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ACRONYMS

175 WG	175th Wing
AFB	Air Force Base
AFI	Air Force Instruction
AGL	Above Ground Level
ANG	Air National Guard
AOPA	Aircraft Owners and Pilots Association
ARTCC	Air Route Traffic Control Center
BASH	Bird/Wildlife Strike Hazard
BOF	Bureau of Forestry
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DAF	Department of the Air Force
DAFI	Department of Air Force Instruction
dB	decibels
dBA	A-weighted decibels
DEA	Draft Environmental Assessment
DNL	day-night Sound Average Level
DNWG	Department of Defense Noise Working Group
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FL	Flight Level
FONSI	Finding of No Significant Impact
ft	feet
GHG	greenhouse gas
IFR	Instrument Flight Rules
IUCN	International Union for the Conservation of Nature
LASDT	Low Altitude Step Down Training
L_{dnmr}	onset-adjusted monthly DNL
L_{eq}	equivalent sound level
Lmax	maximum sound level
MACA	Mid-Air Collision and Avoidance
MD	Maryland
MOA	Military Operating Area
MSL	Mean Sea Level
MTRs	Military Training Route
NAS	National Airspace System
NEPA	National Environmental Policy Act
NFC	National Firefighting Center
NGB	National Guard Bureau
NIMH	National Institute of Mental Health
NM	nautical mile
NOTAM	Notice to Airmen
NRHP	National Register of Historic Places
PA DCNR	Pennsylvania Department of Conservation and Natural Resources
PA DEP	Pennsylvania Department of Environmental Protection

PGC	Pennsylvania Game Commission
PTSD	Post-Traumatic Stress Disorder
RAP	Ready Aircrew Program
RNAV	area navigation
SEL	sound exposure level
SNM	square nautical mile
SUA	Special Use Airspace
TFR	Temporary Flight Restriction
U.S.	United States
USAF	United States Air Force
U.S.C.	United States Code
US DOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VFR	Visual Flight Rules
VR	Visual Route

INTRODUCTION

The National Guard Bureau (NGB) would like to extend our appreciation to all who have shown interest in this proposal and have provided comments on the Draft Environmental Assessment (DEA). By taking an active part in the Air Force's Environmental Impact Analysis Process, you help to ensure that this document is the best it can possibly be and that all substantive issues have been addressed.

Comments were received via email and the United States (U.S.) Postal Service. The table of contents shows the comment category title and where the response to that comment can be located in this document. Comments were grouped into similar topics so that, in many cases, a single response was generated for multiple comments, thereby reducing redundancy in responses.

There were approximately 430 comments received from the general public during the DEA comment period. Not all comments received were considered substantive, though all were fully considered and made part of the administrative record. Substantive comments were considered individually and collectively and responded to in the following pages. Some comments were used to make corrections or modifications in the body of the DEA. Responses to specific comments will direct the reader to where in the EA modifications were made.

Substantive comments are those comments that generally challenge the analysis, methodologies, or information in the DEA as being factually inaccurate or analytically inadequate; that identify impacts not analyzed or developed and evaluate reasonable alternatives or feasible mitigations not considered by the NGB; or that offer specific information that may have a bearing on the decision, such as differences in interpretations of significance, scientific, or technical conclusions, or cause changes or revisions in the proposal. Non-substantive comments, which do not require a specific NGB response, are generally considered to be those comments that are nonspecific; express a conclusion, an opinion, agree, or disagree with the proposals; vote for or against the proposal itself, or some aspect of it; state a position for or against a particular alternative; or otherwise state a personal preference or opinion. Due to the number of comment letters received on the DEA, the NGB has summarized the comments in accordance with Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] 1503.4). The full comment letters are a part of the official record. The comments are presented in **Appendix H** of the EA and are organized as follows: Section 1 – Public Comments; Section 2 – Agency Comments; Section 3 – Political Comments; Section 4 – Tribal Comments; Section 5 – Pennsylvania Wilds Form Letter. Approximately 22 percent of the comment letters were from a single form letter.

Commenters that provided substantive comments can locate their names in these tables to see which of the comment responses is applicable to their comment. The majority of the comment letters constituted two different form letters (approximately 100 comments). A single response is given to each type of form letter, individual names are not provided for form letters or non-substantive variations of those letters.

The following sections provide a summary of the comments and the NGB responses. The comments are grouped by category.

1.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

1.1 PUBLIC INVOLVEMENT

Comment summary: Extend the public comment period

Response: The Draft Environmental Assessment (DEA) and Draft Finding of No Significant Impact (FONSI) were prepared in accordance with the Air Force Environmental Impact Analysis Process (EIAP) (32 CFR 989), Federal Aviation Administration (FAA) Order 1050.1F, and the Council on Environmental Quality's (CEQ) Regulations for Implementing the National Environmental Policy Act (NEPA) (40 CFR 1500). The Air Force EIAP implements the requirements of NEPA for actions proposed by the Air National Guard (ANG). The purpose of NEPA is to ensure that an informed decision, with public input, that considers the potential impacts to the human environment, is reached. The ANG has had the opportunity to review comments received during the public comment period. In accordance with 40 CFR 1501.6(a)(2) and 32 CFR 989.15(e)(2)(v), the public is offered an opportunity to review and provide input on a proposed action during the public comment period. At this time, in-person public meetings are not planned.

These regulations state that public, state, tribal, and local governments, and relevant agencies should be involved in the preparation of an EA to the extent practicable with a public comment period of no less than 30 days. The level of public involvement is at the discretion of the agency and for the Duke MOA DEA, public involvement was achieved by inviting the public to review the DEA/FONSI and submitting comments through email and regular mail.

The DEA and Draft FONSI were available beginning on 27 October 2021 for public review, with an initial comment period of 30 days. The comment period was initially extended to 45 days to allow the public and agencies additional time to review the document. To enable maximum public participation, the comment period was further extended to 31 December 2021, allowing a total of 65 days of public participation in the comment process.

Comment summary: Hold public meetings in directly impacted counties; request that hybrid meeting where remote landowners and other affected parties can likewise attend, including national and local environment groups in these meeting and make public all comments from them; meeting must be well-advertised, including efforts to include the Plain Sect communities residing within this region.

Response: Various modalities (e.g., online and hard copies) were used to provide access to the DEA/FONSI to ensure that all communities that wanted to participate in the public comment process would have the opportunity. Notices of Availability and requests for comments were made online and through the publication of notices in local newspapers, including the Bradford Era, Cameron County Echo, Endeavor News, and Potter Leader Enterprise in October and November of 2021. The DEA and Draft FONSI were made available online for review at https://www.175wg.ang.af.mil/. In addition, hard copies of the document were available for review at four public libraries located in the affected area, including Bradford Area (Bradford, PA), Coudersport (Coudersport, PA), Green Free (Wellsboro, PA), and Galeton (Galeton, PA). Both electronic and hard copies of the DEA and Draft FONSI were further distributed upon request. The DEA/FONSI were available beginning on 27 October 2021 for public review, with an initial comment period of 30 days. The comment period was initially extended to 45 days to allow the public and agencies additional

time to review the document. To enable maximum public participation, the comment period was further extended to 31 December 2021, allowing a total of 65 days of public participation in the comment process.

Comments were accepted via email and regular mail. Comments received during the public comment period are addressed within the EA, as appropriate, as opposed to sending responses to each individual that provides comments. In addition, each of the comments received during the public comment period will be included in the administrative record as an appendix to the Final EA.

An extensive list of agencies were provided an opportunity to review and provide comments on the DEA/FONSI, including but not limited to U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers, U.S. Forest Service (USFS), State Historic Preservation Office, FAA, Aircraft Owners and Pilots Association (AOPA), Pennsylvania Department of Conservation and Natural Resources (PA DCNR), and representatives for each county within the proposed project area. The complete list of agencies and interested parties that were contacted in 2019 and 2021 as part of the Intergovernmental Scoping and Coordination Process is available in **Appendix A** of the EA.

Comment summary: Information posted on the installation website is inconsistent with the information provided in the Environmental Assessment; respond to all the comments received at public meetings and by mail, email and telephone.

Response: The Frequently Asked Questions (FAQs) posted on the installation's website were drafted early in the process. The DEA/FONSI provided additional detail beyond what was provided on the installation's website. FAQs will be updated to more accurately reflect the information provided in the EA so that the information will be consistent. The installation's website will be updated to address some of the comments received during the public comment period for the DEA. In addition, the DEA/FONSI is under revision to address the comments received, as appropriate, which will provide the public with a better understanding of the proposed action. Furthermore, all comments will be included in the Administrative Record.

Comment summary: Conduct a public demonstration.

Public flyovers are not completed as a part of a noise demonstration for an EA.

1.2 AGENCY AND STAKEHOLDER CONSULTATION

Comment summary: Maryland National Guard (MD ANG) has not responded to the concerns expressed by the PA DCNR in October of 2019.

Response: The DEA/FONSI were prepared in accordance with EIAP (32 CFR 989), FAA Order 1050.1F, and CEQ regulations (40 CFR 1500). Refer to **Response 1.1** for more information on the process. In August of 2020, the NGB responded to PA DCNR regarding the agency's concerns raised in October 2019. In addition, the NGB held teleconferences with PA DCNR to discuss the proposed action and attempt to incorporate potential mitigation measures to address some of the concerns. As a result of discussions with PA DCNR, the NGB and the 175 WG prepared proposed mitigation measures that would raise the floor of the proposed Duke Low MOA to minimize impacts to sensitive areas identified by PA DCNR. The mitigation measures include the Duke Low MOA altitudinal mitigation for state parks and state forests (see **Figure 2-3** in the EA) and are discussed in **Section 3.3** Land Use, **Section 3.4** Biological Resources, and

Chapter 5 Management Actions and Special Procedures in the EA. Additional correspondence with PA DCNR via email provided essential information that was incorporated into the EA. The EA has been revised to address comments and concerns raised by PA DCNR, other agencies, and the public during the review of the DEA, where appropriate.

Comment summary: Keep agencies informed as your review/decision-making progresses; some users of the airspace may not have been identified as stakeholders; outreach to stakeholders (regional airports, local government, etc.).

Response: Stakeholders were initially notified of the Proposed Action through the scoping process. The NGB and ANG notified relevant federal, state, and local (county) agencies in 2019 and 2021 to initiate communication and to identify potential environmental concerns specific to the Proposed Action. The agencies were requested to respond within 30 days to ensure their concerns were considered in the DEA. Similarly, consultation letters were sent to the federally recognized tribes to provide notification of the action and to initiate government-to-government consultation in accordance with Section 106 of the National Historic Preservation Action, *Agency and Public Coordination*. Twelve regional airports and aviation special interest groups were also contacted to notify them of the Proposed Action and to request their input. The complete list of agencies and interested parties that were contacted in 2019 and 2021 as part of the scoping process is available in **Appendix A** of the DEA.

Agencies that have requested to be informed as decisions are made will be provided with a copy of the Final EA when it becomes available.

The Notice of Availability of the DEA/FONSI was advertised and widely disseminated to all stakeholders identified and those that requested notification. Refer to **Response 1.1** for more information on the process.

1.3 PENNSYLVANIA NATURAL DIVERSITY INVENTORY (PNDI)

Comment summary: Request that the NGB access the PNDI PA Conservation Explorer and perform a PNDI environmental review.

Response: Scoping consultation was initiated in 2019 with PA DCNR, PA Department of Environmental Protection (PA DEP), PA Forestry Association, USFWS, U.S. Department of Transportation (US DOT), U.S. Geological Survey, U.S. Environmental Protection Agency (USEPA) (NY and PA), and Department of Agriculture. Additional consultation was sent to PA Ecological Services, PA DEP, PA DCNR, PA Wilds, PA Game Commission (PGC), and Western PA Conservancy, as well as several agencies within New York, and each county underlying the proposed Duke Low MOA requesting input regarding potential concerns. A list of agencies consulted was attached to the consultation letter that was distributed. Additional discussions between PA DCNR and the NGB occurred, culminating in the altitude mitigations that have been incorporated into the Proposed Action. The NGB did not receive a request by PA DCNR for a PNDI environmental review prior to the request made in correspondence dated 23 December 2021.

1.4 COORDINATION WITH PENNSYLVANIA GAME COMMISSION

Comment summary: What levels of coordination have occurred with the PGC regarding the Proposed Action and potential impacts on bat species?

Response: Scoping consultation was initiated in 2021 with the PGC, but no response was received. Prior to implementation of the Proposed Action, the ANG Eastern Area Defense Sector would coordinate with the PGC to establish a communications plan with protocols to allow for de-confliction of the airspace as needed during activities, such as annual species population surveys. This is discussed in Sections 2.2, 3.3, and Chapter 5 of the EA.

2.0 LEVEL OF DOCUMENTATION, REGULATIONS, AND IMPACTS

2.1 LEVEL OF DOCUMENTATION

Comment summary: The ANG disregards 32 CFR 989.16, Environmental Impact Statement (EIS), which provides that certain classes of environmental impacts normally require preparation of an EIS; An EIS should be completed based on the potential for significant environmental degradation, significant threat or hazard to public health or safety, and substantial environmental controversy concerning the significance or nature of the environmental impact; conduct analysis at a programmatic level.

Response: The need to complete an EIS is driven by the significance of the impacts associated with a Proposed Action. The analysis of the anticipated impacts indicates that the Proposed Action would not result in significant impacts based on the DAF and the FAA regulatory thresholds for the resource areas identified within the proposed project area. The anticipated impacts associated with the proposed action, as well as the methodology for determining the expected impacts, are discussed in depth in **Chapter 3** of the EA. The analysis concluded that the anticipated environmental impacts resulting from the implementation of the Proposed Action do not meet the criteria for conducting an EIS. The analysis conducted for the EA determined that the Proposed Action would not pose significant impacts to the environment.

As discussed in **Section 3.6** of the EA, the Proposed Action would not pose a significant threat or hazard to public health or safety. The nature of the expected environmental impacts associated with the implementation of the Proposed Action are not considered substantially controversial from an environmental standpoint.

The completion of a Programmatic EA for the Duke Low MOA is not appropriate since the Duke Low MOA EA was completed for a specific proposed action. A programmatic EA is typically completed for the analysis of a program as a whole and is often used when the specific actions under a program are routine and likely to have similar impacts that can be evaluated at a broad scale. As discussed under 40 CFR 1508.28, the completion of a programmatic document allows the lead federal agency to tier from the analysis to analyze specific actions. A programmatic analysis provides a general overview and would not provide the site-specific analysis that is required for a proposed action.

2.2 SECTION 4(F) OF THE DEPARTMENT OF TRANSPORTATION ACT OF 1966

Comment summary: Discuss applicability of Section 4(f) to the Proposed Action.

Response: Section 4(f) of the Department of Transportation Act of 1966 applies only to agencies within the US DOT. The NGB is not considered an agency within the US DOT. The Proposed Action would not require the use or modification of any publicly owned land. In addition, consistent with FAA Order 1050.1F, special use airspace (SUA) actions are exempt from the requirements of Section 4(f) (FAA 2015a). Section 4(f) of

the Department of Transportation Act is discussed in **Section 1.5**, Resources Not Carried Forward for Detailed Analysis, of the EA.

2.3 RESOURCES NOT DISCUSSED

Comment summary: Visual effects and air quality should be analyzed.

Response: There would be no construction or infrastructure development associated with the Proposed Action, and no changes to the visual or aesthetic characteristics of any area under the Proposed Action. The Proposed Action would not produce light emissions that could create annoyance or interfere with activities or contrast with, or detract from, the visual resources and/or the visual character of the existing environment. Likewise, there would be no changes in personnel, no construction, and no changes in ground-based operations or training due to the Proposed Action that would impact air quality. These effects would be negligible; therefore, visual effects and air quality were not carried forward for detailed analysis in this EA.

2.4 CHANGE IN IMPACTS

Comment summary: What actions or remedies would the NGB take to alleviate impacts that rise to the level of significant adverse impacts?

Response: A detailed analysis has been completed that has determined that the Proposed Action would not result in significant impacts. If it is determined after the implementation of the Proposed Action that significant adverse impacts to resources exist within the Duke Low MOA, the NGB and the 175 WG would be required to complete additional NEPA analysis to address and analyze those impacts.

3.0 ALTERNATIVES

3.1 SELECTION CRITERIA

Comment summary: Reason for the location of the Duke Low MOA; why was the 200 mile distance criteria established?

Response: **Chapter 2,** Description of Proposed Action and Alternatives, of the EA outlines the Proposed Action and the selection criteria. The selection criteria must be met in order to meet the purpose of and need for the proposed project. If any of the alternatives identified fail to meet the selection criteria, they must be eliminated from further consideration. The selection criteria include the following:

- Must be within a reasonable distance (200 nautical miles [NM]) of Martin State Airport,
- Must provide sufficient low-level airspace to accommodate A-10C pilot training requirements, and
- Must be adequate for 175 WG low level flight operations to maintain proficiency.

Flying long distances to remote or out-of-state training airspace and returning to the home base in MD would substantially limit valuable training time and increase fuel consumption and cost. The aircraft need to fly to the training airspace, conduct the specified training, and return to base with adequate fuel reserves for safety. Even with the option of aerial refueling, traveling long distances for daily training is not reasonable.

Therefore, reasonable alternatives must provide suitable training airspace within 200 nautical miles of Martin State Airport.

3.2 REASONABLE ALTERNATIVES

Comment summary: Alternative analysis is incomplete; EA failed to consider a reasonable range of alternatives; why not use Bollen Range; why not consider western MD; modification of Evers MOA; use of Davis-Monthan Air Force Base (AFB), Farmville and Pickett MOAs; why are previously used training locations no longer available?

Response: In addition to the preferred and no action alternatives, nine alternatives were considered in **Section 2.3** and a summary of the alternatives is presented in **Table 2-4** of the EA. The alternatives eliminated from further consideration did not meet one or more of the selection criteria, as illustrated in **Section 2.3** of the EA.

The FAA is the controlling agency for airspace, and it reviews and approves all airspace proposals. The establishment of a new airspace in western MD would have a significant effect on commercial airspace users. Western MD is directly within the flight paths of commercial users that access airports in the DC metropolitan area, as well as western Pennsylvania and eastern Ohio. In addition, the mountainous terrain and sparse radio coverage would prevent the expansion of any new airspace below 1,000 feet (ft) above ground level (AGL) in western MD. Therefore, western MD was removed from consideration. As discussed in **Section 2.3** of the EA, R-5802, which is part of Bollen Range, does not meet the selection criteria regarding size requirements for the Proposed Action. The 175 WG does use R-5802 for other training purposes not related to the Proposed Action. The modification of the Evers MOA would not meet the criteria of the Proposed Action since the airspace cannot be expanded below 1,000 ft AGL due to mountainous terrain and the resulting sparse radio coverage. The national radio quiet zone is also beneath the Evers MOA. The training areas at Davis Monthan AFB were made available to the 175 WG for training on occasion but the frequency is not enough to meet specific training requirements. In addition, airspace associated with Davis Monthan AFB exceeds the 200 NM radius that was identified as part of the selection criteria. The Farmville and Pickett MOAs have 5,000 ft altitude weather restrictions for using the MOAs and neither MOA could be expanded to accommodate the Proposed Action as modification of the MOAs would significantly interfere with existing civilian air traffic operations. The 175 WG previously utilized R-4006 for low altitude training; however, this airspace is no longer an option due to the significantly reduced availability. The limited availability of R-4006 would not meet the 175 WG pilot training requirements. SUA access and training time within these MOAs is not controlled by the 175 WG. Operating the Duke Low MOA temporarily or placing limitations on the scheduling would not meet the training needs of the 175 WG.

3.3 ADDITIONAL ALTERNATIVES NOT CONSIDERED

Comment summary: Flight simulator as an alternative; make the Duke Low MOA a temporary or seasonal MOA; reason for the location of the Duke Low MOA.

Response: To maintain the A-10 Ready Aircrew Program (RAP) and comply with Air Force Instruction (AFI) 11-2A- 10CV1, A-10C Aircrew Training, it is critical that a year-round, realistic training environment be available to the 175 WG. The proposed Duke Low MOA meets the criteria to comply with the requirement

to provide an integrated, year-round, realistic training environment in accordance with A-10 RAP and AFI 11-2A- 10CV1 training requirements for 175 WG pilot training (**Section 2.1**, Selection Criteria).

The mission of the MD ANG is to provide air combat forces and theater airlift aircraft to America's Unified Combatant Commands. Under its federal mission, the 175 WG is assigned to the Air Combat Command and is tasked with carrying out missions compatible with training, mobilization readiness, humanitarian and contingency operations worldwide. A flight simulator does not fully provide the real-world training environment pilots need to meet the training requirements and maintain certifications. Flight simulators are used for flight training but are unable to provide all facets the training necessary for combat-ready pilots. As such, flight simulation would fail to meet the federal and state missions of the MD ANG and would not meet the purpose and need for the Proposed Action. The 100 ft AGL is required for Low Altitude Step-Down training (LASDT). A-10C pilots must be flexible when it comes to threats and mission tasking. Pilots operating the A-10C will regularly descend down to 1,000 ft AGL or lower during a simulated gun or rocket delivery. Separating the proposed Duke Low MOA into three separate MOAs would not meet the realistic training needs of the 175 WG pilot training program. A-10C aircrews must be able to train by simulating all types of weapons delivery and mission sets. Simulated diving weapon delivery profiles span the altitudes between 100 ft AGL and 18,000 ft mean sea level (MSL). Please refer to **Section 1.3** of the EA, Purpose and Need, for more details.

3.4 ALTERNATIVES DISMISSED

Comment summary: The ANG provided some very brief (paragraph-long) rationales for dismissing alternatives, but the DEA lacked any detail in terms of how these sites were analyzed and vetted, in accordance with Section 102 of NEPA (42 USC 4332).

Response: **Section 2.3** of the EA, Alternatives Dismissed from Further Analysis, summarizes the alternatives that were considered to accomplish the Proposed Action. Existing airspaces within 200 NM of Martin State Airport were evaluated. In accordance with 40 CFR 1501.5, an Environmental Assessment is required to briefly discuss the alternatives considered but eliminated from consideration. Each alternative and the rationale for eliminating each is discussed, as required.

3.5 NO ACTION ALTERNATIVE

Comment summary: How does No Action Alternative experience training shortfalls that negatively affect combat readiness and pilot safety?

Response: The No Action Alternative was included in the EA, in accordance with 32 CFR 989.8(d). **Chapter 3** of the EA describes the existing conditions for resources under the proposed Duke Low MOA, which serves as a baseline of conditions that would continue if the No Action Alternative were implemented. The No Action Alternative is analyzed for each resource area and included in the quantitative comparison of anticipated impacts, where necessary.

The A-10 provides many unique capabilities to the fight. These unique capabilities are the driving factor of a low altitude requirement. A-10 aircrews must be able to train effectively and accurately by simulating all types of weapons and mission sets. In a close air support environment, diving weapon delivery profiles span the altitudes between 100 ft and 15,000 ft AGL. The A-10 will regularly descend to 1,500 ft AGL during a

guns or rocket delivery. Aircrews must be proficient in the gun as it is the aircrafts primary weapon. Aircrews also regularly train for missions that have them operating below medium and low weather decks, fly at low altitudes during search patterns for isolated personnel, conduct threat reactions against simulated threats, and finding targets visually.

All A-10 pilots are trained at and qualified to fly at 500 ft AGL. As pilots gain experience, they upgrade to a flight lead, forward air controller, search and rescue pilot, and more, they train to lower altitudes. Once pilots are trained at and qualified to those lower altitudes, they still need to train to adequately meet the mission requirements. The proposed Duke Low MOA would not only be utilized to train pilots to qualify at those lower altitudes; it would be utilized to keep the skills sharp for those pilots that are already trained to those altitudes. All pilots receive the same training and constant upgrades and specialized training continue throughout a pilot's flying career. The bottom line is that the failure to create adequate training airspace to meet current and future aircrew training and qualification requirements will result in training shortfalls and a lack of combat readiness necessary in today's environment. Please see **Section 1.3** of the EA, Purpose and Need, for additional information.

3.6 MODIFICATION OR NEW MOA

Comment summary: Is the Proposed Action a modification or new MOA; the intent of the DEA is to create a new, separate MOA, rather than modify the existing MOA?

Response: The Proposed Action would include the modification of the existing Duke MOA, as opposed to creating a new MOA. Under the Proposed Action, the existing altitudes of the Duke MOA would be modified to extend from 100 ft AGL to 7,999 ft MSL. This modification would essentially split the MOA into a high and low MOA. The creation of a new MOA would indicate that a new MOA would be created where an existing MOA does not currently exist. The Proposed Action includes the modification of an existing airspace that is currently charted and utilized. Please see **Section 2.2** of the EA, Proposed Action, for more detail.

4.0 PURPOSE AND NEED

4.1 LOW ALTITUDE TRAINING

Comment summary: Why must the floor be as low as 100 ft AGL?

Response: The 100 ft AGL is required for LASDT. A-10C pilots must be flexible when it comes to threats and mission tasking. Pilots operating the A-10C will regularly descend to 1,000 ft AGL or lower during a simulated gun or rocket delivery mission. A-10C aircrews must be able to train by simulating all types of weapons delivery and mission sets. Simulated diving weapon delivery profiles span the altitudes between 100 ft AGL and 18,000 ft MSL. Please refer to **Section 1.3** of the EA for more details.

4.2 14 CFR PART 91, FAA EXEMPTION 4371

Comment Summary: 14 CFR Part 91 FAA Exemption 4371 states that flights should be no lower than 100 ft above obstacles.

Response: 14 CFR Part 91 governs general operating and flight rules for all civil, generally non-commercial aircraft. It governs situations where the pilot is directly responsible for private aircraft. Since the Proposed Action would be implemented for the operation of military aircraft at lower altitudes, 14 CFR Part 91 would not apply. FAA Exemption 4371 was granted to the DAF on 21 June 1985, which allows the DAF to "conduct low-level operations without complying with enroute minimum altitudes for flight under instrument flight rules (IFR) or direction of flight requirements for IFR enroute segments in uncontrolled airspace." The exemption is reviewed every two years to ensure that it is justified, and conditions and limitations are adjusted, if necessary. On 16 March 2022, the DAF requested that the exemption be extended. On 16 June 2022, the FAA granted the requested exemption to 31 July 2024, unless the exemption is superseded or rescinded at an earlier date. As such, flying is allowed at altitudes no lower than 100 ft above obstacles when employing visual low-level procedures. Operations under this exemption must be conducted under the procedural requirements of a letter of agreement between the 175 WG and the FAA Cleveland Air Route Traffic Control Center (ARTCC). The FAA exemption to fly below 500 ft AGL within SUAs is an operational feasibility exemption and does not address potential environmental effects. For more information, please see **Section 2.2.2** of the EA, Proposed Action, Air Operations.

4.3 THE NEED FOR 100% OF PILOTS TO MEET TRAINING REQUIREMENTS

Comment Summary: MD ANG does not demonstrate why 100% of pilots must meet training requirements or why training must be as low as 100 ft AGL

Response: The A-10 provides many unique capabilities to the fight. These unique capabilities are the driving factor of a low altitude requirement. A-10 aircrews must be able to train effectively and accurately by simulating all types of weapons and mission sets. In a close air support environment, diving weapon delivery profiles span the altitudes between 100 ft and 15,000 ft AGL. Aircrews also regularly train for missions that have them operating below medium and low weather decks, fly at low altitudes during search patterns for isolated personnel, conduct threat reactions against simulated threats, and finding targets visually.

All A-10 pilots are trained at and qualified to fly at 500 ft AGL. As pilots gain experience, they upgrade to a flight lead, forward air controller, search and rescue pilot, and more, they train to lower altitudes. Once pilots are trained at and qualified to those lower altitudes, they still need to train to adequately meet the mission requirements. The proposed Duke Low MOA would not only be utilized to train pilots to qualify at those lower altitudes; it would be utilized to maintain proficiency for those pilots that are already trained to those altitudes. All pilots receive the same training and constant upgrades and specialized training continue throughout a pilot's flying career. The failure to create adequate airspace to meeting existing and future training needs will result in training shortfalls and a lack of combat readiness necessary in today's environment. This information has been added to **Section 1.3** of the EA, Purpose and Need.

5.0 PROPOSED ACTION DETAILS

5.1 MITIGATION

Comment summary: Advance public notice of scheduled flyovers should be issued to local and regional news media which could help reduce the negative impacts.

Response: The 175WG and/or the Eastern Area Defense Sector would not issue press releases when they activate and operate in the proposed airspace. Questions and concerns regarding 175 WG training operations can be emailed to the Eastern Area Defense Sector at https://www.eads.ang.af.mil/Contact-Us/. This Office will be able to address concerns regarding 175 WG operations.

5.2 OPERATION

Comment summary: What will change with the Proposed Action; how will the frequency of training operations change with the Proposed Action; why is the low altitude MOA necessary if low level Military Training Routes (MTR) exist; will MD ANG A-10s continue to use other MOAs and restricted airspace for training if the Duke Low MOA is approved; what is ANG Eastern Area Defense Sector; set up training courses at airports to achieve appropriate training.

Response: The effects of the Proposed Action would be similar to what is occurring now. For example, within the existing Duke MOA, aircraft currently fly in one direction. The implementation of the Duke Low MOA would enable aircraft to fly in other directions. However, operations along the existing MTRs would still occur. MTRs provide excellent low-level airspace below 1,500ft AGL; however, MTRs are single-direction routes. Visual Route (VR)-704 and VR-707 have legs that go down to 100 ft AGL but as single-direction routes they do not allow for full, random combat maneuvering that is necessary for realistic training for current and future needs. The projected aircraft utilization comparing the existing and proposed airspace is presented in **Table 2-2** of the EA. The Proposed Action would result in an increase in the number of missions per year within the combined existing Duke MOA and proposed Duke Low MOA.

The proposed Duke Low MOA would meet the criteria to comply with the requirement to provide an integrated, year-round, realistic training environment in accordance with A-10 RAP and AFI 11-2A- -10CV1 training requirements for 175 WG pilot training (**Section 2.1** of the EA). **Section 2.3** of the EA summarizes the analysis for dismissing alternatives from further analysis.

The MD ANG would continue to use other MOAs and restricted airspace as weather and training needs dictate.

The ANG Eastern Area Defense Sector is the Air Combat Command unit assigned to the North American Aerospace Defense Command location in New York. At this time, other non-governmental entities are not involved in the protocol development process.

5.3 EXPECTED USAGE

Comment summary: What is the anticipated usage over the next five, 10, or 15 years? If usage increases beyond 170 days, will another EA be required?

Response: The expected usage of the Proposed Duke Low MOA was determined by the needed usage by the 175 WG based on training needs, as well as discussions with other potential users. The anticipated usage of the proposed Duke Low MOA is consistent with what is discussed in the EA and would not exceed those levels: two hours per day, twice per day, one hour at a time, with no more than six total aircraft on the days of activation, approximately 170 days per year. The use of the airspace is scheduled by the scheduling unit and would not exceed 170 days per year. Usage of the proposed Duke Low MOA would be monitored closely

to ensure actual usage does not exceed the levels discussed in the EA. If it is determined that additional usage of the MOA is required in the future, additional NEPA analysis would be conducted.

5.4 OTHER EXPECTED USERS

Comment summary: Who else will use the Duke Low MOA; Will MI ANG train in the Duke Low MOA; Would F-22s, F-35s, or other aircraft that operate at higher decibel levels be allowed to utilize MOA?

Response: In addition to the 175 WG, stationed at Martin State Airport, other expected users of the Duke Low MOA would include the 177th Fighter Wing, stationed at Atlantic City Air National Guard Base in New Jersey, the 193d Special Operations Wing, stationed at the Harrisburg International Airport in Pennsylvania, and the 113 WG, stationed at Joint Base Andrews in MD. The proposed annual usage by 113 WG for the existing Duke MOA and the proposed Duke Low MOA is listed in **Table 2-2**. Michigan ANG is not an expected user of the proposed Duke Low MOA given the distance to the proposed Duke Low MOA from the installation.

5.5 CUTOUT FOR N38

Comment summary: The current cutout for N38 does not take the Area Navigation (RNAV) (GPS) Runway 10 approach to Wellsboro Johnston Airport (N38).

Response: The NGB worked with the Cleveland ARTCC to determine the exclusion zone. The NGB also consulted with the AOPA. The AOPA had concerns regarding Wellsboro Johnston Airport operations and the exclusion zone is a mitigation measure provided to support the local pilots.

The Proposed Action includes an exclusion zone (cutout) for the Wellsboro Johnston Airport from surface to 6,000 ft MSL to allow for IFR traffic using the RNAV instrument approach for Runway 10. The proposed utilization is not common but is routine and would be approximately 495 hours per year spread throughout the airspace. The exclusion zone is for Class E airspace or as directed by Cleveland ARTCC for vectoring into airports southwest of the airspace. The NGB does not segregate instrument flight rules (IFR) approach procedures from military airspace. The NGB would not have access to the Runway 10 IFR approach. Cleveland ARTCC will use tools to land aircraft safely. The 175 WG continuously monitors the Cleveland ARTCC for changes and updates to airspace conditions. The 175 WG uses visual flight rules (VFR), but if IFR is needed due to poor weather conditions, the 175 WG would likely not fly on those days. Please refer to **Section 3.1.2.5** of the EA for information regarding N38 in relation to the Proposed Action.

5.6 TRAVEL ROUTES

Comment summary: How is the training program air traffic getting to and from the MOA area being policed? Are the travel routes to be identified on mapping?

Response: The travel routes are within National Airspace System (NAS) and would comply with FAA regulations. The travel routes to the MOA vary and since they are not military training routes (MTR) they are not mapped. Aircraft will travel in the NAS under air traffic control.

5.7 DURATION OF EXPECTED NOISE EXPOSURE

Comment summary: Concern regarding duration of potential noise exposure from aircraft; how long will aircraft be below 1,000 ft AGL?

Response: Published activation timeframes and actual usage time are different terms. On the days that the proposed Duke Low MOA would be activated; it would normally be used in the following timeframe: one hour in the morning between the hours of 10:00 a.m. – 12:00 p.m. and one hour in the afternoon between the hours of 2:00 p.m. and 4:00 p.m. During the one hour of usage time for each sortie, the majority of flight time would be spent at higher altitudes (above 1,000 ft). The A-10 aircraft would spend approximately ten minutes or less below 1,000 ft. Overall, during each sortie, aircraft would be down in the low altitude ranges between 500 ft to 100 ft for approximately 2-3 minutes per activation. Notably, the LASDT training down to 100 ft AGL would only be several seconds in duration and less than 0.5 miles overland in the 2-3 minutes of flight in the low altitude ranges. The aircraft's radar altimeter is used to measure AGL altitude. In forested areas where the tree canopy is approaching 100 ft in height, the aircraft would be at least 100 ft above the tree canopy or 200 ft AGL over these areas. In addition, 95 percent of aircraft operations would be conducted above 1,000 ft AGL. The expected noise impacts are discussed in detail in **Section 3.2** of the EA.

5.8 ELECTRONIC COUNTERMEASURES (ECM)

Comment summary: Will ECMs be used under the Proposed Action?

Response: The release of ECMs, including chaff and flares, weapons firing, and ordnance deployment would not occur within the proposed Duke Low MOA. **Section 2.2** of the EA, Proposed Action, states that no supersonic operations, release of chaff and flares, ordnance deployment, or weapons firing would occur within the proposed Duke Low MOA.

6.0 PUBLIC SAFETY

6.1 DARK HOLES

Comment summary: Potential delay in response time due to gaps in cell phone coverage.

Response: The Duke MOA is an existing airspace with established emergency procedures that function under the cell phone coverage limitations. Currently, the 175 WG aircraft, other military aircraft, and civilian aircraft transit through this area. The risk of a mishap under the Proposed Action is very low. Refer to **Section 3.6.2.1** of the EA for more details. The existing emergency procedures would remain in place and would be updated or revised as necessary.

6.2 EMERGENCY RESPONSE

6.2.1 First Responders

Comment summary: First responders are part-time volunteers which may prolong response time; provide training to emergency response personnel; provide firefighting training simulator in the region.

Response: It is impossible to predict the precise location of an aircraft accident; therefore, the possibility for a mishap in a remote area does exist. As described in **Section 3.6.2.2** of the EA, local first responders would likely be first on the scene given the distance from the 175 WG. The NGB would consult with the appropriate land use manager to minimize direct damage and coordinate response actions. A National Defense Area would be established around the accident scene and the site would be secured during the investigation. The NGB would be responsible for site clean-up and any damage claims submitted for the incident. The NGB response to a mishap would follow the same procedures regardless of the location. As stated above, the NGB would consult with the land use manager to minimize damage or determine site-specific mitigation measures.

175 WG training operations, including A-10 training operations, currently occur within the existing Duke MOA. If an ANG aircraft is involved in an incident, local emergency responders would likely reach the site first depending on the location of the incident. An NGB safety board would convene at the nearest active duty base and would coordinate the necessary support needed. The current emergency diversion procedures that are in place would be modified as necessary under the Proposed Action. As discussed in **Section 3.6** of the EA, no recorded mishaps have occurred in or near the existing Duke MOA in the last five years. Anticipated mishap rates associated with the Proposed Action would be consistent with existing conditions. Existing emergency response procedures would continue to be implemented, and modified as appropriate, under the Proposed Action.

6.2.2 Emergency Response and Mid-Air Collision Avoidance (MACA)

Comment Summary: Divert procedures; concern regarding ability of DCNR Rangers responding to emergencies – comprehensive assessment of threats on ground, mitigation, resources provided to respond to incidents; emergency response assistance from ANG; midair collision avoidance.

Response: Military training occurring within the proposed Duke Low MOA would maintain contact with the controlling agency (FAA, Cleveland ARTCC) to ensure proper separation with all non-participating aircraft, to include non-scheduled LIFE FLIGHT helicopters enroute to UPMC Cole Hospital or other medical events. LIFE FLIGHT helicopters would not be impacted under the Proposed Action. The Duke Low MOA would only be activated and used when conditions allow pilots sufficient visibility to maintain visual separation from terrain and other aircraft. In addition, the MACA educational and outreach program (SeeAndAvoid.org website) would continue to be utilized to ensure a comprehensive online flight-safety community. This is discussed in the **Section 3.1.4.1** (Air Traffic) and **Section 5** (Management Actions and Special Procedures) of the EA.

6.2.3 Aircrew Emergency Extraction Information

Comment Summary: Request for aircrew emergency extraction information; recommend providing details to all EMS, fire departments, and police departments within 80 miles of the perimeter of the Duke MOA; Provide placards and signs to the local airports that present information on the type aircraft that operate in the MOA.

Response: The request for aircrew emergency extraction information would be incorporated into ongoing emergency response coordination. The 175WG would continue cooperation efforts with all users and nearby airports as part of the MACA program. Affected airports would be added to the existing MACA program.

6.2.4 Air Tanker Activity During Firefighting

Comment Summary: Request for aircraft information and air tanker activity during firefighting.

Response: The ANG operates in full compliance with the current DAF and FAA requirements. In the event that fire tankers were operating in the MOA, a Notice to Airmen (NOTAM) would be issued to close the area and the ANG would not schedule training. If ANG aircraft were operating during a fire event, see and avoid procedures would be used to avoid conflict with firefighting services. Further, those aircraft would be evacuated from the area.

6.3 MISHAPS

6.3.1 Safety Protocols

Comment summary: How would ANG avoid mishaps; safety protocols and procedures in place?

Response: Air crews are trained to see and avoid any risks, including in populated areas. All accidents are investigated accordingly with set procedures in place. The 175 WG would continue to follow flight safety regulations dictating emergency and accident response, and investigation as outlined in AFI 91-202, US Air Force (USAF) Mishap Prevention Program; Department of Air Force Instruction (DAFI) 91-204, Safety Investigations and Reports; AFI 91-204ANGSUP, Safety Investigation and Hazard Reporting; and DAFI 91-225, Aviation Safety Programs. In addition, flight safety regulations as described in AFI 11-202V1, Aircrew Training; AFI 11-202V3, Flight Operations; AFI 11-418, Operations Supervision; AFI 11-214, Air Operations and Procedures, all contribute the safe operation and use of aircraft.

6.3.2 ADS-B IN/OUT Equipment

Comment summary: Request for military to use ADS-B IN/OUT equipment.

Response: Dependent Surveillance-Broadcast (ADS-B) Out is a function of an aircraft's onboard avionics that periodically broadcasts the aircraft's state vector and other required information allowing the aircraft to be tracked by other users of the airspace or surveillance systems on the ground. 14 CFR 91.225 requires that after January 1, 2020 ADS-B Out equipment be installed on all aircraft in Class A airspace. An Interim Final Rule (effective July 18, 2019) modified the requirement for all aircraft to be equipped with ADS-B and to transmit at all times. Specifically, aircraft that are owned/operated by Federal, State, and local government agencies and conducting missions for national defense, homeland security, and law enforcement purposes can operate aircraft that are not equipped with ADS-B. 14 CFR 91.225(f) states that "The requirements of paragraph (b) of this section do not apply to any aircraft that was not originally certificated with an electrical system, or that has not subsequently been certified with such a system installed." The ADS-B transmission requirement could draw attention to operational vulnerabilities and expose government aircraft performing sensitive missions to immediate risk and compromise the operations security of missions for national defense. This decision was made at the Department of Defense level and the DAF does not have authority to equip the A-10 aircraft with this technology.

6.3.3 Obstruction Distance, Privately Piloted Aircraft, and Crash Prevention

Comment summary: How is 500 ft distance from person, vessel, vehicle, or structure adhered to? How will ANG aircraft avoid privately piloted aircraft; probability that low-level training would present dangerous scenarios on the ground, such as crash, injuries on the ground, property damage, forest fires, more; landing in the event of mechanical failure.

Response: **Chapter 5** of the EA outlines the management actions and special procedures for the proposed Duke Low MOA, including NOTAM. Military aircraft training in the proposed Duke Low MOA would maintain contact with the controlling agency to ensure proper separation with all non-participating aircraft.

As part of preflight preparations, all obstructions within the proposed Duke Low MOA, including structures and populated areas, are identified by the pilots. In addition, pilots are professionally trained to "see and avoid" conflicts while flying within military airspace, including any structures, people, or vehicles. Pilots are responsible for complying with all FAA and Department of Defense (DoD) regulations while flying, including 14 CFR 91.119, Minimum Safe Altitudes. The DAF and NGB take seriously any claims of inappropriate or unsafe actions by our professional Airmen. Any event deemed inappropriate or unsafe would be dealt with on a case-by-case basis to ensure it is not repeated.

6.3.4 Protocol for Medical Air Transport

Comment summary: What is the protocol for medical air transport entering active MOA?

Response: International aviation laws list determine who has priority when utilizing an airspace. The first priority is aircraft in distress. The second priority is air ambulance services, or small private jets or helicopters that fly to hospitals. Air crews continually monitor communications related to air ambulance services, including Lifeguard and LIFE FLIGHT. If an A-10 is flying and receives a Lifeguard flight notice, the A-10 would leave the area immediately. Immediately upon receiving notification that air ambulance series require priority within an airspace, air traffic controllers would contact pilots within the airspace and would evacuate the area immediately.

6.4 NOTIFICATION OF ANG AIRCRAFT OPERATIONS

Comment summary: Request for communication of Duke MOA activity and type of aircraft; Hyner View State Park hang gliding activity.

Response: **Chapter 5** of the EA outlines the management actions and special procedures for the proposed Duke Low MOA, including NOTAM. Military aircraft training in the proposed Duke Low MOA would maintain contact with the controlling agency to ensure proper separation with all non-participating aircraft. Procedures would be established with Cleveland ARTCC to give all air ambulance services priority access to all hospital heliports located underneath proposed airspace. In addition, pilots are professionally trained to "see and avoid" conflicts while flying within military airspace. If issues are identified, such as a fire within the area, the airspace would be closed until the situation is resolved.

As specified in **Chapter 5** of the EA, Management Actions and Special Procedures, military aircraft training occurring within the proposed Duke Low MOA would maintain contact with the controlling agency (FAA,

Cleveland ARTCC) to ensure proper separation with all non-participating aircraft, to include non-scheduled LIFE FLIGHT helicopters enroute to UPMC Cole Hospital or other medical events. LIFE FLIGHT helicopters would not be impacted under the Proposed Action. The Duke Low MOA would only be activated and used when conditions allow pilots sufficient visibility to maintain visual separation from terrain and other aircraft. In addition, the MACA educational and outreach program (SeeAndAvoid.org website) would continue to be utilized to ensure a comprehensive online flight-safety community.

The 175 WG currently communicates with the Hyner Hang Gliding Club to inform them when training activities are scheduled, and this practice would continue with the implementation of the Proposed Action.

6.5 NATURAL GAS INFRASTRUCTURE

Comment summary: Concern that low-flying aircraft noise will activate natural gas sensors used to alert operators of gas leaks; concern about incorporating impacts from fracking into analysis.

Response: The NGB is not aware of aircraft impacts on the sound detection devices referenced. The commenter was contacted for information regarding incidents of aircraft triggering the sound detection devices and indicated that none have been recorded. During the Scoping process, a map of locations where the PA DEP has issued permits in the last 16 months for drilling rigs that could exceed 100 ft in height was provided. This information is presented in **Figure 3-14** of the EA. In accordance with 14 CFR 91.119 and AFI 11-202v3, aircraft would continue to follow low-level guidance and remain 500 ft above all known or observed antennas and obstacles.

7.0 NOISE

A detailed noise analysis was completed, and a summary of the findings is presented in **Section 3.2** of the EA. The document incorporated background noise levels from biological, geophysical, climatic, and anthropogenic components into the analysis.

7.1 NOISE ANALYSIS REPORT

Comment summary: Provide the finalized Noise Study for Modification of Duke Military Operations Area; day-night Sound Average Level (DNL) is not useful for assessing impacts to wildlife.

Response: Additional information could be discovered during the public review period of a DEA, potentially requiring the completion of additional analyses. As a result, a noise analysis would not be finalized prior to the completion of a Final EA, regardless of the action. PA DCNR requested and was provided with a copy of the Draft Noise Study during their review of the DEA, including all of the relevant noise related data, and had an opportunity to review it. The Noise Study would be finalized with the Final EA and included as an attachment to the document.

7.2 LEVEL OF NOISE IMPACT

Comment summary: The DEA fails to adequately assess the broad impacts of the proposed Duke Low MOA; the noise assessment and subsequent information is presented in the DEA without modeling and accompanying documentation, rendering it difficult to evaluate the proposed impacts; noise impacts are

significant; impacts of long-term low altitude flight; short term persistent noise; impulse noise; concerns over cumulative effects.

Response: The USEPA has identified 55 decibel (dB) DNL as a level that protects public health and welfare with an adequate margin of safety (USEPA 1974). This means that 55 dB DNL is a threshold below which adverse noise effects are usually not expected to occur. 65 dB DNL is widely used as a noise criterion for airports. It represents a compromise between acceptable noise and economic practicality. According to the Federal Interagency Committee on Urban Noise, noise exposure greater than 65 dB DNL is considered generally incompatible with residential, public use (i.e., schools), or recreational and entertainment areas (Federal Interagency Committee on Urban Noise 1990).

Research continually refines our understanding of the effects of any pollutant or stressor on the human body. The studies to date continue to support the conclusion that permanent, physical harm for most people comes from chronic exposure to extreme noise (working lifetime of 40 years with exposure lasting 8 hours per day for 5 days per week). The DoD uses USEPA screening criteria for partial hearing loss risk by determining if any residences would be exposed to 80 DNL or greater. The intermittency of aircraft noise, even during training exercises with multiple aircraft at one time, makes the risk much lower than that expected to harm nearly all people. Permanent, physical harm from noise only occurs with extreme, chronic exposure. As discussed in **Section 3.2.6** of the EA, populations exposed to noise greater than 80 dB DNL would be at the greatest risk of permanent hearing loss and none of the areas beneath the existing or proposed airspace would experience noise at this level. Residents and outdoor recreationists would have no ill effects from casual, temporary exposure to expected noise levels and hearing protection would not be required.

An evaluation of expected noise impacts was completed and incorporated an analysis of both DoD and FAA noise significance criteria. Based on the EA that has been prepared, the Proposed Action would have minimal effect on the area under the MOA. On the days that the Proposed Duke Low MOA would be activated, it would normally be used for one hour in the morning between the hours of 10:00 a.m. and 12:00 p.m., and one hour in the afternoon between the hours of 2:00 p.m. and 4:00 p.m. During the one hour of usage for each sortie, the majority of flight time would be spent at higher altitudes (above 1,000 ft). The A-10 aircraft would spend approximately ten minutes or less below 1,000 ft. Overall, during each sortie, aircraft would be down in the low altitude ranges between 500 ft to 100 ft for 2-3 minutes per activation. Notably, the LASDT training down to 100 ft AGL would only last for seconds. In forested areas where the tree canopy is approaching 100 ft in height, the aircraft would be at least 100 ft above the tree canopy. In addition, 95 percent of aircraft operations would be conducted above 1,000 ft AGL.

In accordance with FAA Order 1050.1F, a land use impact would occur if noise levels increased by 1.5 dB or more at or above 65 A-weighted decibels (dBA) day-night Sound Average Level (DNL) (see **Section 3.3.3** of the EA). Accordingly, for FAA purposes, a significant impact would occur if noise levels increased by 1.5 dB or more at or above 65 dBA DNL. Refer to **Section 3.3** of the EA for more details. **Table 3-9** of the EA provides details of the overall sound levels with and without the Proposed Action. The existing background noise under the Duke Low MOA ranges from 47.1 to 52.9 dBA DNL and would increase to a range from 47.4 to 53.0 dBA DNL under the Proposed Action, which would not exceed the significance criteria. The Proposed Action would increase overall noise by between 0.1 and 1.3 dBA onset-adjusted monthly day-night average sound level (L_{dnmr}), and 0.1 and 0.3 dBA DNL. DNL provides overall noise

impact and L_{dnmr} is a noise metric which accounts for sudden onset noise. Neither increase would be perceptible. Individually and for a few seconds, people may experience brief episodes of noise from overflights but as large as the MOA is, this would be a rare occurrence at any given point. In general, the aircraft operations would be spread throughout the 1,727 square nautical miles (SNM) proposed Duke Low MOA. The anticipated noise impacts associated with the Proposed Action would not exceed 65 dBA DNL and would be compatible with all land uses.

Impulse noise is defined as pulses of sudden onset and brief duration (less than 1 second) that usually exceed an intensity of 140 dB. Examples of impulse noise includes firing a handgun, detonating a firecracker, backfiring of a piston engine, high-volume squelching of radio equipment, and a sonic boom caused by breaking the sound barrier. The eardrum may be ruptured by intense levels (140 dB) of impulse/blast noise. A sonic boom is caused by an object moving faster than the speed of sound, or at approximately 768 miles per hour. As discussed throughout the EA, supersonic activities would not occur within the proposed Duke Low MOA. The fastest any aircraft that would be utilizing the airspace are capable of flying is approximately 450 knots, or just over 750 miles per hour. Impulse noise is not an expected consequence of the Proposed Action.

The proposed Duke Low MOA altitudinal mitigation map for state parks and state forests (see **Figure 2-3** of the EA) was prepared by the NGB and the 175 WG to address concerns for the most critical sensitive areas. Specifically, PA DCNR raised concerns regarding potential impacts to key recreational, historical, and tourist destinations, as well as the avoidance of impacts to raptor migration and elk rut. Low altitude avoidance and noise sensitive areas for the proposed airspace would be identified in the local flight instructions for pilots. Pilots would be instructed to avoid these locations by horizontal (1 NM lateral boundary) and vertical distances (500 and 1,000 ft AGL) to enhance flight safety, noise abatement, and environmental sensitivity. See **Section 3.3.4.1** of the EA for more details.

The Final Duke Low Military Operations Area Noise Assessment is included as an attachment to the Final EA.

7.3 NOISE ANALYSIS PARAMETERS

Comment summary: Perform noise analysis using a spot analysis or an average of noise over the day; recommendation to use unweighted peak sound levels and maximum sound levels.

Response: Under the Proposed Action, aircraft would not hover during operations. As such, a spot analysis is an unsuitable method to analyze noise in this case. The EA includes an assessment of both land use compatibility, using DNL, and the effects from individual overflights using the supplemental metrics, including maximum sound level (L_{max}), which is the maximum sound level when an aircraft is directly overhead, and sound exposure level (SEL), which is a measure of the total energy of an acoustic event that provides a measure of the net effect of a single event. An explanation of each of these metrics are included in **Section 3.2.1** of the EA and the methodology for using each is described in **Section 3.2.2** of the EA. The EA uses maximum sound levels (L_{max}) to assess the effects of individual overflights as indicated in the comment. The analysis summarizing potential impacts related to individual overflight noise is included in **Section 3.2.8.2** of the EA. Unweighted peak sound levels are not used to evaluate aircraft noise.

The noise analysis completed for the EA uses the MR_NMAP (v3.0) as part of the NoiseMAP computer suite to predict noise levels associated with aircraft operations beneath the proposed Duke Low MOA (USAF 2016). The noise analysis report is in **Appendix F** of the EA.

7.4 NOISE MITIGATION MEASURES

Comment summary: Noise mitigation measures other than operational measures should be considered, including measures such as trail improvements and maintenance.

Response: The analysis that was completed indicates that the Proposed Action would not have significant impacts on trails. As such, mitigation is not required. Mitigation measures such as trail improvement and maintenance are not within the scope of the Proposed Action.

7.5 NOISE ANALYSIS CONCLUSIONS

Comment summary: Factual statements in the DEA do not support the ANG's conclusion.

Response: Noise effects are addressed in **Section 3.2** of the EA. The noise analysis is consistent with the operational usage outlined in **Chapter 2** of the EA, Description of Proposed Action and Alternatives, specifically under **Section 2.2**, Proposed Action. The EA includes an assessment of both land use compatibility using DNL and the effects from individual overflights using the supplemental metrics L_{max} and SEL.

L_{dnmr} includes a penalty for rapid onset rates in low flying aircraft. As the acoustic events from low flying aircraft are on the order of seconds, not milliseconds, L_{max} and SEL are the appropriate metrics for assessment as opposed to Peak Level. These events would be loud and have rapid onset as indicated in the EA; however, not short enough to be considered impulse noise. Notably, information on peak levels (dBP) of low flying aircraft are not available.

Areas beneath the proposed MOA would intermittently experience aircraft overflights exceeding 75 dBA L_{max} at any given point on the ground. However, any particular location on the ground would be overflown at low altitudes relatively infrequently. The airspace that is "overhead" (i.e., within 45 degrees of the horizon) increases with altitude, such that only 0.03 square miles is "overhead" at 500 ft AGL, 0.11 SM at 1,000 ft AGL, and 0.45 square miles at 2,000 ft AGL. This combined with the vast distribution of aircraft within the proposed Duke Low MOA and the limited amount of time at these altitudes, the time an aircraft was "overhead" at any given point on the ground would be extremely limited (e.g., seconds to minutes per year).

The analysis completed to determine the anticipated noise effects that would occur as a result of the Proposed Action, in combination with the literature research conducted, supports the conclusion provided in the EA.

7.6 NOISE EFFECTS ON HUMAN BEHAVIOR

Comment summary: Noise effects on human behavior; effects on tourism; would those vacationing here find other places; impacts to small businesses, real estate, those who recreate in the area.

Response: The NGB appreciates the statistics provided by some commenters on outdoor recreation and tourism in Pennsylvania and recognizes the importance of these industries to the local economy, specifically

the counties located below the proposed Duke Low MOA. While the NGB acknowledges possible impacts on tourism areas located under the loudest areas of the airspace, there is not a way to forecast a quantifiable impact on outdoor recreation and tourism from the proposed overflight activity. The statistics provided are included in **Section 3.7.2.5** of the EA and illustrate the effect tourism has on the local economy, including visitor spending within the PA Wilds. The potential impact to recreation and the economy are discussed in **Section 3.7.4** of the EA.

The distribution of proposed training would occur across a vast area of airspace (approximately 1,727 SNM). The likelihood of an individual experiencing an overflight is relatively low. Impacts to visitor experience would be intermittent, occurring only when aircraft are operating in the area. An individual's reaction to an overflight varies based on personal factors as well as factors such as proximity to the sound source, the setting of a specific recreational area, and the recreational activities in which the individual is engaged. Impacts on visitors from aircraft are only one of numerous factors that can affect visitor enjoyment (NPS 1994). It is not expected that the nature or tempo of the training would be at such a level that individuals recreating and hunting within recreational areas would experience extreme, consistent, routine, or even daily overflights.

Visitors are currently exposed to noise from existing aircraft operations, military and civilian. The NGB acknowledges the importance of these areas for tourism. However, it is not possible to predict how many individuals would have a negative response to an overflight that would cause them never to return, thereby impacting the revenue in the area. Since there are many non-noise-related factors that can affect tourism, the analysis does not attempt to quantify changes in tourism revenues or visitor numbers in individual communities directly related to military overflights.

Aircraft noise has been found to potentially affect the value of property under airspace with 65 DNL or higher noise exposure. Situations where it has been determined aircraft noise affects property values have been those that experience routine or continuous flights on a daily basis (such as housing around airports). According to the noise analysis that was completed, the noise exposures would remain far below 65 DNL throughout the proposed Duke Low MOA.

Property values are dynamic and influenced by a combination of factors, including market conditions, neighborhood characteristics, and individual real property characteristics (e.g., the age of the property, its size, home amenities, and lot size). The degree to which any factor may affect property values is influenced by many other factors that fluctuate widely with time and market conditions. These same factors enter the personal decision for people to purchase a home. The frequency of flights and the noise related to them are two of many factors that may affect changes in property values. As many non-noise related factors can affect property values, the analysis does not attempt to quantify changes in property values specifically as a result of the Proposed Action. For these reasons, the EA does not provide for specific compensation for a reduction in housing values. Questions and concerns regarding 175 WG training operations can be emailed to the Eastern Area Defense Sector at https://www.eads.ang.af.mil/Contact-Us/. This Office will be able to address concerns regarding 175 WG operations.

8.0 BIOLOGICAL RESOURCES

8.1 WILDLIFE IMPACTS

Comment summary: Sudden noise may cause deer to panic; low level flights may cause physiological or behavioral responses that reduce wildlife fitness; concerns about noise impacts on elk; visual impacts on wildlife; bat impacts are not effectively addressed; defining representative ground-dwelling species.

Response: To address concerns raised by PA DCNR while ensuring the MD ANG A-10 training mission, the NGB and the 175 WG prepared proposed mitigation measures which include limitations on nighttime operations, a 1,000 ft AGL floor over some sensitive areas located in the southern portion of the Duke Low MOA, and a 500 ft AGL floor for sensitive areas in other parts of the Duke Low MOA (see **Figure 2-3** of the EA). These altitude restrictions would reduce any potential noise effects on biological resources. Additional background information on the potential impacts of aircraft noise on biological resources was added to the EA; see **Section 3.4** of the EA for more details. The Proposed Action would not reduce the distribution or viability of species or habitats of concern, as no impacts to vegetation or habitat are expected. The intermittent aircraft noise over any given area would limit the potential effects on wildlife and domestic animals. Approximately 95 percent of aircraft operations would be conducted above 1,000 ft AGL, limiting potential effects on migratory birds.

Information was added to **Section 3.4.4.1** of the EA to supplement the impact analysis of aircraft noise and visual stimuli on wildlife. Studies on ungulates (e.g., elk, pronghorn, bighorn sheep, and mule deer) show that disturbances from subsonic aircraft noise are transient and short in duration, which suggests that they habituate to the sounds. In a heavily used MOA in Alaskan caribou, military jet overflights did not cause mortality of caribou calves or result in increased cow-calf pairs 24 hours after exposure to overflights (Lawler et al. 2005, Magoun et al 2003). Caribou exhibited mild short-term responses compared to reactions to predators. At altitudes of 200 ft or less, caribou ran and panicked when fixed-wing aircraft approached and reactions decreased as flight altitudes increased; above 500 ft panic responses were not observed (Klein 1973). A study that exposed Sonoran pronghorn to direct military overflights concluded that the military jet activity did not cause changes in behavior (Krausman & Harris 2002, Krausman et al. 2004). Overflights of A-10 and F-16 aircraft military aircraft had marginal influence on Sonoran pronghorn behavior. The Sonoran pronghorn behavioral patterns were similar with and without the military aircraft stimuli and the exposed animals had similar behavior to pronghorn not exposed to regular military activity (Krausman et al. 2004). Wildlife react to visual stimuli (e.g., aircraft overflights) that are below 1,000 ft AGL (Bowles 1995). Since approximately 95 percent of the aircraft operations would be conducted above 1,000 ft AGL, visual impacts are not expected to be significant.

The impacts of the Proposed Action on bats are discussed in **Sections 3.4.4.3** and **3.6.4.3** of the EA. Under the Proposed Action, there could be a limited number of overflights that occur at night when many bat species are active; however, those flights would not occur below 1,000 ft AGL due to potential safety concerns. Some species of bat migrate or hunt at altitudes of 1,100 ft AGL; however, based on the behavior of migrating bats, it is likely that they are flying just above treetop level. In addition, bats stop to forage throughout the night, indicating that they are likely flying low enough detect areas for feeding, drinking, and roosting (Peurach et al. 2009; Roby 2019). Northern long-eared bats primarily fly through the understory of forested areas while hunting make short migrations to their winter hibernacula (USFWS 2022). A study that

looked at 147 recorded bat strikes, in which the pilots reported awareness of the strikes, concluded that the average altitude of bat-aircraft strike occurrence is approximately 1,100 ft AGL (Peurach et al. 2009). Given that aircraft would spend approximately 10 minutes or less below 1,000 ft AGL during each sortie, and nighttime operations would not occur below 1,000 ft AGL, the potential for bat-aircraft strikes is negligible.

The text was revised to describe representative ground-dwelling species such as black bear and bobcat in Section **3.4.2.2** of the EA.

8.2 GROUND DISTURBING ACTIVITIES

Comment summary: Effects on wildlife would not be negligible since wildlife on the ground will be disturbed by jet noise, vibration, and air turbulence.

Response: The Proposed Action would involve establishment of permanent airspace to support aircraft activities; no ground disturbing activities would occur. There would be no construction-related impacts or changes to land use as a result of implementing the Proposed Action. Noise, vibration, and air turbulence from aircraft are not considered ground-disturbing activities in the context of the Proposed Action. Potential impacts resulting from vibration is discussed under **Response 8.4**.

8.3 BIRD IMPACT ANALYSIS

Comment summary: Request careful analysis of impacts to birds; impacts regarding migratory birds; how will the NGB mitigate bird strikes particularly during migration periods; how does the NGB plan to use real-time predictions of bird migrations; how would a bird or bat strike be determined and how will it be reported; how was the average number of air strikes per year calculated; how would breeding birds be impacted.

Response: Additional text was added to the EA to supplement the impacts analysis of the Proposed Action on birds in **Section 3.4.4.1** of the EA. Noise-related effects on birds involve the masking of communications among members of the same species, reducing the detectability of biologically relevant signals including the sounds of predators and prey, and temporarily or permanently decreasing hearing sensitivity (Dooling & Popper 2007). Birds typically hear a narrower frequency bandwidth compared to humans (Dooling & Popper 2007). A study of captive zebra finches (*Taeniopygia guttata*) given a choice of foraging in noisy and quiet area found no significant difference in the amount of time birds spent in noisy and quiet areas though those foraging in noisy areas spent more time being vigilant, resulting in less efficient foraging than those in quiet areas (Evans et al. 2018). In a study of ovenbirds, Habib et al. (2007) found chronic noise exposure near compressor stations affected pairing success, attributable by masking and distorting the song of breeding males on territories. In birds, hearing loss is difficult to characterize since birds regenerate hair cells even after substantial losses that can result in temporary threshold shifts (Bowles 1995). The Proposed Action would not reduce the distribution or viability of species or habitats of concern.

Additional information on migratory birds known or expected to occur within the Proposed Duke Low MOA was added to **Section 3.4.2.3** of the EA. A table was created and includes a list of species protected under both the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act and includes each species' respective breeding seasons (**Table 3-12** in the EA). **Table 3-13** of the EA includes a list of bird species with state and federal protection status. The current Bird-Aircraft Strike Hazard (BASH) Plan and FAA pre-flight protocols that are currently followed for the Duke MOA would also apply under the proposed Duke

Low MOA. The DAF Bird Avoidance Model and Avian Hazard Advisory System provide information that assists pilots with scheduling flight routes that minimize the hazard of bird-aircraft strikes. The online, near real-time geographic information system data helps predict bird movement using bird habitat, migration, and breeding characteristics. Approximately 95% of aircraft operations would be conducted above 1,000 ft, which is above the level where bird-aircraft strikes would be considered high risk. Since a majority of operations would occur about 1,000 ft AGL, the potential effects on migratory birds would be limited. **Section 3.6.2.3** of the EA further details the BASH prevention program. In the event of a bird strike event, the NGB would make all possible efforts to identify the species and record incidental takes.

The calculated number of bird strikes under the Proposed Action is less than four strikes per year based on an annual rate of strikes using the 100,000 flying hours standard (Air Force Safety Center 2019). The incidence rate of bird strikes under the existing conditions is considered low and would be expected to remain low under the Proposed Action. Based on ANG records during the last five years, there have been no recorded BASH incidents in or near the Duke MOA.

Effects reported in noise-wildlife studies were temporary with no acute (i.e., sudden) effects on reproduction, mortality, or survivorship. Ellis et al. (1991) found that the impact of frequent low level jet overflights on nesting peregrine and prairie falcons were minimal and not associated with reproductive failure. A few seconds after an overflight, the birds tend to quickly resume their normal activities. Likewise, the impacts to raptors and other birds (e.g., waterfowl, grebes) from low-level aircraft flights were brief and not detrimental to reproductive success (Smith et al. 1988; Ellis et al. 1991; Grubb and Bowerman 1997). Bowels et al. (2003) also found that Mexican spotted owls do not exhibit escape flights from roost groves or nests after exposure to military jet aircraft.

8.4 INDIANA AND NORTHERN LONG EARED BAT

Comment summary: Potential impacts to Indiana and Northern Long Eared Bats as a result of the Proposed Action

Response: Additional language has been added to **Section 3.4.4.2** of the EA. While no ground disturbance would occur under the Proposed Action, possible impacts to bats could occur from ground vibrations associated with airspace use at 100 ft AGL and above. Few researchers have studied the effects of sound on Indiana Bats. The studies that have been completed have indicated that hibernating Indiana Bats and Little Brown Bats did not appear to respond to intense sound simulations, such as recordings of actual military activities played over a loudspeaker system. In addition, bats exposed to low-level flights exhibited no acute responses, such as panic flights, falling young bats, or startle responses. No significant differences in bat orienting responses were noted before, during, or after jet flights, but depressed levels of bat flights were noted for up to 30 minutes following the jet noise. See **Section 3.4.4.2** of the EA for more detail.

Under the Proposed Action, there could be a limited number of overflights that occur at night when many bat species are active; however, overflights would not occur below 1,000 ft AGL due to safety concerns. Some species of bat migrate or hunt at altitudes of 1,100 ft AGL; however, based on the behavior of migrating bats, it is likely that they are flying just above treetop level. In addition, bats stop to forage throughout the night, indicating that they are likely flying low enough detect areas for feeding, drinking, and roosting (Peurach et al. 2009; Roby 2019). Northern long-eared bats primarily fly through the understory of

forested areas while hunting make short migrations to their winter hibernacula (USFWS 2022). A study that looked at 147 recorded bat strikes, in which the pilots reported awareness of the strikes, concluded that the average altitude of bat-aircraft strike occurrence is approximately 1,100 ft AGL (Peurach et al. 2009). Given that aircraft would spend approximately 10 minutes or less below 1,000 ft AGL during each sortie, and nighttime operations would not occur below 1,000 ft AGL, the potential for bat-aircraft strikes is negligible.

8.5 BALD EAGLE AND HERON NESTS

Comment summary: Safeguarding bald eagle and heron nests through mitigation measures.

Response: Bald eagles are protected under the Bald and Golden Eagle Protection Act, which prohibits "taking" of these species and includes protection for their nests and eggs. To avoid interference with bald eagle nests and to follow recommendations from the USFWS, under the Proposed Action aircraft would maintain a 1,000 ft overflight buffer and a 0.5 NM lateral buffer around bald eagle nests beneath the Duke Low MOA, consistent with DAF directive. The Proposed Action would be consistent with National Bald Eagle Management Guidelines, as requested by USFWS.

The blue heron is protected under the Migratory Bird Treaty Act but was not identified by the USFWS Information for Planning and Consultation information as a species of particular concern in the proposed Duke Low MOA. The Armed Forces is exempt from the incidental take of migratory birds during authorized military readiness activities, provided that they confer and cooperate with the USFWS to develop and implement appropriate conservation measures for any activities that may result in a significant adverse effect on a population of a migratory bird species, as discussed in **Section 3.4.2.3** of the EA. Use of the BASH Plan, pre-flight protocols, USAF Bird Avoidance Model and Avian Hazard Advisory System, and operation of most aircraft (95%) above 1,000 ft would minimize the hazard of flight strikes.

8.6 NORTHERN GOSHAWK

Comment summary: Northern Goshawk should be added to the Pennsylvania list of endangered species.

Response: The Northern Goshawk was added to the list of endangered species within Pennsylvania after the Draft EA public comment period concluded. The species was added to the EA in **Table 3-13,** Federal and State Listed Threatened and Endangered Species, and discussed in **Section 3.4.2.3** of the EA.

8.7 MONARCH BUTTERFLIES

Comment summary: Impacts on monarch butterflies should be analyzed.

Response: There are no documented impacts to butterfly populations related to low level military overflights. On July 21, 2022, the International Union for the Conservation of Nature (IUCN), a membership union composed of government and civil society organizations, listed the monarch butterfly as endangered due to habitat loss and climate change. While the monarch butterfly is listed as endangered by IUCN, it is not currently listed as a federally or state listed endangered or threatened species by the USFWS, the agency responsible for the oversight and enforcement of the Endangered Species Act. In December 2020, the USFWS determined that listing the monarch under the Endangered Species Act is warranted but precluded by higher priority listing actions. As such, the monarch is a candidate for listing and the USFWS will review

the status each year until they are able to begin developing a proposal to list the monarch. At this time, since the monarch is not currently listed, neither Section 7 of the Endangered Species Act nor the implementing regulations for Section 7 include requirements for federal agencies with respect to candidate species. Critical habitat has not been designated for the monarch butterfly.

8.8 TREES

Comment summary: Proposed requirements for burn permits for clear cutting and controlled burning to regenerate plant life for wildlife; aircraft avoidance of trees and other obstacles.

Response: The NGB does not regulate or authorize clear-cutting or controlled burning of Pennsylvania forests and is outside the scope of this analysis. In forested areas where the tree canopy is approaching 100 ft in height, the aircraft would be at least 100 ft above the tree canopy or 200 ft AGL over the areas. In accordance with 14 CFR 91.119, Minimum Safe Altitudes and AFI 11-202v3, General Flight Rules, aircraft would continue to follow low-level guidance and remain 1,000 ft above the highest obstacle and 2,000 ft laterally when over congested or populated areas, as well as 500 ft above all known or observed antennas and obstacles.

8.9 NATURAL AREAS

Comment summary: Tamarack Swamp Natural Area should have a 1,000 ft AGL buffer like Hammersley Wild Area; state natural areas are not included in the DEA; FAA recommendation to maintain a 2,000 ft minimum safe altitude floor over state parks under FAA Advisory Circular 91-36D.

Response: In response to concerns raised regarding noise impacts to sensitive species, the NGB raised the floor to 500 ft AGL over state parks and undeveloped areas that are considered noise sensitive. These areas include Denton Hill, Lyman Run, Patterson, Prouty Place, Cherry Springs, Sinnemahoning, Ole Bull, and Sizerville state parks. The airspace floor would also be raised to 500 ft AGL over Johnson Run Natural Area, Pine Tree Trail Natural Area, Bucktail State Park Natural Area, Tamarack Swamp Natural Area, and Square Timber/Big Run Wild Area. In addition, the floor of the MOA would be raised to 1,000 ft AGL over the Forrest H. Dutlinger Natural Area, Hammersley Wild Area, and Kettle Creek State Park in an effort to minimize potential impacts to those wild and recreational areas. Based on the sporadic and infrequent change in sound level from baseline and the predicted wildlife startle response (Dufour 1980; Manci et al. 1988; Ellis et al. 1991), the potential for noise disturbance from aircraft operations would not be considered significant in terms of effects on threatened or endangered species, including state-listed species. This is discussed in **Section 3.4.4.3** of the EA**.**

FAA Advisory Circular 91-36D, *Visual Flight Rules (VFR) Flight Near Noise-Sensitive Areas*, was implemented to mitigate complaints concerning low flying aircraft over federally owned noise sensitive, including areas such as National Parks, National Wildlife Refuges, Waterfowl Production Areas, and Wilderness Areas. No federally owned noise sensitive areas are located beneath the proposed Duke Low MOA. This is discussed in **Section 3.2.8.2** of the EA.

8.10 HABITAT AND UNIQUE CHARACTERISTICS

Comment Summary: Assess unique characteristics of the geographic area, such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas; potential visual impacts, particularly for Cherry Springs Dark Sky Preserve; altitude mitigation over Tamarack Swamp.

Response: The Proposed Action would include no ground disturbance, so impacts to wild and scenic rivers, wetlands, and farmlands would not occur. The potential effects to cultural resources are discussed in **Section 3.5** of the EA. All previously recorded cultural resources are documented in **Appendix G** of the EA. A discussion of parklands found beneath the Duke MOA is included in **Section 3.3** of the EA. The Final Noise Analysis is included as **Appendix F** of the Final EA.

Concerns were raised during the public comment period related to potential impacts to the Cherry Springs State Park, which is also known as the Cherry Springs Dark Sky Preserve. Cherry Springs State Park is a remote and wild state park, named for the large stands of black cherry trees originally found in the area. Night sky enthusiasts flock to the park to experience dark skies and views of the Milky Way, planets, and hard to see phenomena (PA DCNR 2022). As discussed in **Section 3.3.4.1** of the EA, a 500-foot altitude mitigation buffer has been over Cherry Springs State Park, which was identified as a noise sensitive area. In addition, night operations would not occur at altitudes below 1,000 ft. Night operations currently occur within the existing Duke MOA. Given the infrequency of flights occurring over a single location, visual impacts to this area are not expected.

A 500-foot altitude mitigation would be placed over Tamarack Swamp i to minimize potential impacts.

9.0 ECONOMIC IMPACTS

9.1 TOURISM

Comment summary: the Proposed Action will disturb visitors to the region who come to experience nature and all its wonders which will threaten Pennsylvanian's livelihoods; request coordination with Pennsylvania Fish and Boat Commission to reduce impact on anglers. Acknowledges tourism, but fails to demonstrate how proposed action would have no significant impacts on outdoor recreation and tourism

Response: The NGB appreciates the concerns expressed and recognizes the importance of tourism to the local economy. The NGB acknowledges possible impacts on tourism areas located in the loudest areas of the airspace, but there is no way to forecast a quantifiable impact on outdoor recreation and tourism from the Proposed Action. There is a lack of published studies on quantifiable impact from aircraft overflights in MOAs to local economies related to outdoor recreation and tourism. While there are possible impacts on recreation and tourism in the parks and natural areas beneath the proposed Duke Low MOA airspace, there are no data to forecast a quantifiable impact on outdoor recreation and tourism from the proposed overflights. The likelihood of an individual experiencing an overflight would be low and intermittent because the distribution of proposed training would occur across a vast area of airspace (1.4 million acres), as discussed in **Section 3.7.4.3** of the EA. In addition, the Proposed Action would not alter, prohibit, or otherwise limit the public's access to the recreational areas beneath the Duke Low MOA.

Management actions and special procedures specified in **Chapter 5** of the EA would be implemented under the Proposed Action to further minimize any potential effects. In addition, the proposed Duke Low MOA altitudinal mitigation for state parks and state forests would be implemented to address concerns for the most critical sensitive areas. Pilots would be instructed to avoid these locations by horizontal and vertical distances specified on the map (500 and 1,000 ft AGL) to enhance flight safety, noise abatement, and environmental sensitivity. Considering implementation of management actions, special procedures, and altitudinal mitigation for state parks and state forests, the Proposed Action would not significantly impact tourism.

Noise from the proposed aircraft operations would have less than significant effects on the public's use and enjoyment of the state parks and forests, and other wildlife and recreational areas under the proposed Duke Low MOA. In a 1992 USFS study, the majority of wilderness users interviewed were not annoyed by overflights. The major emphasis of this study was to determine the effects of aircraft overflights on visitor enjoyment. No statistically reliable relationships were found between annoyance due to the sight or sound of overflights and respondents' reported intent to revisit. Intention to revisit was also unrelated to aspects of visits that respondents reported liking least. Refer to **Section 3.7.4.3** of the EA for more details.

The NGB and the 175 WG prepared proposed mitigation measures to address concerns raised by PA DCNR while ensuring the MD ANG A-10 training mission. Low altitude avoidance and noise sensitive areas for the proposed airspace would be identified in the local flight instructions for pilots. Pilots would be instructed to avoid these locations by horizontal (1 NM lateral boundary) and vertical distances (500 and 1,000 ft AGL) to enhance flight safety, noise abatement, and environmental sensitivity. A 1,000 ft AGL floor would be implemented over sensitive areas of concern in the southern portions of the Duke Low MOA, specifically over the Hammersley Wild Area, Forrest H. Dutlinger Natural Area and the Kettle Creek State Park. A 500 ft AGL floor would be implemented over sensitive areas of concern in the remaining portions of the Duke Low MOA, such as over the State Parks, Sinnemahoning Creek and the historical Austin Dam ruins. Tamarack Swamp, Pine Tree Trail, Ole Bull State Park were added to the areas with a 500 ft AGL floor. In forested areas where the tree canopy is approaching 100 ft in height, the aircraft would be at least 100 ft above the tree canopy or 200 ft AGL over the areas. The likelihood of an individual experiencing an overflight would be low and intermittent because the distribution of proposed training would occur across a vast area of airspace (1.4 million acres). Refer to **Section 2.2** of the EA for more details.

9.2 PENNSYLVANIA WILDS

Comment summary: Concern over impacts on Pennsylvania Wilds as a premier outdoor recreation destination; one of the Commonwealth's most valuable and unique resources. The proposal threatens that wild nature by creating noise and air pollution, disturbing wildlife and visitors; training flights are detrimental to that experience and may affect Pennsylvanians' livelihoods.

Response: There is a lack of published studies on quantifiable impact from aircraft overflights in MOAs to local economies related to outdoor recreation and tourism. While there are possible impacts on recreation and tourism in the parks and natural areas beneath the proposed Duke Low MOA airspace, there are no data to forecast a quantifiable impact on outdoor recreation and tourism from the proposed overflights. Given the size of the airspace (1.4 million acres) and the distribution of proposed training, the likelihood of an individual experiencing an overflight would be low and intermittent. Every four days on average an individual on the ground may experience an individual aircraft overflight that would interfere with speech

on the ground for approximately 22 seconds. Utilization of the Duke MOA has occurred historically for decades, so to some degree, aircraft noise is not new to the region. The environmental consequences of the Proposed Action as it relates to the PA Wilds is discussed in **Sections 3.3.4** and **3.7.2.5** of the EA.

9.3 HARDWOOD INDUSTRY CONCERNS

Comment summary: Concern over detrimental impacts on hardwood industry; impacts from training flares, jet fuel spills.

Response: The hardwood industry would not be affected by the Proposed Action since it would not include construction, development, or changes in ground-based operations. The safety protocols, and management actions and special procedures would be implemented under the Proposed Action to ensure the safe use of the Duke Low MOA. To minimize interaction with civilian aircraft, military aircraft training in the proposed Duke Low MOA would maintain contact with the controlling agency to ensure proper separation with all non-participating aircraft. The Proposed Action would not involve the use of chaff or flare release. Fuel dumping would not be included as a component of any routine flight training and would only occur during in-flight emergency circumstances with a loss of life potential for the pilot.

Based on ANG records during the last five years or known previously, there have been no recorded mishaps in or near the Duke MOA. The types of aircraft training in the Proposed Duke MOA and associated mishap rates per 100,000 hours would remain unchanged when compared to existing conditions. Please refer to **Section 3.6.4.1** of the EA for more details.

9.4 FARMLAND

Comment summary: How was impact on farmland conducted?

Response: The National Land Cover Database shows that only nine percent of the land beneath the proposed Duke Low MOA is designated as crops and pastureland. There would be no short- or long-term changes in land use as a result of the implementation of the Proposed Action and it would not involve any ground disturbance or conversion to non-agricultural uses, as discussed in **Section 1.5** of the EA. As a result, an analysis of potential impacts to farmlands was not conducted. **Section 3.4.4.2** of the EA includes a discussion of the effects of noise on domestic animals. Studies indicate that domestic animals exhibit some behavioral responses to military overflights, but generally habituate to those disturbances over a period of time. Additional studies regarding the effects of aircraft overflight on domestic animals have been reviewed and discussed in further detail in **Section 3.4.4.2** of the EA.

9.5 CHANGE IN LAND USE

Comment summary: How land is used may change as a result of the Proposed Action

Response: Changes in land use would be driven by changes in noise levels beneath the proposed Duke Low MOA. As discussed in **Section 3.2** of the EA, based on the noise modeling results, the noise resulting from the proposed overflights would not exceed a level indicating a need for land use restrictions (65 DNL) or adversely affect human health (55 DNL). In addition, the flights are not expected to occur in one area with

substantial frequency given the overall size of the proposed training airspace. As a result, the Proposed Action would not result in changes to land use. See **Section 3.3** of the EA for more details.

9.6 RECOVERY FROM ADVERSE IMPACTS

Comment summary: Request to provide funds for adverse impacts from flyover event (e.g., horse injured from being frightened by flyover event).

Response: Damage or injury to property and livestock from incidents caused by 175 WG activity would be evaluated on a case-by-case basis. Questions and concerns regarding 175 WG training operations can be emailed to the Eastern Area Defense Sector at https://www.eads.ang.af.mil/Contact-Us/. This Office will be able to address concerns regarding 175 WG operations.

9.7 PROPERTY VALUES

Comment summary: Noise will affect housing values, property values

Response: There are several factors that affect property values that make estimating impacts difficult. Factors directly related to the property, such as size, improvements, and location of the property, as well as current conditions in the real estate market, interest rates, and housing sales in the area, are more likely to have a direct impact on property values. Several studies have analyzed property values as they relate to military and civilian aircraft noise. In one study, a regression analysis of property values as they relate to aircraft noise at two military installations was conducted (Fidell et al. 1996). This study found that, while aircraft noise at these installations may have had minor impacts on property values, it was difficult to quantify that impact. Other factors, such as the quality of the housing near the installations and the local real estate market, had a larger impact on property values. Therefore, the analysis was not able to predict the impact of aircraft noise on the property values of two comparable properties.

Another study examined and summarized the results of 33 studies that attempted to quantify the impact of noise on property values (Nelson 2004). It concluded that aircraft noise has the potential to adversely impact property values, specifically, property values could be discounted between 0.5 and 0.6 percent per decibel when compared to a similar property that is not affected by aircraft noise. The data indicate that noise effects on property value increases for noise levels above 75 DNL. As illustrated in **Section 3.2** (Noise) in the EA, the noise associated with training is lower than that associated with an active runway (i.e., an installation). The noise exposure would be distributed across a vast area and no single location would be expected to receive a consistently high exposure to noise. The highest DNL expected at any of the municipalities under the proposed Duke Low MOA is 53 DNL, which is an increase of 0.1 DNL when compared to existing conditions. This level is much lower than the 65 DNL threshold established for land use restrictions and significantly lower than 75 DNL which has been indicated to affect property values. Given the low expected DNL values and the distribution of the training activity across such a large area, it would not be expected that the Proposed Action would have any quantifiable impacts to the existing housing values within the region of influence.

9.8 MITIGATION FOR ECONOMIC IMPACTS

Comment summary: What mitigation measures would be implemented to alleviate significant economic impacts if they occur? Impacts to vulnerable communities and limited resources to respond to emergencies

Response: The level of impact to a local or regional economy that would result from military training is dependent on various factors, including but not limited to the frequency of flights, time of day, and local perception of military flights. Noise modeling indicates that the Proposed Action would result in an increase in overall noise levels by between 0.4 and 1.3 dBA L_{dnmr} and 0.1 to 0.3 dBA DNL for all state parks and forests, and other wildlife and recreational areas under the proposed Duke Low MOA. Within population centers, noise levels would increase by between 0.1 and 1.2 dBA L_{dnmr} and 0.1 to 0.2 dBA DNL. No area under the proposed Duke Low MOA would exceed 53.3 dBA L_{dnmr} or 53.0 dBA DNL. Given the low expected DNL values and the distribution of the training activity across such a large area, the Proposed Action is not expected to result in quantifiable impacts to the existing housing values under the proposed Duke Low MOA.

The noise analysis indicates that the average noise resulting from the Proposed Action would not be at a level that would be considered incompatible with recreational land uses. Though studies show that noise from a number of sources, including aircraft, can affect visitor experience and enjoyment of parks and forests, it is not clear how such experience affects visitation. While it is possible that noise could reduce visitation, potentially reducing contributions to local economies, it is not possible to quantify the economic impact.

The populations beneath existing airspace are currently exposed to military aircraft activity and that would continue in the future. Economic industries currently found under the proposed Duke Low MOA, such as manufacturing, government and government enterprises, retail trade, and manufacturing would continue to be important economic industries within the area.

The specific cost for responding to an accident as a result of the proposed training activity cannot be quantified since it is dependent on local conditions at the time of the incident, geographic area and distance from responders, and severity of fire. The DAF responds to all aircraft related incidents and the 175 WG maintains a detailed emergency and mishap response plan to react to an accident, should one occur (see **Section 3.6.2.1** of the EA, Safety Planning, Awareness Training, Emergency Response, and Alerts). Damage or injury to property from incidents caused by 175 WG activity would be evaluated on a case-by-case basis. Questions and concerns regarding 175 WG training operations can be emailed to the Eastern Area Defense Sector at https://www.eads.ang.af.mil/Contact-Us/. This Office will be able to address concerns regarding 175 WG operations.

9.9 AGRICULTURAL IMPACTS

Comment summary: Has ANG conducted full inventory of number of farms that maintain livestock? Will low flyovers in those areas be avoided? EA does not recognize impact on agricultural activities, production, and business; analysis of impact to fertility, reproduction, lactation, harm or injury to farm animals. The statement that livestock habituate over time is too broad of a generalization.

Response: **Section 3.4.4.2** of the EA discusses the noise effects on domestic animals. The effects of aircraft noise on domestic animals indicates that they exhibit some behavioral responses to military overflights but generally seem to habituate to the disturbances over a period of time. Many studies on domestic animals suggest that some species appear to acclimate to sound disturbance (Manci et al. 1988). The effects of noise on domestic animals have been studied since the late 1950's and based on these studies, the effects from conducting low-altitude flights over agricultural areas would be small (Bowles et al. 1990). Noise generated by low-altitude, highspeed aircraft overflights normally will have no direct effect on large domestic livestock (USAF 1994). In a technical bulletin, the Department of Defense Noise Working Group published a summary of an extensive body of pertinent scientific data on domestic fowl accumulated over the past 40 years. The technical bulletin concluded that the most serious potential damages to poultry are injuries and suffocations that occur when panicked birds pile or crowd. It was noted that any type of aircraft noise of sufficient sound level can induce piling and crowding; however, only naive birds (with no prior exposure to aircraft noise) panic, and birds habituate quickly to noise. The technical bulletin noted that the likelihood of damaging panicked responses is small based on experimental studies and interviews with growers. Based on the existing experimental evidence, effects on productivity (effects on growth and egg production) were considered unlikely and predictions of the potential for effect could not be made because little is known about the physiological effects of stress, in general, on birds. The summary noted that effects of aircraft overflights on marketability are possible; however, the economic losses due to aircraft overflights would be minimal (Department of Defense Noise Working Group [DNWG] 2013). More severe responses are possible depending on the number of birds, the frequency of exposure, and environmental conditions (Wyle Laboratories 2008). Given the volume of proposed Duke Low MOA airspace, no single location would be subjected to repeated or continuous overflights. Based on the findings in the studies on the effects of aircraft noise on domestic animals, the potential for noise disturbance from aircraft operations under the Proposed Action would be less than significant effects on domestic animals and livestock. In addition, concentrated Animal Feeding Facilities (e.g., stockyards) are charted on aeronautical charts and are routinely avoided and will continue to be avoided.

The EA notes that the National Land Cover Database shows nine (9) percent of the land beneath the Duke Low MOA is designated as crops and pastureland. Farms would not specifically be avoided for low altitude flights.

Damage or injury to property and livestock from incidents caused by 175 NGB action would be evaluated on a case-by-case basis. Questions and concerns regarding 175 WG training operations can be emailed to the Eastern Area Defense Sector at https://www.eads.ang.af.mil/Contact-Us/. This Office will be able to address concerns regarding 175 WG operations.

10.0 RECREATION

10.1 CHERRY SPRINGS DARK SKY AREA, CHERRY SPRINGS STATE PARK

Comment summary: Concern over impacts on Cherry Springs Dark Area and ability of tourists to enjoy the area.

Response: Concerns were raised during the public comment period related to potential impacts to the Cherry Springs State Park, which is also known as the Cherry Springs Dark Sky Preserve. Cherry Springs State Park

is a remote and wild state park, named for the large stands of black cherry trees originally found in the area. Night sky enthusiasts flock to the park to experience dark skies and views of the Milky Way, planets, and hard to see phenomena (PA DCNR 2022). As discussed in **Section 3.4.4.3** of the EA, a 500 ft altitude mitigation buffer would be implemented over Cherry Springs State Park, which was identified as a noise sensitive area. In addition, night operations would not occur at altitudes below 1,000 ft. Night operations currently occur within the existing Duke MOA. Given the infrequency of flights occurring over a single location, visual impacts to this area are not expected.

10.2 DISTURBANCE WITHIN RECREATIONAL AREAS

Comment summary: A 100 ft ceiling is low in areas where people are recreating; impacts on anglers.

Response: In forested areas where the tree canopy is approaching 100 ft in height, the aircraft would be at least 100 ft above the tree canopy or 200 ft AGL over these areas. In accordance with 14 CFR 91.119, Minimum Safe Altitudes and AFI 11-202v3, General Flight Rules, aircraft would continue to follow low-level guidance and remain 1,000 ft above the highest obstacle and 2,000 ft laterally when over congested or populated areas, as well as 500 ft above all known or observed antennas and obstacles. This is discussed in **Section 3.2.8.2** of the EA (Individual Overflight Noise).

As discussed under **Response 7.1**, Level of Noise Impact, and **Section 3.7.4.3** of the EA, the anticipated noise associated with the Proposed Action would not be considered significant when considering the public's use and enjoyment of the state parks and forests, and other wildlife and recreational areas under the proposed Duke Low MOA. In a USFS study (1992), the majority of wilderness users interviewed were not annoyed by overflights.

Anglers would not be affected in regard to impacts on water resources since there would be no ground-disturbing activities, no infrastructure changes, no supersonic flight activities, no release of chaff and flares, no weapons firing, and no ordnance deployment, effects on water resources (i.e., wetlands, floodplains, surface waters, groundwater, or wild and scenic rivers).

10.3 HUNTING ACTIVITIES

Comment summary: The EA incorrectly states that interference with hunting activities would be avoided under the Proposed Action.

Response: **Sections 3.3.4.1** and **3.7.4.3** of the EA were revised to include language indicating that the Proposed Action would be commensurate with reducing interference with hunting activities because there would be very little use on weekends, no use on federal holidays, and the majority of hours (approximately two hours per activation day) used would occur during the mid-day, when hunting is least affected. The Proposed Action would not alter, prohibit, or otherwise limit the public's access to the recreational areas beneath the proposed Duke Low MOA.

Comment summary: Why are state parks held to a 500 ft altitude floor when FAA Advisory Circular 91-36D recommends National Parks be permitted a 2,000 ft minimum safe altitude floor? Explain the difference.

Response: FAA Advisory Circular 91-36D was issued in response to noise complaints received by FAA concerning low flights over federally managed noise sensitive areas, including National Parks, National Wildlife Refuges, Waterfowl Production Areas, and Wilderness Areas. This Advisory Circular references the Noise Policy for Management of Airspace over Federally Managed Areas and provides additional recommendations for minimizing noise impacts over those specific areas referenced. State parks are managed by state agencies. The recommendations provided within this Advisory Circular are voluntary and adherence is not required. Within the proposed Duke Low MOA, raising the floor to 2,000 ft AGL over state managed lands would eliminate more than half of the proposed training area, limiting the ability of the 175 WG to train effectively.

11.0 ENVIRONMENTAL JUSTICE

11.1 ENVIRONMENTAL JUSTICE AREAS

Comment summary: Outreach to communities; methodology used to evaluate impacts from Proposed Action on environmental justice areas; how will impacts be limited

Response: The proposed airspace was identified through a systematic process outlined in **Section 2.1** of the EA. All public involvement and outreach activities are described in **Section 1.4.4** of the EA and presented in **Appendix H**. No requests to translate materials were received through written or electronic communications.

Individual communities were not contacted regarding the Proposed Action. A Notice of Availability for public review of the Draft EA was published in four regional newspapers and made available in local libraries. The DEA/FONSI was made available and distributed upon request to federal, state, and local agencies, as well as regional libraries to invite public participation. More information is available on the 175 WG's webpage at https://www.175wg.ang.af.mil/. See **Section 1.4.4** of the EA for more details.

Impacts to low-income, minority, and youth populations are assessed in **Section 3.8**, a new section that was added to the EA to address Environmental Justice. The Proposed Action would not result in significant impacts to any resources that would adversely impact the health or environment of minority or low-income populations or children living beneath the ROI. Impacts to low-income and/or minority populations or children would not be considered significant based on the significance criteria that was used to evaluate anticipated impacts during the analysis. All populations under the proposed Duke Low MOA would experience the same effects from the Proposed Action, which means that disproportionate impacts would not occur. For more details, please see **Section 3.8** of the EA.

11.2 EXECUTIVE ORDER 14008

Comment Summary: In light of Executive Order 14008, Tackling Climate Crisis at Home and Abroad, perform a more in-depth analysis regarding impacts of this proposal on the 22 environmental justice and otherwise distressed communities under the proposed Duke Low MOA.

Criteria and guidelines for addressing environmental justice impacts are provided in **Section 3.8** (Environmental Justice) of the EA. The noise analysis presented in **Section 3.2** (Noise) of the EA illustrates that the Proposed Action would result in an overall increase in noise levels by between 0.1 and 1.3 dBA

L_{dnmr} and 0.1 and 0.3 dBA DNL for areas beneath the proposed Duke Low MOA. These changes in noise levels would not be perceptible when compared to existing conditions, and noise from aircraft would continue not to contribute appreciably to the overall background levels throughout the region. These changes in noise would not be "reportable" under FAA guidance (FAA Order 1050.1F), and these effects would not be considered significant. This would constitute a negligible increase in the annual average noise when compared to existing conditions. Overall, noise levels associated with the Proposed Action would be relatively consistent with existing conditions and in populated areas would remain below recommended land use thresholds. Therefore, potential impacts associated with noise to any low income, minority, children, or elderly living beneath proposed Duke Low MOA would be expected to be insignificant. The impacts associated with environmental justice and protection of children with respect to airspace is discussed in further detail in **Section 3.8** of the EA. Consideration of cumulative effects identified in **Chapter 4** of the EA would be expected to result no significant impacts to environmental justice populations. Respective future actions would require independent NEPA analysis by respective lead agencies to assess potential environmental justice impacts.

12.0 PUBLIC HEALTH AND QUALITY OF LIFE

12.1 NOISE IMPACTS, NON-AUDITORY CONCERNS

Comment summary: Concerns that residents with post-traumatic stress disorder (PTSD), including veterans, will react adversely to aircraft noise

Response: There is public concern that aircraft noise has non-auditory health effects, which are physiological effects on health and well-being (i.e., stress response and cardiovascular effects) that are caused by exposure to aircraft noise. While there is a substantial amount of research on the topic, most of the studies concern chronic exposure to high levels of noise, like that experienced in an airport environment with hundreds of flights per day. The impacts of aircraft noise on human health are unclear and the majority of the research on this topic focuses on chronic exposure of high levels of noise, which would not occur under the Proposed Action. The DNWG stated that the current state of scientific knowledge cannot yet support inference of a causal or consistent relationship between military aircraft noise exposure and non-auditory health consequences for exposed residents. The results of published studies of aircraft noise on human health are unclear. There is a lack of scientific basis to conclude that aircraft noise has negative non-auditory health consequences on exposed residents (DNWG 2013).

Post-traumatic stress disorder (PTSD) is a serious, life-altering condition that affects six to eight percent of the population. Triggering events vary widely for each individual, from military combat and natural disasters to car accidents and assaults. It is not possible to predict how individuals will react or the severity of the response to the Proposed Action given the diverse causation and success rate of individual treatment. The National Institute of Mental Health (NIMH) offers guidance to understand the symptoms and reactions as well as information to find treatment. NIMH has specific links on their website at https://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorderptsd/ index.shtml. The NGB recognizes the effects that PTSD can have on an individual. Data does not currently exist that identifies where patients with PTSD may be located within the proposed Duke Low MOA, as the Department of Veterans Affairs would not publish information on patients unless they volunteer to be a member of a study, due to potential violations of the Health Insurance Portability and Accountability Act of 1996 (associated

with publishing such information. Such studies do not currently exist within the proposed Duke Low MOA. If there is an issue that is raised, concerns would be mitigated after the implementation of the Proposed Action. Any issues identified would be addressed on a case-by-case basis as they arise.

12.2 RESIDENTS OF THE AREA

Comment summary: Proposed modification is completely unacceptable as it will have a detrimental impact on the residents of the area; impacts to quality of life.

Response: Utilization of Duke MOA has occurred historically for decades, so to some degree, aircraft noise is not new to the region. The proposed Duke Low MOA would introduce intermittent operations occurring at lower altitudes than what is currently conducted. Refer to **Section 3.2** of the EA for more information on the noise impacts. An evaluation of expected noise impacts was completed and incorporated an analysis of both the DoD and FAA noise significance criteria. Based on the EA that has been prepared, the Proposed Action would have minimal effect on the area under the MOA.

Quality of life is a subjective determination based on personal experiences and preferences. Some of the community characteristics that affect quality of life include population density; educational, recreational, and cultural opportunities; housing characteristics; and access to community and health care services. The preferences and values attributed to these characteristics will vary by the individual as well as the form in which these characteristics are presented in the community. Therefore, the EA does not analyze the effects on a specific individuals' quality of life.

12.3 QUALITY OF LIFE

Comment summary: How will pilots avoid congested areas of cities, towns, and open-air assemblies of people (including state parks, festivals); degradation of quality of life.

Response: As part of preflight preparations, pilots identify any populated areas and avoid them. Training would not occur over congested areas. Air Force Manual 11-202v3, Flight Operations, specifically prohibits flying over any congested area of a city, town, or settlement, as well as over any open-air assembly of persons during military training. Pilots must maintain an altitude of at least 1,000 ft above the highest obstacle within a horizontal radius of 2,000 ft of the aircraft. See **Section 3.3.4** of the EA for further discussion. Studies have been conducted to determine the effects on health as associated with military overflights. Studies have been cited throughout the EA.

In addition to avoiding cities and towns, an altitude mitigation map has been developed to avoid flyovers below 500 ft AGL over state parks under the proposed Duke Low MOA, as discussed in **Section 3.2.8.2** of the EA.

13.0 MITIGATION AND RESTRICTIONS

13.1 PUBLIC NOTICE OF SCHEDULED FLYOVERS

Comment summary: Advance public notice of scheduled flyovers should be issued to local and regional news media which could help reduce the negative impacts; establish no-fly days around federal holidays

Response: The 175 WG will not issue press releases to notify the public of activation or operation in the airspace. Questions and concerns regarding 175 WG training operations can be emailed to the Eastern Area Defense Sector at https://www.eads.ang.af.mil/Contact-Us/. This Office will be able to address concerns regarding 175 WG operations.

The purpose of the Proposed Action is to establish low-level airspace beneath the existing Duke MOA to train and prepare military pilots and aircrews for current and future conflicts. The action would provide reasonable flexibility for aircrew usage and air traffic control de-confliction. As discussed in **Section 2.2** of the EA, the MD ANG is a federal entity that would not typically fly on federal holidays outside of wartime; however, the training requirements could not be met with restrictions, such as no-fly days.

13.2 NATURAL AREA MITIGATION BUFFERS

Comment summary: Tamarack Swamp Natural Area and Pine Tree Natural Area are not on the mitigation map, but should be; which areas will have mitigation buffers

Response: As illustrated on **Figure 2-3** in the EA, a 500 ft AGL buffer has been added around the Tamarack Swamp Natural Area, Pine Tree Trail Natural Area, and Ole Bull State Park. A 500 ft AGL floor would be implemented over sensitive areas of concern in the remaining portions of the Duke Low MOA, such as over the State Parks, Sinnemahoning Creek and the historical Austin Dam ruins. In addition, a 1,000 ft AGL floor would be implemented over Hammersley Wild Area, Forrest H. Dutlinger National Area, and Kettle Creek.

13.3 AGRICULTURAL ZONES

Comment summary: Agricultural zones with livestock should be protected with mitigation buffers

Response: Concentrated Animal Feeding Facilities, such as stockyards, are charted on aeronautical charts and are routinely avoided during flyovers. Pilots would continue to avoid flying over these facilities under the Proposed Action.

14.0 CLOSE CAUSAL RELATIONSHIPS AND CUMULATIVE IMPACTS

14.1 COUNCIL ON ENVIRONMENTAL QUALITY REGULATIONS

Comment summary: CEQ regulations are under review, request consideration of cumulative impacts, environmental justice, climate change, and public interest

Response: Effective 20 May 2022, the CEQ's NEPA Implementing Regulations have been updated. The language in the EA has been updated accordingly to reflect the change in the regulations. See **Section 1.4.1,** NEPA, in the EA for details on how NEPA and CEQ regulations are implemented. **Chapter 4** of the EA has been updated to change the discussion related to "close causal relationships and reasonably foreseeable actions" to a discussion related to the expected cumulative effects. **Section 4.1** of the EA includes the approach to the cumulative effects analysis, which includes the scope of the analysis, a list of past, present, and reasonably foreseeable actions, and the cumulative effects analysis.

As discussed under Response **11.0, Environmental Justice**, the Proposed Action is not expected to result in disproportionate impacts to environmental justice communities and populations based on the findings of

no significant adverse impacts on the other resources evaluated. Impacts to low-income and/or minority populations or children would not be considered significant based on the significance criteria that was used to evaluate anticipated impacts during the analysis. All populations under the proposed Duke Low MOA would experience the same effects from the Proposed Action, which means that disproportionate impacts would not occur. Therefore, the resource area for environmental justice and children's environmental health and safety risks was not carried forward for detailed analysis in the EA.

Additional language has been added to **Section 1.5** of the EA to discuss climate change. The DAF, in keeping with the mandate of Executive Order 13834, Efficient Federal Programs, operates with the following goals to reduce energy consumption and as a result reduce greenhouse gas (GHG) emissions:

- Achieve and maintain annual reductions in building energy use and implement energy efficiency measures that reduce costs.
- Meet statutory requirements relating to the consumption of renewable energy and electricity.
- Ensure that new construction and major renovations conform to applicable building energy efficiency requirements and sustainable design principles and annually assess and report on building conformance to sustainability metrics.
- Track and report on energy management activities, performance improvements, cost reductions, greenhouse gas emissions, energy and water savings, and other appropriate performance measures.

At this time, climate change presents a global problem caused by increasing concentrations of GHG emissions. While climate change results from the incremental addition of GHG emissions from millions of individual sources, the significance of an individual source alone is impossible to assess on a global scale beyond the overall need for global GHG emission reductions to avoid catastrophic global outcomes.

A GHG analysis is a global analysis and since all sorties under existing conditions and the Proposed Action are already occurring somewhere globally, there would be no increase in GHGs. While the training syllabus is currently reduced within the existing airspace, this training is still accomplished once the pilot reaches their operational squadron at other installations. Thus, there is no increase in GHGs since all sorties currently occur globally. As noted in the EA, climate change represents a global problem resulting from the incremental addition of emissions from millions of individual sources.

Under 40 CFR 1506.6, agencies are required to involve the public in implementing their NEPA procedures, and this includes public involvement in the preparation of EAs and FONSIs. These are public "environmental documents" under Section 1506.6(b), and, therefore, agencies must give public notice of their availability. Appropriate notification of the availability of the EA was provided prior to the release of the document for public review.

15.0 CULTURAL RESOURCES

15.1 NATIONAL REGISTER OF HISTORIC PLACES (NRHP)

Comment summary: Are the state parks and forests listed or eligible for listing in the NRHP; Phase I and II evaluations of cultural resources under the proposed Duke Low MOA is required; tables in DEA only include previously recorded and listed; not complete list of resources in the Area of Potential Effect; provide Austin Dam with an opportunity to review the EA.

Response: According to Pennsylvania's Historic and Archeological Resource Exchange, the following state parks that fall within the Proposed Duke Low MOA have an "undetermined" eligibility status for listing in the NRHP: Cherry Springs, Denton Hill, Kettle Creek, Lyman Run, Ole Bull, and Sinnemahoning (PA-SHARE 2022). The following state parks: Bendigo, Elk, Hyner Run, Hyner View, Patterson, Prouty Place, and Sizerville; and state forests: Elk, Sproul, Susquehannock, and Tioga do not have eligibility status records.

Effects resulting from the introduction of noise into historic property settings are expected from the Proposed Action, but those effects would not significantly affect the features of properties that make them eligible for listing in the NRHP; therefore, the proposed action would have no adverse effects to historic properties or culturally significant places making further evaluation of this resource unnecessary.

The DEA was provided to Austin Dam for their review. No comments were received.

16.0 OTHER QUESTIONS AND COMMENTS RECEIVED

16.1 COMMENTS FROM FORM LETTERS

Comment summary: While using an air tanker on a wildfire, our plane was flying in a generally easterly direction from the Moshannon air tanker base, approaching the side hill fire header. Airspace was closed to all other traffic, but a Warthog was flying just above the west branch of Susquehanna River. The air tanker was diverted just in time to avoid a disastrous mid-air collision. The Air operations manager for the Bureau of Forestry (BOF) made an official complaint.

Previous training flights in Pennsylvania were at tree-top level and had resulted in extremely dangerous situations. Where a power line crosses the West Branch of the Susquehanna River in the vicinity of the village of Keating in western Clinton County, an A-10 was flying low above the river and the tail sections of the aircraft severed a power line which crossed the river. The high voltage power line whipped across PA Route 120.

While BOF crews were planting tree seedlings by using mechanized tree planters pulled by small dozers, National Guard Warthogs would practice strafing by using the active tree planter as targets. This was totally unsafe and frightening.

Response: When the USFS is dispatched to fight a forest fire, they will set up a Temporary Flight Restriction (TFR). The National Firefighting Center (NFC) in Boise, ID is responsible for working with the FAA and establishing these TFRs as needed. When the NFC maps the TFRs and discovers that it is within a MTR

corridor, the NFC will contact the unit scheduling desk to advise them of the TFR and determine if there are any flights currently scheduled or operating on the route. In the event of a conflict and the TFR is set up after the pilot has initiated training, both the pilots and the firefighting teams will ensure that there is no conflict. Furthermore, the NFC is aware of the location of each MTR. If a TFR is issued within a MTR, they will continue to observe the airspace throughout the firefighting events to ensure safety. Pilots check TFRs and NOTAMs before each flight. Pilots are notified if a TFR or NOTAM is issued and will avoid the airspace as necessary. In addition, if there is an active wildfire under the airspace, pilots would not utilize the airspace in order to de-conflict ongoing emergency response efforts.

Within the proposed Duke Low MOA, the potential for this type of conflict would not exist. All MOAs have a controlling agency, which is the ARTCC, with the FAA. The ARTCC is also responsible for establishing the TFR. When the USFS requires the establishment of a TFR, the NFC will contact the applicable ARTCC to have it established. Any military aircraft that needs to utilize an established MOA requires the permission of the applicable ARTCC before they are allowed to access the MOA. If a TFR has been established, the ARTCC will inform the pilot of the TFR and they will have the ability to monitor for avoidance.

There is no record that supports the claim that an A-10 was responsible for severing a power line in the area that is mentioned. If a military aircraft was responsible, an incident would have been filed. In addition, during training activities, no live weapons are carried and all training is simulated.

The U.S. Congress has directed the FAA to manage the NAS on behalf of the People of the United States of America. As such, the FAA and the appropriate ARTCC act as the controlling agency for all airspace activity in a region to include military aircraft operations. Any reports of inappropriate activity are investigated by the FAA and reported to the appropriate military authority to execute any disciplinary or corrective action as needed.

The DAF and the ANG take seriously any claims of inappropriate or unsafe actions by our professional Airmen. Any properly investigated event would have been dealt with on a case-by-case basis to ensure it is not repeated.

16.2 ADDITIONAL QUESTIONS RAISED

Comment summary: Where can complaints be sent and how will complaints be addressed if received?

Response: Questions and concerns regarding 175 WG training operations can be emailed to the Eastern Area Defense Sector at https://www.eads.ang.af.mil/Contact-Us/. This Office will be able to address concerns regarding 175 WG operations. Complaints will be reviewed to determine the appropriate response.

16.3 REFERENCES

Comment summary: References are outdated in several sections; analysis dismisses how low-level training could impact the number of visitors and money spent; how was analysis conducted?

Response: The EA was revisited to review the references that were used and to determine if there were more accurate and up to date references that would be applicable. All of the references were reviewed, and additional research was conducted to ensure that the analysis was accurate, and the appropriate references

are incorporated into the document. Updated references have been incorporated throughout the document that support the analysis.

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