

Appendix A Public and Agency Coordination



U.S. Department
of Transportation
**Federal Aviation
Administration**

ATO Mission Support Services
Airspace Services
800 Independence Avenue SW
Washington DC 20591

Scott P. Chambers, P.E., Colonel, USAF
National Guard Bureau
3501 Fetchett Avenue
Joint Base Andrews, Maryland 20762-5157

October 26, 2018

Dear Colonel Chambers,

Thank you for your letter of October 25, 2018 requesting that the Federal Aviation Administration (FAA) participate as a cooperating agency in the National Guard Bureau's (NGB) preparation of an Environmental Assessment (EA) for the Modification and/or Addition of Airspace Utilization of the Evers Military Operations Area (MOA), West Virginia. Per NGB's letter, this project will evaluate the following in the EA:

- Establishment of Evers North MOA;
- Establishment of Evers Central MOA;
- Establishment of Evers South MOA;
- Establishment of Evers Low MOA;
- Establishment of Diesel North ATCAA;
- Establishment of Diesel Central ATCAA;
- Establishment of Diesel South ATCAA; and
- Elimination of the Existing Evers MOA

The FAA appreciates the NGB's recognition of our role in the evaluation of Special Use Airspace (SUA) and analysis of potential impacts to airspace associated with your project as required by the National Environmental Policy Act (NEPA) and its implementing regulations at 40 C.F.R. Part 1500. Since this proposal involves the use of SUA, the FAA accepts the NGB's request to act as a cooperating agency in accordance with the guidelines set forth in the Memorandum of Understanding (MOU) between the FAA and the Department of Defense (DoD) Concerning SUA Environmental Actions, dated October 4, 2005, and in accordance with the NEPA regulations at 40 C.F.R. Section 1501.6 regarding cooperating agencies, and with FAA Order 7400.2L, Chapter 32, Appendix 8 – *FAA Special Use Airspace Environmental Processing Procedures* which outlines the process by which FAA works with DoD as a cooperating agency on projects involving SUA.

FAA's participation in the development of the EA for this proposed action resides under the jurisdiction of FAA's Eastern Service Center, Operations Support Group, at 1701 Columbia Avenue, College Park, Georgia 30337. Debra Hogan is the Environmental Team Manager for Eastern Service Center who will assign an environmental specialist to coordinate NEPA

document development and reviews. The Eastern Service Center's environmental specialist will be the focal point for matters related to the review of the NGB's NEPA documentation for this project and any related airspace issues that will be tracked and coordinated by FAA Headquarters Environmental Policy Group (AJV-114).

While Appendix 8 of FAA Order 7400.2L indicates that the airspace review and environmental impacts review should be conducted in tandem as much as possible, they are still separate processes. Approval of either the aeronautical portion or the environmental impact analysis portion of the NEPA document does not automatically indicate approval of the entire proposal. Enclosed are Appendices 7 and 8 from FAA Order 7400.2L for additional details.

A copy of your request for FAA's cooperating agency status and this reply are being forwarded to Debra Hogan of the Service Center's Operations Support Group. Ms. Hogan can be contacted at 404-305-5618 or Debra.L.Hogan@faa.gov for further review of the NEPA document(s).

For questions regarding NEPA document processing and coordination with the Service Center, please contact either me in the Airspace Policy Group (AJV-11) at 202-267-1209, or Paula Miller 202-267-7378 in AJV-114 (Environmental Policy Team).

Sincerely,



Rodger A. Dean
Manager, Airspace Policy Group
Air Traffic Organization
Federal Aviation Administration

Cc: Kevin Marek, NGB/A4AM
Debra Hogan, Operations Support Group Environmental Team Manager, Eastern Service Center
Paula Miller, AJV-114, FAA HQ/ATO Environmental Policy Team
Lisa Favors, Environmental Specialist, FAA/AJV-114, Eastern Service Center
Sean Hook, Maj, USAF, Exec. Dir., USAF/FAA HQ/AJV-11
Paul Gallant, AJV-113, FAA HQ/ATO Regulatory Policy Team

Enclosures

Chapter 32, Appendices 7 and 8 from FAA Order 7400.2L

Appendix 7. FAA/DOD Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING BETWEEN
THE FEDERAL AVIATION ADMINISTRATION AND
THE DEPARTMENT OF DEFENSE
FOR
ENVIRONMENTAL REVIEW OF SPECIAL USE AIRSPACE ACTIONS

I. Definitions.¹

In addition to definitions in the Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) (40 CFR Part 1508), the following definitions also apply to this Memorandum of Understanding (MOU):

“DoD” means the Department of Defense or one or more components thereof, depending on the context.

“SUA” means “special use airspace,” as defined in FAA Order JO 7400.2.

“DoD SUA Action” means a DoD activity for which the FAA determines an FAA SUA Action is required or otherwise warranted.

“Environmental Review Process” means all activities that are necessary for compliance with the following and must be completed before DoD and FAA SUA Actions can be implemented: the National Environmental Policy Act (NEPA); the CEQ Regulations; DoD and FAA NEPA-implementing procedures; and other federal environmental laws, regulations, executive orders, and administrative directives.

“Proponent” means: (1) DoD for FAA SUA Actions for which the FAA requires submission of a proposal by DoD; and (2) the FAA for other FAA SUA Actions.

“FAA SUA Action” means the FAA’s establishment, designation, or modification of SUA for which a component of DoD is the “using agency,” as defined in FAA Order JO 7400.2.

II. Purpose and Scope.

The purpose of this MOU is to describe guidelines for efficiently conducting the Environmental Review Process for DoD and FAA SUA Actions by avoiding unnecessary duplication of effort and reducing delay through effective coordination and cooperation between the agencies.

¹ Terms defined in this section are capitalized throughout the document.

This MOU applies “lead agency” (40 CFR §1501.5) and “cooperating agency” (40 CFR §1501.6) concepts and requirements to Categorical Exclusions (CATEXs), Environmental Assessments (EA), Environmental Impact Statements (EIS), and other related or supporting documents for DoD and FAA SUA Actions.

III. Designation of Lead and Cooperating Agencies (40 CFR §1508.16 and §1508.5).

A. Introduction. DoD and FAA SUA Actions can be subject to different levels and scope of environmental impact analyses pursuant to NEPA, as implemented by the CEQ regulations and by the DoD’s and the FAA’s agency-specific NEPA-implementing procedures. The CEQ regulations encourage designation of a lead agency where related actions by several Federal agencies are involved.

Either the DoD or the FAA may be the lead or cooperating agency for a NEPA review addressing both DoD and FAA SUA Actions. The lead agency, in such instances, is responsible for consultation with other agencies, for early and continuing coordination of appropriate environmental evaluations and analyses, and, in coordination with the cooperating agency, for making and documenting determinations under other applicable environmental laws and regulations (e.g., the Endangered Species Act and the National Historic Preservation Act) and incorporating such documentation into the appropriate NEPA document. The lead agency will invite other federal agencies having jurisdiction by law or special expertise with respect to any environmental issue that should be addressed in the NEPA process to become a cooperating agency (40 CFR §§1501.6, 1508.5).

Both the FAA and the DoD acknowledge the purposes of NEPA (40 CFR §1500.1), and the need to both eliminate unnecessary duplication and reduce delay. Accordingly, the FAA and the DoD will integrate NEPA considerations and requirements of both agencies into the SUA project planning process as early as possible in their respective project planning schedules. The agencies will also strive cooperatively to coordinate development of environmental documents that meet the standards for adequacy in accordance with both agencies’ NEPA implementing procedures, thereby expediting completion of the Environmental Review Process.

B. Designation of lead agency. The Proponent will serve as the lead agency (40 CFR §1501.5).

C. Designation of cooperating agency. The DoD and the FAA will ensure designation of the cooperating agency early in the NEPA process (40 CFR §1501.6). Upon request of the lead agency, the DoD or the FAA will serve as a cooperating agency.

Written requests by the FAA and the DoD will be directed to:

Federal Aviation Administration	
Airspace Regulations and Policy Group (AJV-11)	OSG Manager of the applicable FAA Service Center
Air Force	
Deputy Assistant Secretary of the Air Force for Installations (SAF/IEI) 1665 Air Force Pentagon	cc: AF/A3TI - Airspace Policy Rm 5D756 1480 AF Pentagon

Rm 4B941 Washington, DC 20330-1665	Washington, DC 20330-1480 (703) 692-7752 HQ AF/A4CP Installation Strategy and Plans Division Rm 4D950 1260 Air Force Pentagon Washington DC, 20330-1260 (703) 614-0237
Navy	
Director Chief of Naval Operations (N45) 2000 Navy Pentagon (Rm 2E259) Washington, DC 20350-2000	cc: Chief of Naval Operations will direct to appropriate code
Marine Corps	
MCICOM (Attn: NEPA) Headquarters Marine Corps 3000 Marine Corps Pentagon Room 2D153A Washington, DC 20350-3000	
Army	
Asst. Chief of Staff for Installation Management Installation Services, Environmental (DAIM-ISE) 600 Army Pentagon (5A120-1) Washington, DC 20310-0600	cc: Deputy Assistant Secretary of Army, Environmental Safety and Environmental Health (DASA(ESOH)) Headquarters, U.S. Army Aeronautical Services Agency (Attn: Airspace Branch) 9325 Gunston Road, Suite N319, Fort Belvoir, Virginia 22060
Major Range and Test Facility Base (MRTFB)*	
Director, Test Resource Management Center (TRMC) 4800 Mark Center Dr., Suite 07J22 Alexandria, VA 22350	

*The MRTFB is managed by the TRMC and includes Army, Navy, and Air Force test ranges and associated airspace as designated by annual issuance. The TRMC will coordinate with the lead or cooperating agency as necessary

IV. Documentation.

A. General. To eliminate unnecessary duplication, reduce paperwork, and reduce delay, the FAA and the DoD will cooperatively develop necessary environmental documentation. The agencies will share and may use, as allowed by their respective regulations/directives, background data and impact analysis prepared by either agency in support of a DoD or FAA SUA Action. Documentation will be developed and processed in accordance with applicable FAA Orders, DoD directives and regulations, and established cooperating agency relationships (40 C.F.R. §1506.1).

The lead agency will provide, within scope (40 C.F.R. §1508.25), project-specific related data supporting the proposed action, alternatives, and impact analyses to the cooperating agency to facilitate the development of a legally defensible NEPA document and support appropriate determinations.

The lead and/or cooperating agency will independently evaluate any information or analysis before using it to support a NEPA review. The intent of the lead and cooperating agency relationship is to ensure mutually adequate documentation that complies with both the lead and cooperating agencies' NEPA-implementing procedures. Deficiencies in information, analysis, or other issues covered within the scope of the documentation will be addressed and corrected during cooperating agency concurrent review(s).

B. Categorical Exclusions.

The DoD and the FAA will address the availability of CATEXs early in the development of DoD and FAA SUA Actions. CATEXs are not interchangeable between the agencies. If the Proponent decides to rely on a CATEX for its action and the cooperating agency cannot rely on a CATEX for its action, the Proponent will provide information and analysis the cooperating agency identifies as necessary for the cooperating agency's NEPA review. To the extent consistent with the cooperating agency's NEPA-implementing procedures, the cooperating agency may request that the Proponent prepare an EA or fund the preparation of an EA or EIS.

V. General Guidance.

A. Scheduling. To help avoid unnecessary delay in the Environmental Review Process, the DoD and the FAA will establish a mutually agreed-upon schedule that reflects appropriate time limits to ensure that required actions are taken on a timely basis, consistent with the cooperating agency designation (ref. III.C.). The schedule will accommodate both agencies' requirements (e.g., DoD mission requirements, FAA requirements for processing SUA proposals, both agencies' NEPA-implementing procedures). Each agency will promptly notify the other of any difficulty with meeting scheduled deadlines or any need to revise the schedule.

B. Administrative Records. The FAA and the DoD, as either lead or cooperating agency, agree to develop and maintain an administrative record of each SUA project in accordance with their agency's respective administrative record and document retention rules and requirements. In the event either agency's action is timely challenged, the other agency will make its administrative record available to the agency whose action has been challenged.

C. Resolution of disagreements. If the FAA and the DoD fail to reach agreement at the normal working level on any issue relating to environmental processing of proposed SUA Actions, the matter will be referred, in ascending order, as outlined in the table below. At any time, the FAA's Office of the Chief Counsel and the Office of the General Counsel of the Service Department involved shall be consulted for assistance with legal issues.

Equivalent Levels of Responsibility for Resolution of Disagreements	
FAA Administrator	DoD Policy Board on Federal Aviation (PBFA) Chairman
FAA Chief Operating Officer, Air Traffic Organization	DoD PBFA Executive Director Principal Member
FAA VP, Mission Support Services	DoD PBFA Deputy Executive Director
FAA Director, Airspace Services	DoD PBFA Airspace and Procedures Subgroup Chair

D. Funding. Agency budget constraints may delay processing and implementation of DoD and FAA SUA Actions. As part of the lead agency-cooperating agency relationship, the DoD and the FAA will determine responsibilities, consistent with this MOU, for funding the preparation of NEPA documentation (40 CFR §1501.6(b)(5)) and, if appropriate, decision implementation measures (40 CFR §1505.3).

E. Amendments. If either party determines that it is necessary to amend this MOU, it will notify the other party in writing of the specific change(s) desired, with proposed language and the reason(s) for the amendment. The proposed amendment will become effective upon written agreement of both parties.

VI. Effective Date.

This MOU is effective from the last signature date below until rescinded or amended.

SIGNED:

DATE: **30 Sep 2019**

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Executive Director, DoD Policy Board
On Federal Aviation

DATE: **OCT 17 2019**

ANGELA RENEE
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VP, Mission Support Services
Federal Aviation Administration

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Appendix 8. FAA Special Use Airspace Environmental Processing Procedures

1. GENERAL.

This appendix provides guidance for FAA participation in the environmental review of proposed special use airspace (SUA) actions. The requirements in this appendix are in addition to the airspace proposal processing procedures contained in this order. The aeronautical and environmental processes for SUA proposals involve some overlap and the actions taken, or modifications made, to the proposal in one process may affect the actions required and/or the outcome of the other process.

2. BACKGROUND.

a. The SUA program is designed to accommodate national security requirements and military training activities wherein activities must be confined because of their nature, or wherein limitations are imposed upon aircraft operations.

b. SUA proposals are subject to both NEPA and aeronautical processing requirements. Since the FAA is the approval authority for SUA actions, the agency cannot make a final decision on any particular SUA proposal prior to the completion of the NEPA and aeronautical processing phases.

3. POLICIES.

The following policies apply to the processing of SUA proposals:

a. In addition to responsibilities of a cooperating agency as defined in 40 CFR Parts 1500–1508, FAA must:

1. Provide to DOD information and technical expertise within the special expertise and jurisdiction of the FAA as it relates to the proposed action.

2. Resolve or respond to environmental issues raised during the NEPA process relating to aeronautical

issues.

3. If an EA or EIS is required, identify and evaluate the environmental impacts relating to the proposal.

4. Furnish to DOD the names of organizations, agencies, or other parties the FAA believes may be

interested in the DOD proposal.

5. Notify and coordinate FAA proposed airspace actions with DOD components that may be affected.

b. FAA Participation in NEPA Meetings. The FAA must participate in scoping, interagency, and public NEPA meetings conducted by the proponent. The Air Traffic Service Center Director (or the Director's Designee) with responsibility for Cooperating Agency participation will determine FAA representation in the meetings. When FAA personnel participate in such meetings:

1. The audience must be informed that FAA participation is to provide aeronautical technical expertise and is not to be construed as FAA endorsement or support of any SUA proposal, and that no decisions concerning the proposal will be made at the meeting.

2. If requested, the FAA will provide an overview of the procedures followed by the FAA for processing SUA proposals.

3. The FAA will advise the audience of the Service Center handling the processing of the aeronautical proposal. Additionally, the audience should be advised that written comments on the aeronautical aspects of the proposal should be submitted during the public comment period associated with the aeronautical circularization.

c. FAA NEPA Compliance Options. In accordance with CEQ regulations, the FAA must participate in the NEPA process as a cooperating agency. The FAA may adopt an EA or EIS prepared by DOD if the FAA independently evaluates the information in the document and takes full responsibility for the scope and content that addresses FAA actions. Where the proponent's NEPA documentation is insufficient, additional NEPA documentation will be required before the FAA can make a final decision. The FAA may ask the applicant to correct any deficiencies and re-submit the assessment if the FAA is not satisfied (see FAA Order 1050.1, "Environmental Impacts: Policies and Procedures," paragraphs 2-2.1 and 2-2.2). The FAA must issue its own FONSI and/or ROD. See FAA Order 1050.1, paragraph 8-2.

d. Time Limits for Final Environmental Impact Statements (EISs). If three years have expired following the approval of a final EIS, and major steps towards implementation have not commenced, a written reevaluation of the adequacy, accuracy, and validity of the final EIS must be prepared by the proponent. Written reevaluations must comply with the requirements set forth in FAA Order 1050.1, paragraph 9-2. The proponent may also elect to prepare new documentation if circumstances dictate.

4. LEAD AND COOPERATING AGENCIES.

The FAA/DOD MOU provides for the application of "lead agency" and "cooperating agency" responsibilities in the SUA environmental process. When the DOD is the proponent, the DOD will serve as lead agency for the evaluation of SUA environmental impacts and the preparation and processing of environmental documents.

a. The DOD, as lead agency, will determine whether an SUA proposal:

1. Is a major action significantly affecting the quality of the human environment requiring an environmental impact statement (EIS);

2. Requires an environmental assessment (EA); or,

3. Is categorically excluded in accordance with FAA Order 1050.1, paragraphs 5-6.1 through 5-6.5.

These determinations must be coordinated with the FAA at the earliest possible time to prevent delay in preparation of any required NEPA documentation.

b. The appropriate FAA Service Center, as identified in response to a request to participate, will act as the point of contact for Cooperating Agency status during the evaluation of the proposal's environmental study. The FAA may use documents prepared by the proponent in its environmental process, provided the FAA has independently reviewed the scope and content of the documentation and assumes responsibility as described in subparagraph 3c, above. (See FAA Order 1050.1, paragraph 8-2.)

c. Where the actions of one agency are subject to a categorical exclusion and the actions of the other agency with respect to the same SUA is not subject to a categorical exclusion, then the other agency will prepare the appropriate environmental documentation. The applicability of a categorical exclusion to parts of the action will be noted in the environmental document. FAA budget constraints may delay processing and implementation of a proponent's proposal when the categorical exclusion of the proponent is not listed in FAA Order 1050.1, chapter 5.

5. SUA ENVIRONMENTAL CONCERNS.

In addition to other environmental considerations required under NEPA, CEQ regulations, and FAA Order 1050.1, the following are items the FAA expects to be considered, if applicable, in SUA environmental documents. This list should not be considered all-inclusive:

a. Other Times by NOTAM. When specified in the proposal, this provision permits access to the SUA area 24 hours per day. The environmental document must address the potential impact for use of the SUA during the "other times by NOTAM" period.

b. Flares and Chaff. Address the potential impact of flare and/or chaff use when this activity is specified in the SUA proposal.

- c. “No Action Alternative.” Include discussion of this alternative.
- d. Coastal Zone Consistency Determination. Include if applicable.
- e. Proposed Airspace Parameters. The environmental analysis in the EA or EIS for the SUA proposal must match the airspace parameters contained in the SUA proposal (for example, boundaries, altitudes, times of use, and type and extent of activities).
- f. Non-participating Aircraft. Include a discussion of the effect of the SUA proposed action on non-participating aircraft, if applicable.
- g. Mitigation. As defined in CEQ regulations, mitigation includes:
 - 1. Avoiding the impact altogether by not taking a certain action or parts of an action;
 - 2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 - 3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - 4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
 - 5. Compensating for the impact by replacing or providing substitute resources or environments.
- h. Cumulative Impacts. Cumulative impacts on the environment are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.
- i. Consultation. Consultation must be conducted in accordance with the National Historic Preservation Act, Section 106; the Endangered Species Act, Section 7; FAA Order 1210.20.
 - “American Indian and Alaska Native Tribal Consultation Policy and Procedures,” and other applicable laws, regulations, and Department of Transportation and FAA Orders.

6. INTERAGENCY SUA ENVIRONMENTAL PLANNING MEETING.

To facilitate early coordination between the FAA and the DOD proponent, the DOD proponent must make a request to the FAA for Cooperating Agency status as soon as the proponent decides to initiate the environmental process.

When the FAA is invited to participate as a cooperating agency, it is suggested that a planning meeting be held as soon as practical. The agenda of the meeting should be based on the type of SUA proposal, the extent of the planned environmental analysis.

- a. The appropriate Regional Military Representative (Milrep) will coordinate the proponent’s request for a planning meeting with the appropriate Service Center Director (or his/her designee). Representatives of the FAA, the proponent, and the proponent’s NEPA consultant, if any, should be invited to participate by the military representative.
- b. The meeting should include discussion of pertinent issues, including but not limited to:
 - 1. The type of SUA proposal to be submitted,
 - 2. Identification of points-of-contact and establishment of liaison between concerned parties,
 - 3. Determination of the appropriate type of environmental documentation,
 - 4. The appropriate extent of FAA participation,
 - 5. Identification of potentially significant impacts,
 - 6. Consideration of the need for scoping, interagency, and/or other public meetings,
 - 7. Setting processing milestones,
 - 8. Clarifying any questions the proponent may have regarding the FAA’s requirements for the environmental analysis and documentation; and,
 - 9. Exchange of information on any environmental and/or aeronautical concerns in the area of potential

effect.

1. Brief attendees on the airspace processing procedures in Part 5 of this order that will apply to the SUA proposal.

2. Encourage the proponent to work proactively with aviation user groups and individuals to address aeronautical issues as they arise. This should ensure early consideration of aeronautical mitigation.

d. At the meeting, the Service Center environmental representative should:

1. Brief attendees on the environmental processing procedures in FAA Order 1050.1 and Chapter 32 of this order that apply to the SUA proposal.

2. Encourage the proponent to work proactively with other Federal, State, and Local agencies; Tribal Governments; and the public on environmental concerns as they arise. This will ensure that mitigation to address environmental concerns is considered early in the process.

3. Advise attendees that the FAA cannot render a final determination on the environmental effects of the SUA proposal until after completion of the proponent's environmental process, the FAA's aeronautical process, the FAA's independent review of the proponent's environmental documentation, and any additional environmental analyses conducted by the FAA.

e. The meeting format may be tailored to the needs of the specific proposal. It may be conducted by a teleconference, if permitted by the scope of the proposal or if necessary due to funding or other constraints.

f. Additional meetings should be scheduled as needed to discuss changes, revise milestones, share updated environmental and/or aeronautical impact data or public comments, discuss alteration of the proposal in order to mitigate valid aeronautical objections, incorporate agreements by the proponent to mitigate environmental impacts, or discuss other matters.

7. RELATIONSHIPS AND TIMING OF ENVIRONMENTAL AND AERONAUTICAL PROCESSES.

a. SUA proposals are subject to both environmental and aeronautical processing requirements. These processes are separate but closely related. Any actions by a proponent to mitigate environmental impacts, and/or changes to the proposal to address valid aeronautical objections, may alter the type and extent of environmental analysis required.

b. Normally, the SUA proponent will initiate the environmental process well in advance of submitting an actual SUA proposal to the FAA for review. The appropriate Milrep should inform the appropriate Service Center as soon as possible after receiving notice that a DOD proponent plans to initiate the environmental study process. A letter requesting FAA participation in the environmental study process as a Cooperating Agency should be forwarded to the Director of the Office of Mission Support, Airspace Services, at FAA Headquarters.

c. Proponents should submit SUA proposals to the FAA Service Center prior to completion of the NEPA process. This will enable the FAA to initiate the aeronautical processing phase prior to completion of any required NEPA documents, which will facilitate the earlier consideration of aeronautical factors that may result in modification of the proposal and may affect the environmental analysis. In all cases, the FAA will defer a final decision on the proposal until the required NEPA process is completed.

d. During the aeronautical processing of a proposal with alternatives, only the alternative submitted to the FAA in accordance with Part 5. of this order will be subjected to the aeronautical process described in this order (such as non-rulemaking circularization or Notice of Proposed Rulemaking (NPRM)) by the FAA. However, all reasonable alternatives, including the alternative of no action, must be evaluated in the environmental document.

8. SERVICE CENTER PROCEDURES.

a. Normally, FAA participation in the SUA environmental process will begin at the headquarters level with a request by the proponent of an SUA proposal for the FAA to participate in the process as a Cooperating Agency. However, the FAA point of contact will generally be a representative from the Air Traffic Organization at the Service Center level. Close coordination is required between the Service Center Airspace Specialist and Environmental Specialist throughout the process. This will ensure that FAA concerns are provided to the proponent for consideration, and that NEPA and DOT/FAA environmental requirements are met.

b. Once notified of the initiation of the environmental process by the SUA proponent, the Service Center environmental specialist should request that the proponent provide a minimum of five copies of all preliminary, draft, and final environmental documents for FAA review. The Service Center environmental specialist will forward three copies of the documents to FAA Headquarters (Mission Support, Airspace Services, and Airspace Policy Group).

c. To the extent practicable, the Service Center should provide FAA representation at pre-scoping, scoping, and/or other NEPA public meetings concerning the SUA proposal. If requested by the Service Center, representation from the headquarters Airspace Policy and/or Airspace Management Groups will be provided.

d. Service Center Airspace Specialist Responsibilities:

1. Coordinate requests from the Milrep to schedule an interagency SUA environmental planning meeting with the Service Center Director (or the Director's designee) and the environmental specialist.

2. Participate in interagency SUA environmental planning meetings as directed, by the Service Center Director (or the Director's designee). (See paragraph 6, above.)

3. Participate in pre-scoping, scoping and/or other public meetings as directed.

4. Provide information and assistance as required to the proponent regarding the aeronautical aspects of the proposal and processing procedures under Part 5 of this order.

5. Coordinate with and assist the environmental specialist in the review of environmental documents to ensure consideration of pertinent aeronautical issues. Compare the SUA proposal parameters with the analysis in the environmental document to ensure that the analysis is consistent with the proponent's airspace request. Provide corrections and/or comments to the environmental specialist for transmittal to the proponent.

6. Maintain liaison with the proponent's environmental team to determine if any comments received pertain to aeronautical issues; provide information regarding the aeronautical aspects of alternatives developed by the proponent.

7. Provide to the proponent aeronautical impact information obtained from the formal aeronautical study conducted in accordance with Chapter 21 of this order and during the aeronautical public comment period. As required, negotiate with the proponent to modify the proposal to mitigate valid aeronautical objections or adverse aeronautical impact.

8. Upon receipt of the SUA proposal, initiate processing in accordance with Part 5 of this order.

(a). Determine if an Informal Airspace Meeting will be held in accordance with the procedures in Part 5. of this order. If a meeting is planned, request participation by the proponent to explain and answer questions about the proposal.

NOTE:

Informal Airspace Meetings are optional for SUA proposals. Normally, they are held only if the Service Center determines that there is a need to obtain additional aeronautical facts and information relevant to the SUA proposal under study. Informal airspace meetings may also be held based on known or anticipated controversy of the proposal.

(b). Complete the appropriate rulemaking or non-rulemaking processing requirements as defined in Part 5 of this order.

9. In consultation with the Service Center environmental specialist and the Regional Counsel, review the proponent's decision document to ensure that it is consistent with any modifications made to the SUA proposal, if applicable, and that any agreed upon aeronautical mitigation measures are included.

10. If the Service Center airspace specialist recommends approval of the SUA proposal, submit the completed proposal package to the Airspace Policy Group for final review and determination. The Airspace and Rules Team will receive the SUA package from the Airspace Policy Group for review of any environmental documentation.

e. Service Center Environmental Specialist Responsibilities.

1. Coordinate as required with the Service Center Airspace Specialist regarding SUA matters.

2. Notify the Airspace Policy Group when informed of scheduled interagency SUA environmental planning meetings. Participate in such meetings as directed by the Service Center Director (or the Director's designee) (see paragraph 6 above).

3. Provide information as required to the SUA proponent regarding FAA environmental requirements and concerns.

4. In coordination with the Service Center Airspace Specialist, review the SUA proponent's environmental documents to ensure that applicable impact categories and any specific FAA environmental concerns are considered. After each review, forward any corrections and FAA comments to the proponent.

5. Review the proponent's final document to assess whether it meets the standards for an adequate document under NEPA, the CEQ regulations, DOT Order 5610.1C, and FAA Order 1050.1. Following consultation with the Regional Counsel, determine if the FAA considers the document adequate for adoption. Provide documentation of the results of this review and a recommendation regarding FAA adoption to the Airspace Policy Group.

6. If the proponent takes the position that a categorical exclusion (CATEX) applies to an SUA proposal: (a). Determine if FAA Order 1050.1, Chapter 5, Categorical Exclusions, lists the CATEX. Verify

that no extraordinary circumstances exist that would preclude use of the CATEX for the SUA proposal. Determine what additional environmental analysis would be required if the CATEX is not listed.

(b). Document the results of the review in subparagraph (a) above, and submit the findings to the Airspace Policy Group.

7. Retain the administrative record in accordance with FAA retention guidelines. If DOD is the lead agency for the proposed project, a copy of relevant documents in its administrative record should be obtained and included in the FAA record.

9. MISSION SUPPORT, AIRSPACE SERVICES, AIRSPACE MANAGEMENT GROUP PROCEDURES:

a. Review the proponent's environmental document(s) to verify that the analysis matches the parameters specified in the SUA aeronautical proposal and that any required environmental issues are considered. Conduct this review simultaneously with the Service Center's review as described in paragraph 8. Provide corrections and identify deficiencies to the Service Center Airspace and/or Environmental Specialist for transmittal to the proponent.

b. The Airspace Policy Group must review the proponent's environmental documents for content and compliance with NEPA, CEQ regulations, and applicable DOT and FAA Orders. Coordinate with the Airspace Policy Group as needed, regarding concerns, corrections, or other comments on aeronautical impacts. Provide FAA Headquarters comments to the Service Center Environmental Specialist for transmittal to the proponent.

c. Provide concurrent assistance and policy guidance regarding SUA environmental processing to the Service Center environmental specialist upon request.

d. Coordinate with the Airspace Policy Group as needed for additional information concerning the SUA proposal and aeronautical impact matters.

e. Review the proponent's Final EIS or EA/Finding of No Significant Impact (FONSI), and the Service Center environmental specialists' comments regarding compliance with NEPA, CEQ, and applicable DOT and FAA requirements. Determine if the document is suitable for adoption by the FAA. Prepare FAA adoption memorandum and provide a copy to the Airspace Policy Group for inclusion in the airspace docket or case file.

f. Review the proponent's and Service Center environmental specialist's comments regarding applicability of a CATEX. If the CATEX does not apply, determine if additional environmental analysis is required. Consider if CATEX documentation is required in accordance with FAA Order 1050.1, chapter 5. Provide a copy of the determination to Airspace Policy Group for inclusion in the airspace docket or case file.

g. As appropriate, coordinate with the FAA Office of the Chief Counsel, Airports and Environmental Law Division. See FAA Order 1050.1, paragraphs 2-2.1b(2)(b); 4-3.3, 5-2a(2) and b(10); 5-3e; 6-4a; 7-1.2b; 7-1.2d(3)(c); 8-2c; 8-7; 9-2e; 10-2b, d, e; 10-3b; 10-4a(2); 10-6a(2), b; 11-3; 11-4a, b.

h. Prepare a separate FAA FONSI and/or Record of Decision (ROD) if circumstances dictate. Provide a copy to the Airspace Policy Group for inclusion in the airspace docket or case file.

i. In the case of rulemaking SUA actions, assist the Airspace Policy Group by preparing the statement to be included in the ENVIRONMENTAL REVIEW sections of the NPRM and the Final Rule. In the case of non-rulemaking SUA actions, prepare the FONSI/ROD for the airspace case file for the non-rulemaking documentation and notify the public in accordance with FAA Order 1050.1, paragraph 6-2.2b.

10. MISSION SUPPORT, AIRSPACE SERVICES, AIRSPACE POLICY GROUP:

a. Upon receipt at headquarters, review the proponent's environmental document(s) from an airspace/aeronautical impact perspective to verify that the environmental analysis matches the parameters specified in the SUA proposal and that any required aeronautical issues are considered. Conduct this review simultaneously with the Service Center aeronautical review as described in paragraph 8 above.

b. Ensure that the Service Center airspace specialist provided a copy of the proposal, including any environmental documentation, to the Service Center environmental specialist.

c. Coordinate with the Airspace Policy Group, as required, to discuss the environmental analysis of the proposal.

d. Submit all SUA NPRMs, final rules, and non-rulemaking airspace determinations to the Airspace Management Group for coordination prior to issuance.

e. Insert the following statement in the environmental review section of SUA NPRMs:

“This proposal will be subject to appropriate environmental impact analysis by the FAA prior to any final FAA regulatory action.”

f. Consult with the Airspace Policy Group to draft the text for the ENVIRONMENTAL REVIEW section for SUA final rules. In the case of rulemaking SUA actions, assist the Airspace Policy Group by preparing the statement to be included in the ENVIRONMENTAL REVIEW sections of the NPRM and the Final Rule. In the case of non-rulemaking SUA actions, prepare the FONSI/ROD for the airspace case file for the non-rulemaking documentation and notify the public in accordance with FAA Order 1050.1, paragraph 6-2.2b.

Note:

For “Direct-to-Final-Rule” actions which are categorically excluded under FAA Order 1050.1, the following statement may be inserted in the environmental review section of the Final Rule:

“This action is categorically excluded under FAA Order 1050.1, “Environmental Impacts: Policies and Procedures,” Paragraph (insert Paragraph Number). Therefore, this action is not subject to further environmental review.”

g. Coordinate with the Airspace Policy Group to determine the status of FAA adoption of the proponent’s environmental document(s). Obtain a copy of FAA adoption documentation for inclusion in the rulemaking docket file or non-rulemaking airspace case file.

h. Complete final airspace processing requirements in accordance with Part 5 of this order, including the final determination on the airspace request. In all cases the FAA must not issue a final decision until after the NEPA process is completed; the FAA has adopted the proponent’s EIS or EA, as applicable; and any additional FAA environmental requirements are satisfied.



U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

August 10, 2017

Exemption No. 7960I
Regulatory Docket No. FAA-2001-10191

Lt. Col. Karna P. More
Chief, Flight Directives Division
Department of the Air Force (HQ AFFSA/A30)
6500 South MacArthur Blvd (AJW31AF)
Oklahoma City, OK 73169

Dear Lieutenant Colonel More:

This letter is to inform you that we have granted your petition to amend Exemption No. 7960, as amended. It transmits our decision, explains its basis, and gives you revised the conditions and limitations of the exemption, including the date it ends.

The Basis for Our Decision

By letter dated July 24, 2017, you petitioned the Federal Aviation Administration (FAA) on behalf of the United States Air Force (USAF) for an amendment to Exemption No. 7960, as amended. That exemption from §§ 91.209(a)(1) and (b) of Title 14, Code of Federal Regulations (14 CFR) allows the USAF and the aircrew from other participating services, when conducting approved joint air operations, to conduct night vision goggle (NVG) lights-out training in certain military operations areas (MOA). You requested that the FAA amend this exemption to add additional Military Operations Areas (MOAs) to the list of areas in which the USAF is allowed to operate under the terms of the exemption. On 17 August 2017, the Moody 1 MOA will be resolved and subdivided into Consair North/South, Hawg North/South, Mustang, Sabre, Thud, and Warhawk MOAs in Georgia per FAA Memorandum, Subject: ACTION: Special Use Airspace Action dated 17 May 2017.

In your petition, you indicate that there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

The FAA finds that the USAF's use of NVGs can provide an added level of safety because of the user's ability to detect conventional lighting at extended distances. The FAA believes, however, that despite this increased visibility during hours of darkness, NVGs effectively limit the user's peripheral vision and that using the NVG system during maneuvering may limit the user's vision to only the target or object in view.

AFS-17-113758-E

The FAA believes that this reduced field of view during use of NVGs may lead to a lack of see-and-avoid capability. Therefore, the FAA finds that it is imperative that flightcrews using NVGs operate in monitored airspace or, when not operating in monitored airspace, operate in airspace within a prescribed area that is identified in a Notice to Airmen (NOTAM) that must be issued at least 48 hours before the lights-out operations are to begin. The NOTAM must be made available to the civil aviation community and must be capable of being disseminated among civil users of the National Airspace System (NAS). The FAA also finds that persons monitoring flight operations activity must make pilots of participating aircraft aware of the presence of nonparticipating traffic. The monitoring of flight operations may be performed by military personnel not participating in NVG training activities (i.e., air traffic controllers, military radar unit personnel, airborne radar unit personnel, or pilots of nonparticipating aircraft observing the NVG training).

Our Decision

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested amendment to the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the USAF.

The FAA has determined that the justification for the issuance of Exemption No. 7960, as amended, remains valid with respect to this exemption and is in the public interest. Therefore, under the authority provided by 49 U.S.C. §§ 106(f), 40113 and 44701, which the FAA Administrator has delegated to me, I hereby grant the United States Air Force (USAF) an exemption from §§ 91.209(a)(1) and (b) of Title 14, Code of Federal Regulations (14 CFR) to the extent necessary to allow the USAF and the aircrew from other participating services, when conducting approved joint air operations, to conduct night vision goggle (NVG) lights-out training in certain military operations areas (MOA), subject to the following conditions and limitation.

Conditions and Limitations

1. Operations conducted under this exemption are limited to NVG flight training in the MOAs listed in ATTACHMENT 1 to this exemption. Operations must be conducted in accordance with the published operational times of the MOA.
2. Operations conducted in selected MOAs must be continuously monitored by military personnel to detect all nonparticipating aircraft. The monitoring must be accomplished by radar capable of detecting nonparticipating aircraft, including those that may not be transponder-equipped and/or have a small radar cross-section, in the active volume of operational airspace.
3. Military personnel will immediately advise all participants when a nonparticipating aircraft has entered the active MOA. Participating aircraft will maintain a continuous listening watch on a designated frequency during lights-out operations. If a nonparticipating aircraft is determined to pose a threat of conflict or collision risk, all participating aircraft will immediately restrict their operations, return to normal lighting

conditions, and alter course as necessary to ensure the safety of the nonparticipating aircraft.

4. All NVG flight training operations conducted under this exemption must be contained within a prescribed and publicized area that—
 - a. Is identified by name in a Notice to Airmen (NOTAM) that must be issued at least 48 hours before the lights-out operations are to begin. In other words, no person may operate an aircraft under this exemption unless a NOTAM concerning the lights-out operation was issued at least 48 hours before the lights-out operation. The NOTAM will advise that, during the course of flight planning, potential users of the MOA will be provided with information on the time and place of the proposed lights-out operations. The NOTAM must be made available to the civil aviation community and must be capable of being disseminated among civil users of the national airspace;
 - b. Has been coordinated with the appropriate geographically responsible FAA air traffic control (ATC) facility; and
 - c. Has the capability of being monitored for nonparticipating traffic.

5. The USAF must—
 - a. Establish a procedure to provide informational briefings to local flying organizations, businesses, and other civilian users within 100 nautical miles of the MOA airspace. These briefings must be provided on an annual basis and must be coordinated with the manager of the geographically responsible Flight Standards District Office. The intent of the informational briefings shall be to increase their awareness of lights-out operations and facilitate effective communications between the USAF and the civilian users of the MOA airspace;
 - b. Develop procedures to provide advisories to transient operators of the MOAs to notify them that selected MOAs are in use for lights-out operations. The use of the Automatic Terminal Information Service may be sufficient only if such transmissions can reach all air traffic operating within the selected MOA. Some notifications may be made through the use of NOTAM/special notices disseminated at least 48 hours in advance of scheduled exercises. Other procedures may be applicable based on the location of the MOA and proximity to airports, FAA facilities, and potential aircraft and operators; and
 - c. Develop a letter of agreement (LOA) for lights-out operations in MOAs. The LOA must be coordinated with and agreed to by the FAA ATC facility that has geographic responsibility for the airspace to be used and must include—
 - i. Procedures for the immediate termination of lights-out operations in the event of conflicting, nonparticipating traffic;
 - ii. Procedures for the immediate termination of lights-out operations if a lights-out aircraft spills out of the MOA;
 - iii. Procedures for the loss of communications;

- iv. The type of aircraft and/or USAF unit(s) to be conducting lights-out training operations;
 - v. A way of notifying the geographically responsible FAA ATC facility upon activation and termination of lights-out operations to ensure that FAA ATC is aware of the activities in the MOA;
 - vi. The geographical boundaries, altitude restrictions, and the name of the MOA in which operations under this exemption are authorized; and
 - vii. Procedures for loss of radar contact.
6. Each pilot who participates in operations conducted under this exemption must be thoroughly familiar with its provisions.
 7. Failure to comply with all of the provisions of this grant of exemption may result in a revocation or cancellation of this grant of exemption
 8. This exemption is not valid for operations outside of the United States.

The Effect of Our Decision

This extension terminates on April 30, 2019, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

ATTACHMENT 1 to Conditions and Limitations Number 1, FAA Exemption 7960

2017 MOA List for USAF Operations

MOA designations include all subdivisions unless otherwise noted, e.g. Eagle Hi & Lo, 1 & 2.

Adirondack	Farmville	Paradise
Airburst	Fort Stewart	Pecos
AMRAAM	Fox	Phelps
Avon	Fuzzy	Pickett
Bagdad	Galena	Pike
Basinger	Gamecock	Pine Hill
Beak	Gandy	Pinon Canyon
Beaver	Gladden	Powder River
Benning	Goose	Red Hills
Big Bear	Hatteras B (East/West)	Reserve
Birch	Hart	Reveille
Bison	Hawg (North and South)**	Rose Hill
Bristol	Hays	Rudy
Bronco	Hill Top	Sabre**
Brownwood	Hog (Hi N&S, Lo N&S)	Saddle
Brush Creek	Howard	Salem
Buckeye	Jackal	Sells
Buffalo	Jarbridge	Seymour Johnson
Camden Ridge	Juniper	Smokey
Carthage	Kingsville	Snoopy
Cato	La Veta (Hi and Lo)	Steelhead
Cheyenne	Lake Andes	Stony
Coastal	Lake Placid	Susitna
Condor	Lindbergh	Taiban
Consair (North and South)**	Marian	Talon
Cougar (Hi and Lo)	Morenci	Thud**
Cranberry	Lake Oak	Tiger
Crypt	Lowville	Tombstone
Crystal	Lucin	Turtle
Delta	Mt Dora	Twelve Mile
Desert	Mustang**	Tyndall
DeSoto	Naknek	Viper
Devils Lake	O'Neill	Volk
Dophin	Olympic	Warhawk**
Duke	Ontonagon	Warrior
Eielson	Outlaw	White Elk
Eureka	Owyhee	Yankee
Evers	Palatka	Yukon
Falls	Pamlico A/B*	

** Added to 7960I

IICEP Recipients List Environmental Assessment

West Virginia & Virginia (Evers MOA)

AGENCY		FIRST NAME	LAST NAME	TITLE	ORGANIZATION	MAILING ADDRESS	CITY	STATE	ZIP CODE
FEDERAL									
USFWS VA	Mr.	Troy	Anderson	Supervisor	USFWS NE Region, Virginia Field Office	6669 Short Ln	Gloucester	VA	23061
USFWS WV	MR.	John	Schmidt	Project Leader	United States Fish and Wildlife Service West Virginia Field	90 Vance Drive	Elkins	WV	26241
USACE				Director	West Virginia USACE	502 Eighth Street	Huntington	WV	25701-2070
US National Forests WV	Mr.	Shawn	Cochran	Forest Supervisor	US National Forest	200 Sycamore Street	Elkins	WV	23241
US National Forests VA	Ms	Beth	LeMaster	Forest Supervisor	US National Forest	5162 Valleypointe Park	Roanoke	VA	24019
U.S. Geological Service	Ms.	Pamela	Ambrose	Administrative Officer	U.S. Geological Services	12201 Sunrise Valley Dr	Reston	VA	20192
USEPA	Mr.	Cosmo	Servidio	Regional Administrator	Environmental Protection Agency	Methodist Building 1060 Chapline Street	Wheeling	WV	26003-2995
National Radio Quiet Zone(NRQZ)	Ms.	Paulette	Woody	NRQZ Administrator	Green Bank Observatory	155 Observatory Road	Green Bank	WV	24944-0002
STATE									
Dept. of Environmental Quality				Director	Dept. of Environmental Protection	601 57th Street SE	Charleston	WV	25304
SHPO (WV)	Mr.	Randall	Reid-Smith	State Historic Preservation Officer	Historic Preservation Office	1900 Kanawha Blvd East	Charleston	WV	25305-0300
SHPO (VA)	Ms.	Julie	Langan	State Historic Preservation Officer	Dept. of Historic Resources	2801 Kensington Ave	Richmond	VA	23221
Dept. of Transportation (Aviation Division)				Director	USDOT Federal Aviation Administration	301 Eagle Mt. Road, #13	Charleston	WV	23511
Dept. of Forestry	Mr.	Barry	Cook	State Forester/Director		7 Players Club Dr.	Charleston	WV	25311
Dept. of Natural Resources & Wildlife Resources Division (WV)	Mr.	John	Schmidt	Project Leader	West Virginia Ecological Services	90 Vance Drive	Elkins	WV	26241-9475
Dept. of Natural Resources & Wildlife Resources Division (VA)				Supervisor	Virginia Ecological Services	6669 Short Lane	Gloucester	VA	23061-4410
Dept. of Agriculture		Kris	Warner	State Director	West Virginia Dept. of Agriculture	1550 Earl Core Road, Su	Morgantown	WV	26505
LOCAL BY COUNTY									
Harrison									
Chamber of Commerce & Economic Development	Ms.	Kim	Drummond	Director	Harrison County Chamber of Commerce	520 Main St.	Clarksburg	WV	26301

IICEP Recipients List Environmental Assessment

West Virginia & Virginia (Evers MOA)

AGENCY		FIRST NAME	LAST NAME	TITLE	ORGANIZATION	MAILING ADDRESS	CITY	STATE	ZIP CODE
Barbour									
Chamber of Commerce					Barbour County Commision	26 North Main Street	Philippi	WV	26416
Economic Development					Barbour County Economic Development	134 N. Main Street	Philippi	WV	26416
Tucker									
Chamber of Commerce					Tucker County Chamber of Commerce	410 William Ave	Davis	WV	26260
Economic Development	Mr.	Steve	Leyh	Executive Director	Tucker County Development Authority	264 E. Avenue	Thomas	WV	26292
Pendleton									
Chamber of Commerce	Ms.	Laura	Brown	Executive Director	Pendleton County Chamber of Commerce	47 Maple Avenue	Franklin	WV	26807
Economic Development					Pendleton County Economic and Community Development Authority	P.O. Box 602	Franklin	WV	26807
Lewis									
Chamber of Commerce					Lewis County Chamber of Commerce	115 East 2nd Street	Weston	WV	26452
Economic Development					Lewis County Economic Development	110 Center Ave, 2nd Fl	Weston	WV	26452
Upshur									
Chamber of Commerce	Ms.	Tammy	Reger	Director	Buckhannon-Upshur Chamber of Commerce	14 East Main Street	Buckhannon	WV	26201
Economic Development	Mr.	Robert	Hinton	Executive Director	Upshur County Development Authority	30 E. Main Street	Budkhannon	WV	26201
Randolph									
Chamber of Commerce	Ms.	Lisa	Messinger Wood	Executive Director	Elkins-Randolph County Chamber	10 Eleventh Street	Elkins	WV	26241
Economic Development				Director	Randolph Development Authority	10 Eleventh Street	Elkins	WV	26241
Highland (VA)									
Chamber of Commerce				Director	Highland County Chamber of Commerce	P.O. Box 223	Monterey	VA	24465
Economic Development	Ms.	Betty	Mitchell	Executive Director	The Highland Center of Economic Development	61 Highland Center Driv	Monterey	VA	24465

IICEP Recipients List Environmental Assessment

West Virginia & Virginia (Evers MOA)

AGENCY		FIRST NAME	LAST NAME	TITLE	ORGANIZATION	MAILING ADDRESS	CITY	STATE	ZIP CODE
Braxton									
Chamber of Commerce					Summersville Area Chamber of Commerce	19 Memorial Park Rd	Summersville	WV	26651
Economic Development	Mr.	Richard	Jarvis	Director	Braxton County Development Authority	250 Skidmore Lane	Sutton	WV	26601
Webster									
Chamber of Commerce	Ms.	Nicole	Dudley	Director	Richwood Area Chamber of Commerce	38 Edgewood Avenue	Richwood	WV	26261
Economic Development				Director	Webster County Economic Development Authority	P.O. Box 4	Webster Springs	WV	26288
Pocahontas									
Chamber of Commerce & Economic Development				Director	Marlinton West Virginia Chamber of Commerce	P.O. Box 272	Marlinton	WV	24954
Alleghany (VA)									
Alleghany Highlands Chamber of Commerce & Tourism Alleghany Highlands Economic Development Corporation	Ms.	Pam	Warren	Office Manager	Alleghany Highlands Chamber of Commerce & Tourism	110 Mall Road	Covington	VA	24426
	Ms.	Marla	Akridge	Executive Director	Alleghany Highlands Economic Development Corporation	1000 Dabney Dr, Suite 5	Clifton Forge	VA	24422
Nicholas									
Chamber of Commerce				Director	Richwood Chamber of Commerce	One East Main Street	Richwood	WV	26261
Economic Development				Director	New River Gorge Regional Development Authority	116 N. Heber Street	Beckley	WV	25801
Greenbrier									
Chamber of Commerce				Director	Greater Greenbrier Chamber	200 W. Washington Street	Lewisburg	WV	24901
Economic Development				Director	Greenbrier Valley Partnership	804 Industrial Park, Suite	Maxwelton	WV	24957
Bath (VA)									
Chamber of Commerce				Director	County of Bath Chamber of Commerce	2696 Main Street	Hot Springs	VA	24445
Bortecourt (VA)									
Chamber of Commerce				Director	Botetourt County Chamber	13 West Main Street	Fincastle	VA	24090
Economic Development				Director	Botetourt County Economic Development	One W. Main Street	Fincastle	VA	24090

IICEP Recipients List Environmental Assessment

West Virginia & Virginia (Evers MOA)

AGENCY		FIRST NAME	LAST NAME	TITLE	ORGANIZATION	MAILING ADDRESS	CITY	STATE	ZIP CODE
TRIBES									
Delaware Tribe		Chester	Brooks	Chief	Eastern Oklahoma	5100 Tuxedo Blvd.	Bartlesville	OK	74006-2838
Delaware Nation		Deborah	Dotson	President	Southern Plains	P.O. Box 825	Anadarko	OK	73005
Cherokee Nation		Bill John	Baker	Principal Chief	Eastern Oklahoma	P.O. Box 948	Tahlequah	OK	74465
United Keetoowah Band of Cherokee Indians		Joe	Bunch	Chief	Eastern Oklahoma	P.O. Box 746	Tahlequah	OK	74465
Seneca Nation of Indians		Rickey	Armstrong, Sr.	President	Eastern	90 Ohi:Yo' Way	Salamanca	NY	14779
Seneca-Cayuga Nation (formerly Tribe of Oklahoma)		William	Fisher	Chief	Eastern Oklahoma	23701 South 655 Road	Grove	OK	74344
Tuscarora Nation		Leo	Henry	Chief	Eastern	2006 Mt. Hope Road	Lewistown	NY	14092
Chickahominy Indian Tribe	Mr.	Stephen	Adkins	Chief	Chickahominy Indian Tribe	7240 Adkins Road	Charles City	VA	23030
Chickahominy Indians	Mr.	Gene	Adkins	Chief	Chickahominy Indians - Eastern Division	3120 Mount Pleasant Road	Providence Forge	VA	23140
Monacan Indian Nation	Mr.	Dan	Branham	Chief	Monacan Indian Nation	104 Walnut Place	Lynchburg	VA	24502
Nansemond Indian Tribe	Mr.	Lee	Lockamy	Chief	Nansemond Indian Tribe	5005 Mosby Road	Virginia Beach	VA	23455
Rappahannock Tribe	Ms.	Anne	Richardson	Chief	Rappahannock Tribe	5036 Indian Neck Road	Indian Neck	VA	23148
Upper Mattaponi Indian Tribe	Mr.	Frank	Adams	Chief	Upper Mattaponi Indian Tribe	P.O. Box 184	King William	VA	23086
Airports									
Elkins-Randolph Co (EKN)	Ms.	Mary	Ricottilli	Airport Manager	Elkins-Randolph Cty Airport Authority	400 Airport Rd	Elkins	WV	26241
Upshur Co Regional (W22)	Mr.	James	Wilt	Airport Manager	Bunkhannon-Upshor Airport Authority	630 Airport Rd, Box 104	Bunkhannon	WV	26201
Greenbrier Valley (LWB)	Mr.	Stephen	Snyder	Airport Manager	Greenbrier Cty Airport Authority	584 Airport Rd, Box 1	Lewisburg	WV	24901
Ingalls Field (HSP)	Mr.	Eric	Thompson	Airport Manager	Bath Cty Airport Authority	6240 Airport Rd	Hot Springs	WV	24445
Deer Creek Farm (WV00)	Mr.	Phillip	Doolittle	Airport Manager	(privately owned airport)	199 Green Bank Rd	Arbovale	WV	24915
Hannah Field (7VA9)	Mr.	Rob	Nicholson	Airport Manager	(privately owned airport)	1317 N. Bay Shore Dr	Virginia Beach	VA	23451
Singleton (97VA)	Mr/Mrs	John&Cath	Singleton	Airport Manager	(privately owned airport)	PO Box 116	Warm Springs	VA	24484
Green Bank Observatory (WV52)	Mr.	Michael	Holstine	Airport Manager	(privately owned airport)	PO Box 2	Green Bank	WV	24944
Special Interest Groups									
AOPA	Mr.	Rune	Duke	Sr Director	Aircraft Owners & Pilots Association	50 F St. NW, Ste 750	Washington	DC	20001
Green Bank Observatory (NRQZ)	Ms.	Paulette	Woody	NRQZ Administrator	Green Bank Observatory	155 Observatory Rd, PC	Green Bank	WV	24944
NBAA	Ms.	Heidi	Williams	Director	National Business Aviation Association	1200 G St. NW, Ste 1100	Washington	DC	20005
Valley Aerospace Team	Mr	Charles	Neff	President	Valley Aerospace Team	1115 Middlebrook Rd	Staunton	VA	24401



NATIONAL GUARD BUREAU
3501 FETCHET AVENUE
JOINT BASE ANDREWS 20762-5157

13 June 2019

Mr. Randall Reid-Smith
State Historic Preservation Officer
Historic Preservation Office
1900 Kanawha Blvd East
Charleston, WV 25305-0300

Dear Mr. Reid-Smith

The United States Air Force National Guard Bureau (NGB) at Joint Base Andrews, Maryland would like to initiate consultation with your office under Section 106 of the National Historic Preservation Act of 1966 (NHPA), and its implementing regulations (36 CFR §800).

Pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 USC 4321 et seq.), the NGB is preparing an Environmental Assessment (EA) for a proposed undertaking that will analyze potential effects to human health and the natural environment, including historic and traditional cultural properties. The purpose of the undertaking is to accommodate training requirements of the 113th Wing (WG) of the District of Columbia Air National Guard (DCANG), stationed at Joint Base Andrews. The project consists of the Modification and Addition to Airspace Utilization for the Evers Military Operations Airspace.

A complete project description is provided in Attachment 1, but in general, the proposed action would replace the existing Evers Military Operations Airspace with four Military Operations Airspaces and establish three additional Air Traffic Control Assigned Airspaces (ATCAA). The current configuration of the Evers Military Operations Airspace is too small to meet the continuing training program for Air Combat Command units and for air refueling operations, which are critical training multipliers for the F-16C fleet. The proposed expansion has been coordinated with FAA representatives at the Washington Center to minimize civilian air traffic encroachment while maintaining its boundaries within a single air traffic controlling center.

The NGB has reviewed the proposed undertaking for potential effects to historic properties and, because there will be no associated ground disturbance, consider them to be minimal. Under the proposed action, there would be no infrastructure changes, no ground-disturbing activities, no weapons firing, and no ordnance deployment within the proposed air spaces. No supersonic operations or release of chaff and flares would be conducted. Weekend and night time operations at all altitudes would be limited.

Because there will be no ground disturbing activities or alterations to historic properties, the NGB has reached a determination of No Historic Properties Affected for the proposed undertaking. We respectfully request your concurrence with our determination. A hard copy of



NATIONAL GUARD BUREAU
3501 FETCHET AVENUE
JOINT BASE ANDREWS 20762-5157

13 June 2019

Ms. Julie Langan
State Historic Preservation Officer
Dept. of Historic Resources
2801 Kensington Ave
Richmond, VA 23221

Dear Ms. Langan

The United States Air Force National Guard Bureau (NGB) at Joint Base Andrews, Maryland would like to initiate consultation with your office under Section 106 of the National Historic Preservation Act of 1966 (NHPA), and its implementing regulations (36 CFR §800).

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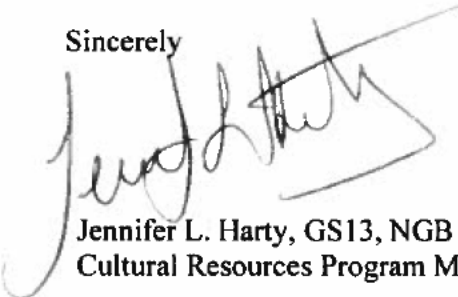
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Because there will be no ground disturbing activities or alterations to historic properties, the NGB has reached a determination of No Historic Properties Affected for the proposed undertaking. We respectfully request your concurrence with our determination. A hard copy of

the Draft and Final EA documents will be provided to your office for review should you request one. We can also provide an electronic copy if you would prefer.

In order for the NGB to address any concerns in a timely manner, please respond within 30 days of receipt of this letter. Please provide any comments to Jennifer Harty, Cultural Resources Program Manager, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or by email at Jennifer.L.Harty.civ@mail.mil. Thank you for your assistance and we look forward to working with you on this undertaking.

Sincerely

A handwritten signature in black ink, appearing to read "Jennifer L. Harty", written over a rectangular box.

Jennifer L. Harty, GS13, NGB
Cultural Resources Program Manager

Attachment:

Description of proposed action

The Air National Guard (ANG) is preparing an Environmental Assessment (EA) to consider the potential consequences to the human and natural environment associated with the modification, expansion, and utilization of the Evers Military Operations Airspace (MOA) to accommodate the training requirements of the 113th Wing (WG), District of Columbia. The 113 WG, stationed at Joint Base Andrews, Maryland, mission is to maintain a well-trained and well-equipped F-16C squadron available for prompt mobilization during war and to aid Allies during emergencies.

The purpose of the action is to expand the existing Evers MOA laterally and vertically to train and prepare for current and future conflicts. The existing MOA is 16 nautical mile [NM] x 30 NM over Highland County, Virginia and Pocahontas and Randolph counties, West Virginia. The airspace begins at 1,000 feet (ft) above ground level (AGL) and continues to 17,999 ft above mean sea level (MSL). The 113 WG maintains 30 combat mission ready (CMR) pilots to meet the Ready Aircrew Program (RAP) sortie and event requirements for training activities over land each year. The primary drivers of airspace shape, size, and feature requirements are the F-16C RAP Tasking Memorandum, in conjunction with AFI 11-2F-16V. These requirements define the minimum number and type of annual sorties, simulator missions and specific training events specialized aircrews must accomplish to sustain CMR pilots. Considering the notional timeline requirements for the F-16C, an 80 NM x 40 NM airspace represents the minimum lateral airspace required to effectively train to the 113 WG's widely varying missions.

The proposed Evers MOA airspace would occur over all or parts of the following West Virginia counties (Harrison, Barbour, Tucker, Pendleton, Lewis, Upshur, Randolph, Braxton, Webster, Pocahontas, Nicholas, and Greenbrier) and Virginia counties (Highland, Alleghany, Bath, and Botetourt). The Proposed Action would expand beyond the lateral footprint of the current Evers MOA, subdivide the new airspace into five portions (Figure 1) that increase the ability of air traffic control to accommodate civil operations, and establish three Air Traffic Control Assigned Airspaces (ATCAAs) above the MOAs (Figure 2). The components of the Proposed Action include:

- Delineate new airspace
 - Evers North, Center and South MOAs (11,000 ft – 17,999 ft above MSL)
 - Evers Low MOA (1,000 ft AGL – 10,999 ft above MSL)
 - Evers East MOA (1,000 ft AGL to 17,999 ft above MSL)
- Create three ATCAAs
 - Diesel North, Center and South ATCAA (Flight Level [FL]180 – FL230 MSL)

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Through the process of interagency and intergovernmental coordination for environmental planning (IICEP), the ANG will notify relevant federal, state, and local agencies, and federally recognized tribes to request their environmental concerns specific to the Proposed Action. The Draft EA will be available on the 113 WG website and sent to regional libraries to invite public participation during a 45-day comment period. Historic resources under the proposed airspace is depicted in Figure 3.

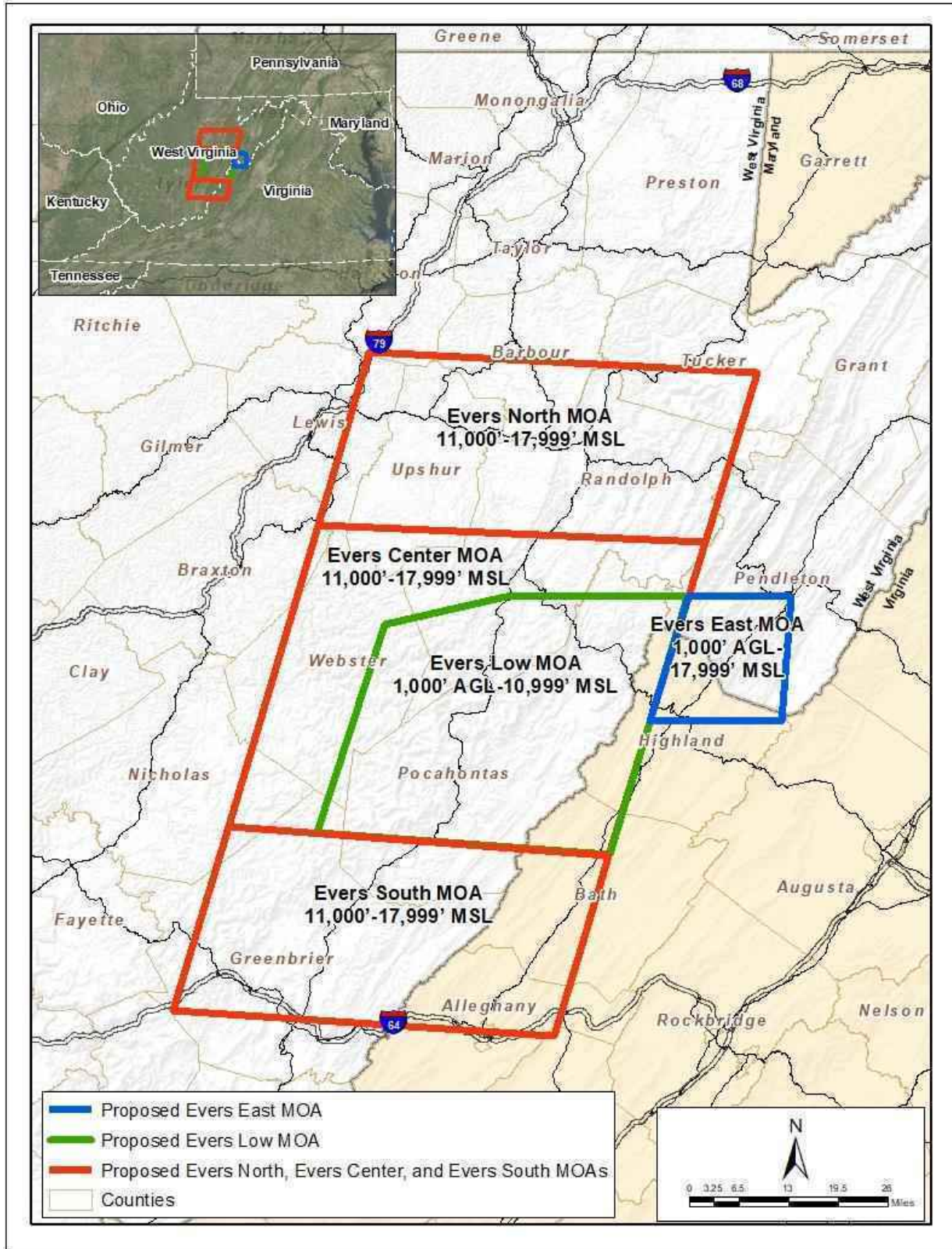


Figure 1. Proposed MOAs

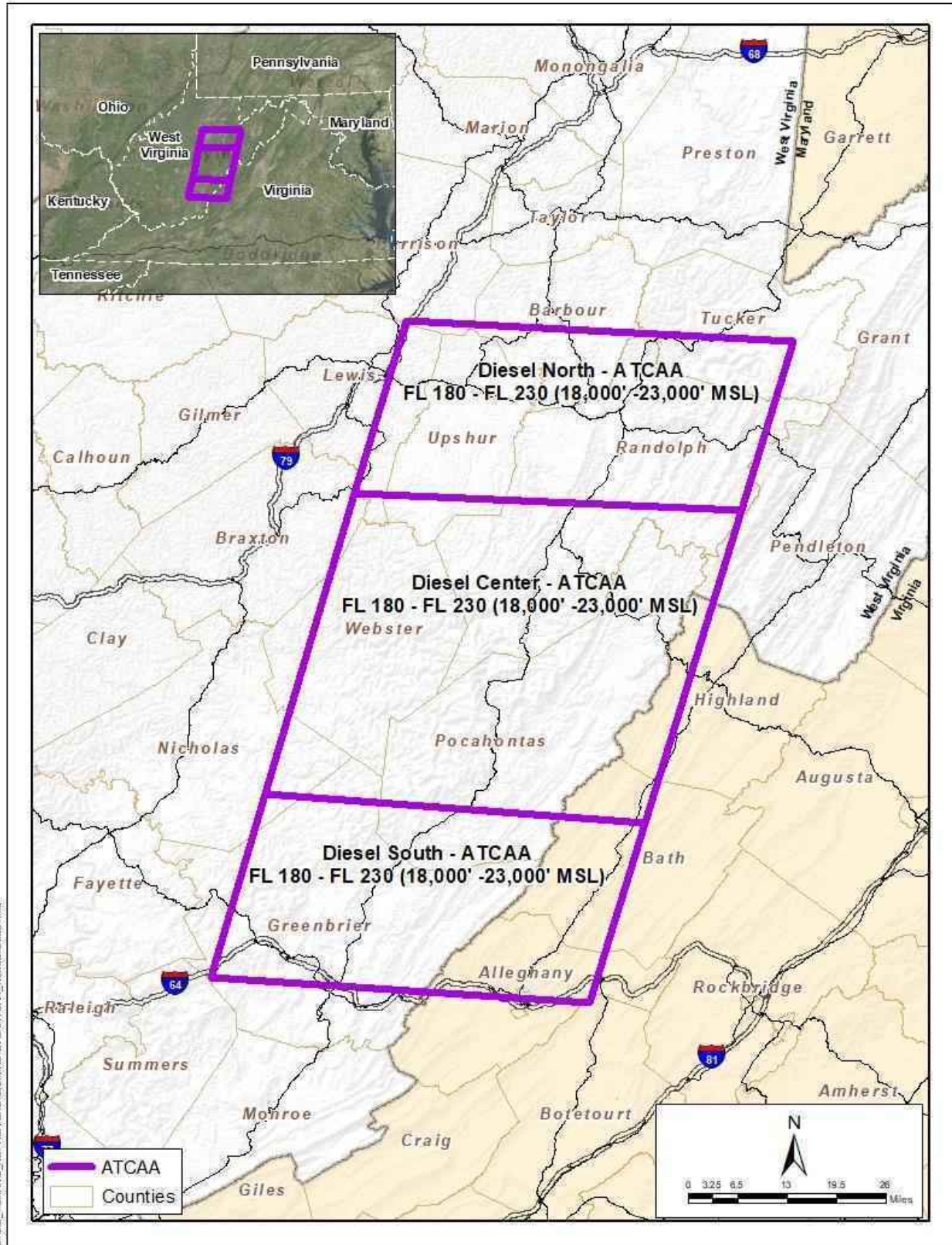


Figure 2. Proposed ATCAAs

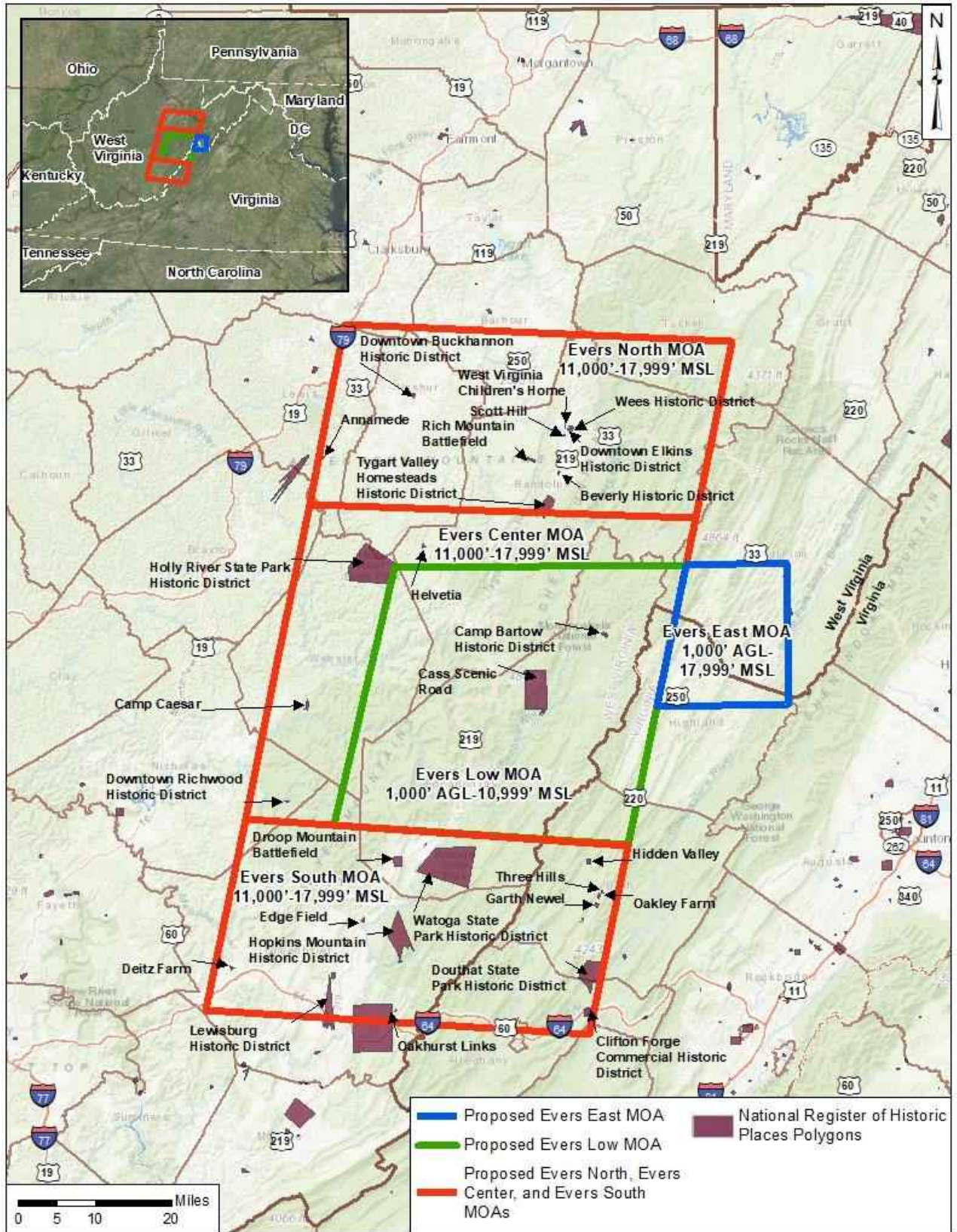


Figure 3. Historic Resources



NATIONAL GUARD BUREAU
3501 FETCHET AVENUE
JOINT BASE ANDREWS 20762-5157

13 June 2019

Mr. Troy Anderson
Supervisor
USFWS NE Region, Virginia Field Office
6669 Short Ln
Gloucester, VA 23061

Dear Mr. Anderson

The Air National Guard (ANG) Joint Base Andrews, Maryland is preparing an Environmental Assessment (EA) for proposed Modification and Addition of Airspace Utilization of Evers Military Operations Airspace (MOA) to accommodate the 13th Wing (WG) training requirements of the District of Columbia Air National Guard (DCANG). Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321–4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Sections 1500–1508), and 32 CFR Part 989, et seq., the ANG will prepare an EA that considers the potential consequences to human health and the natural environment. In accordance with Executive Order 12372, Intergovernmental Review of Federal Programs, we are writing this letter to advise you of this effort and request your assistance in identifying any potential issues related to the proposal.

The National Guard Bureau (NGB) has invited the Federal Aviation Administration (FAA) to be a cooperating agency in the EA. The EA will assess the effects of the Proposed Action and will include analysis of the required No-Action alternative. Enclosed, please find a detailed description of the Proposed Action (Att.1).

The DCANG's mission is to maintain a well-trained and well-equipped F-16C squadron available for prompt mobilization during war and also provide assistance to Allies during emergencies. The federal mission during peacetime has the combat ready unit assigned to the Air Combat Command (ACC) to carry out missions compatible with training, mobilization readiness, humanitarian, and contingency operations.

The Proposed Action would replace the existing single Evers MOA with four MOA's and establish three Air Traffic Control Assigned Airspaces (ATCAA). The new MOA's would be designated as Evers North, Evers Central, Evers South (11,000 feet to 18,000 feet Mean Sea Level [MSL]), and Evers Low (1,000 feet Above Ground Level [AGL] to 11,000 feet MSL). The three ATCAA's would be Diesel North, Diesel Central, and Diesel South (Flight Level [FL]180 [18,000 feet] to FL230 [23,000 feet]). The ATCAA boundaries would be coincidental with the proposed boundaries of Evers North, Central, and South MOA's.

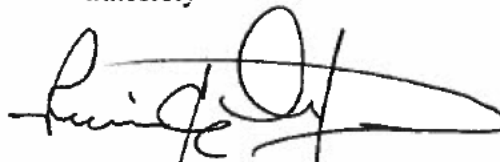
The current configuration of the Evers MOA is too small to meet the continuing training program for ACC units and for air refueling operations, which are critical training multipliers for the F-16C fleet. The proposed expansion has been coordinated with FAA representatives at the Washington Center to minimize civilian air traffic encroachment while maintaining its boundaries within a single air traffic controlling center.

Under the Proposed Action, there would be no infrastructure changes, no grounddisturbing activities and no ordnance deployment within the proposed MOA's. No supersonic operations or release of chaff and flares would be conducted. Weekend and night time operations at all altitudes would be limited.

The National Guard Bureau intends to maximize the use of electronic transmittals during subsequent coordination phases of this project. A hard copy of the Draft and Final EA documents will be provided to your office for review. Enclosed is a copy of the distribution list for those agencies and organizations to be contacted regarding this EA (Att.2). If you consider any additional agencies should review and comment on this proposal, please feel free to include them in a re-distribution of this letter and the attached materials.

In order for the ANG to address your concerns, in a timely manner, please respond within 30 days of receipt of this letter. Please provide any comments you may have within 30 days of receipt of this letter to me at Ramón E. Ortiz, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or email to ramon.e.ortiz2.civ@mail.mil. Thank you for your assistance.

Sincerely

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RAMÓN E. ORTIZ, P.E.
Technical Lead Environmental Planner
NGB/A4AM - Plans and Requirements

2 Attachments:

1. Description of Proposed Action
2. IICEP Distribution List



NATIONAL GUARD BUREAU
3501 FETCHET AVENUE
JOINT BASE ANDREWS 20762-5157

13 June 2019

Mr. John Schmidt
Project Leader
United States Fish and Wildlife Service
West Virginia Field Office Ecological Services
90 Vance Drive
Elkins, WV 26241

Dear Mr. Schmidt

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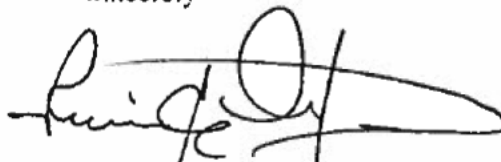
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RAMÓN E. ORTIZ, P.E.
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NATIONAL GUARD BUREAU
3501 FETCHET AVENUE
JOINT BASE ANDREWS 20762-5157

13 June 2019

Sample Agency Letter
Sample Agency
Sample Address
Sample Address

To Whom it May Concern

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RAMÓN E. ORTIZ, P.E.
Technical Lead Environmental Planner
NGB/A4AM - Plans and Requirements

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**DEPARTMENT OF THE AIR FORCE
113TH WING (ANG)
JOINT BASE ANDREWS MD**

13 June 2019

Sample Tribes Letter
Sample Recipient
Sample Address
Sample Address
Sample Address

Dear Sample Recipient

The Air National Guard (ANG) at Joint Base Andrews, Maryland is preparing an Environmental Assessment (EA) for the proposed Modification and Addition of Airspace Utilization Evers Military Operations Airspace (MOA). The project would accommodate the 113th Wing (WG) training requirements of the District of Columbia Air National Guard (DCANG), stationed at Joint Base Andrews. Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321–4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Sections 1500–1508), and 32 CFR Part 989, et seq., the ANG will prepare an EA that considers the potential consequences to human health and the natural environment.

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ACC units and for air refueling operations, which are critical training multipliers for the F-16C fleet. The proposed expansion has been coordinated with FAA representatives at the Washington Center to minimize civilian air traffic encroachment while maintaining its boundaries within a single air traffic controlling center.

The ANG has reviewed the proposed project for potential effects on historic properties and, because there will be no associated ground disturbance, consider them to be minimal. Under the proposed action, there would be no infrastructure changes, no ground-disturbing activities, no weapons firing, and no ordnance deployment within the proposed MOAs. No supersonic operations or release of chaff and flares would be conducted in the low airspace. Weekend and night time operations at all altitudes would be limited.

ANG intends to maximize the use of electronic transmittals during subsequent coordination phases of this project. A hard copy of the Draft and Final EA documents will be provided to your office for review. Enclosed is a copy of the distribution list for those agencies and organizations to be contacted regarding this EA (Att.2). If you consider any additional agencies should review and comment on this proposal, please feel free to include them in a re-distribution of this letter and the attached materials.

In order for the ANG to address your concerns, in a timely manner for both the Tribe and the proposed undertaking, please respond within 30 days of receipt of this letter. Please provide any comments to Jennifer Harty, Cultural Resources Program Manager, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or email to Jennifer.L.Harty.civ@mail.mil. Thank you for your assistance and we look forward to working with you on this undertaking.

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Date: 2019.05.17 16:43:22 -04'00'
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KEITH G. MACDONALD, Colonel, ANG
Commander, 113th Wing

2 Attachments:

- 1. Description of Proposed Action**
- 2. HCEP Distribution List**

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The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300

Randall Reid-Smith, Commissioner

Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

Ms. Jennifer Harty
Cultural Resources Program Manager
Air National Guard
3501 Fetchet Avenue
Joint Base Andrews, District of Columbia 20762-5157

RE: 113th Wing of the District of Columbia Air National Guard
FR# 19-1166-Multi

Dear Ms. Harty:

We have reviewed the above mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to submitted information, the 113th Wing of the District of Columbia Air National Guard proposes to modify and add Every Military Operations Airspace over Barbour, Tucker, Grant, Upshur, Randolph, Webster, Pocahontas, Pendleton, and Greenbrier Counties in West Virginia. There will be no supersonic flights in the airspace and no ground disturbances.

Architectural Resources:

We have reviewed the submitted information and determined there are numerous properties considered eligible and listed on the National Register of Historic Places. There are also many properties that have yet to be evaluated for their eligibility to the National Register of Historic Places. However, we concur that the proposed use of the air space will not be an adverse effect on these resources. No further consultation is necessary regarding architectural resources; however, we do ask that you contact our office if your project should change or the event of an accident where cultural resources could be impacted.

We appreciate the opportunity to be of service. If you have questions regarding our comments or the Section 106 process, please contact Ernest Blevins, Structural Historian, at (304) 558-0240.

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/EEB



COMMONWEALTH of VIRGINIA

Department of Historic Resources

Matt Strickler
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221


Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

MEMORANDUM

DATE: 1 July 2019 **DHR File #** 2019-0428

TO: Ms Jennifer L. Harty
National Guard Bureau

FROM:  Marc E. Holma, Architectural Historian (804) 482-6090
Office of Review and Compliance

PROJECT: Training requirements of 113th Wing of DC Air National Guard
Joint Base Andrews

This project will have an effect on historic resources. Based on the information provided, the effect will not be adverse.

This project will have an adverse effect on historic properties. Further consultation with DHR is needed under Section 106 of the NHPA.

Additional information is needed before we will be able to determine the effect of the project on historic resources. **Please see below.**

No further identification efforts are warranted. No historic properties will be affected by the project. Should unidentified historic properties be discovered during implementation of the project, please notify DHR.

We have previously reviewed this project. Attached is a copy of our correspondence.

Other (Please see comments below)

COMMENTS:

Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 862-6408
Fax: (804) 862-6196

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033



United States Department of the Interior



FISH AND WILDLIFE SERVICE

West Virginia Field Office
6263 Appalachian Highway
Davis, West Virginia 26260

November 9, 2020

Mr. Ramón E. Ortiz
Environmental Engineer
National Guard Bureau
3501 Fetchet Avenue
Joint Base Andrews, Maryland 20762-5157

Re: Modification and Addition of Evers Military Operations Area, Barbour, Braxton, Greenbrier, Harrison, Lewis, Nicholas, Pocahontas, Pendleton, Randolph, Tucker, Upshur, and Webster Counties, West Virginia (FWS File Number 2019-I-0554)

Dear Mr. Ortiz:

This letter responds to your May 11, 2020 request for information regarding the potential occurrence of federally listed species and their designated critical habitats within the above project area. The 113 Wing, District of Columbia Air National Guard (DCANG) proposes to expand and modify the airspace of the Evers Military Operations Area (MOA) to accommodate training for military pilots and aircrews. The existing MOA encompasses areas of Highland County, Virginia and Pocahontas, Pendleton, and Randolph counties in West Virginia. The proposed project area encompasses the airspace of approximately 4,827 square miles in Barbour, Braxton, Greenbrier, Harrison, Lewis, Nicholas, Pocahontas, Pendleton, Randolph, Tucker, Upshur, and Webster counties in West Virginia and Allegheny, Bath, Botetourt, and Highland counties in Virginia.

This letter only addresses the potential effects to federally listed species in West Virginia. The comments below are provided pursuant to the Endangered Species Act (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). This project has been assigned FWS File Number 2019-I-0554 and all future correspondence should clearly reference this FWS File Number.

The U.S. Fish and Wildlife Service (Service) West Virginia Field Office (WVFO) has determined that three federally listed species may occur within the project area and may be affected by the construction of this project – the endangered Indiana bat (*Myotis sodalis*) and Virginia big-eared bat (*Corynorhinus townsendii virginianus*); and the threatened northern long-eared bat (*Myotis septentrionalis*). Bald eagles (*Haliaeetus leucocephalus*) also occur within the project area.

Federally Listed Bats

The current Evers MOA and the proposed expansion fall within multiple Indiana bat and Virginia big-eared bat hibernaculum buffers, some of which are designated as critical habitat. There are also multiple northern long-eared bat hibernacula within the proposed expansion.

The expansion of the MOA could impact bats via direct collision with aircraft and through noise disturbance.

The proposed MOA is composed of five areas: Evers North MOA, Evers Center MOA, Evers South MOA, Evers Low MOA, and Evers East MOA. Flights within the Evers North, Evers Center, and Evers South MOAs will occur between 11,000 to 17,999 feet mean sea level (MSL). At this altitude, bat collision is extremely unlikely. Flights within the Evers East MOA will be performed at altitudes between 1,000 feet above ground level (AGL) and 17,999 feet MSL, and flights within the Evers Low MOA will be performed between 1,000 feet AGL and 10,999 MSL. While some bats have been observed flying at altitudes of 1,100 feet AGL, none of the federally listed bats that occur within the proposed MOA have been observed at those altitudes or recorded as military aircraft bat strikes (Peurach et al. 2009). While there has not been extensive research into Indiana bat flight height, the current data indicate that Indiana bats are unlikely to reach altitudes during foraging or seasonal migration that would place them within the flight path of planes within the MOA (USFWS 2011). Virginia big-eared bats are non-migratory and would not be found foraging within the altitude range of the MOAs. In the environmental assessment (EA) for the Evers MOA, it states that flights will almost always occur during daylight, which further limits the chance of bats being struck by aircraft.

Anthropogenic noise can disturb bats by interrupting hibernation and interfering with foraging activity. Indiana bats, northern long-eared bats, and Virginia big-eared bats hibernate in caves during cooler months. Disturbance during this time can result in excessive energy expenditure that can result in starvation. The flight activities within the proposed expansion will typically range from 42.9 to 47.2 A-weighted decibels (dBA) day-night sound level (DNL) within the Evers East and Low MOAs and at 43.0 dBA and 44 onset-adjusted monthly DNL for the Evers North, Evers South, and Evers Center MOAs, with some intermittent overflights exceeding 75 dBA maximum sound level.

Most research concerning noise and wildlife focuses on responses to chronic noise. Studies indicate that hibernating bats may habituate to repeated and prolonged anthropogenic noise and tended to respond more to audio cues associated with feeding and social behavior (Luo et al. 2014). An ecological risk assessment conducted at Fort Leonard Wood and summarized by Shapiro and Hohmann (2005) indicated that Indiana bats and little brown bats (*Myotis lucifugis*) that were played military training sounds between 65-115 decibels (dB) during an artificially-induced hibernation showed no measurable response. Virginia big-eared bats utilize caves year-round and are considered exceptionally sensitive to disturbance. The Fort Leonard Wood environmental assessment also measured sound detection of military activities within Indiana bat hibernacula caves. Most sounds were undetectable within the cave. Only one training range resulted in barely detectable levels (1-2 dB). Based on the existing research, hibernating bats are unlikely to be impacted by the expansion of the MOA.

During warmer months, Indiana bats and northern long-eared bats move to summer roosts (typically trees), while Virginia big-eared bats continue to roost in caves or rock crevices. All three species forage for insects during this time. Studies indicate that prolonged noise, such as traffic noise (Finch et al. 2020) or industrial noise (Bunkley et al. 2015), can lead to reduced bat activity levels. As previously mentioned, these studies tend to focus on chronic noise. Sounds

produced by flyover of military aircraft within the proposed Evers MOA expansion will be infrequent in nature. The aircraft do not fly the same routes each day and pass over the landscape quickly. The anticipated sound level resulting from flyover is also lower than the sounds used in most studies. A study by Martin et al. (2004) examined bat activity in response to intermittent noise from a military training facility, primarily high caliber weapons fire. The data indicate that bat activity remained consistent during noise events. Firing range activity, while intermittent, is still longer in duration than flyover and likely louder in volume. The existing data suggest that federally listed bats occupying the terrain beneath the proposed MOA expansion are unlikely to be disturbed. Furthermore, flight activities will occur primarily during the day and should not interfere with foraging or mask echolocation.

Based on the current research and the information provided in the Evers MOA environmental assessment, the expansion of the MOA may affect, but is not likely to adversely affect the Indiana bat, northern long-eared bat, and Virginia big-eared bat.

Bald Eagle

Bald eagles (*Haliaeetus leucocephalus*) receive Federal protection under the Bald and Golden Eagle Protection Act (BGEPA). They are listed by the Service as Birds of Conservation Concern in the Appalachian Mountains Bird Conservation Region, within which the proposed project occurs.

The BGEPA provides for the protection of bald eagles by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. BGEPA prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald eagles, including their parts, nests, or eggs. The BGEPA defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.” BGEPA provides civil and criminal penalties for persons who violate the law or regulations.

Under 50 Code of Federal Regulations (CFR) § 22.3, disturb is defined as “to agitate or bother a bald eagle to a degree that causes, or is likely to cause, based on the best scientific information available: 1) injury to an eagle; 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” The BGEPA’s definition of disturb also addresses effects associated with human induced alterations at the site of a previously used nest during a time when eagles are not present. Upon an eagle’s return, if such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment, then this would constitute disturbance.

There are two bald eagle nests each in the Evers Low and Evers East MOAs. There are three nests each in the Evers North, Evers South, and Evers Center MOAs. The aircraft in the Evers North, Evers South, and Evers Center MOAs will fly at a high enough altitude that disturbance of nesting eagles from sight or sound is highly unlikely.

The nests of primary concern are the four nests located in the Evers Low and East MOAs. In the environmental assessment for the proposed expansion, DCANG commits to avoiding low-level flights over noise-sensitive areas, including eagle nest sites, to the maximum extent practicable.

Literature indicates that raptors exposed to extreme levels of low-level jet passes and sonic booms do not experience significant failed productivity or reoccupancy in following years (Ellis et al. 1991). The flights within the Evers MOA expansion will not involve any supersonic flight activities. A study by Grubb and Bowerman (1997) showed that while helicopters elicited the strongest response from nesting bald eagles, military jets also produced a response 31% of the time. Alertness to the flyover was significantly more common (28%) than a flight response (3%). The median distance that provoked an alertness response from the birds was approximately 1,640 feet, and the median distance for flight responses was approximately 656 feet. This research suggests that if the aircraft operating within the Evers expanded MOA were unable to avoid a bald eagle nest, the chances of nest abandonment and negative impacts to the success of the individuals are unlikely to occur.

Military aircraft have been known to strike bald eagles; however, it is not a common occurrence. An analysis of 24 years of Federal Aviation Administration wildlife strike data within the U.S. revealed 234 incidents of bald (200) and golden eagle (34) collisions with aircraft. Of those, only 37 involved military aircraft (U. S. Air Force and NAVY). Only 13.8% of the total overall strikes occurred during the “enroute” phase of the flight. Of the total 200 bald eagle strikes, only 28 occurred within the altitudes at which aircraft are anticipated to fly (Washburn et al. 2015). The aircraft within the Evers Low and East MOAs will fly at a minimum of 1,000 feet AGL. The chances of an eagle-aircraft collision within the proposed Evers MOA expansion are very low. Additionally, the commitment by the DCANG to avoid known eagle nesting locations whenever possible should further minimize this risk.

Summary

Based on the information provided, the Service’s WVFO does not anticipate this project is likely to adversely affect any federally listed species.

Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this determination may be reconsidered. If you have any questions regarding this letter, please contact Kristin Stockton on my team at (304) 679-1620, or kristin_stockton@fws.gov, or at the letterhead address.

Sincerely,



Jennifer L. Norris
Field Supervisor

Literature Cited

- Bunkley, J. P., J. W. McClure, N. J. Kleist, C. D. Francis, and J. R. Barber. 2015. Anthropogenic noise alters bat activity levels and echolocation calls. *Global Ecology and Conservation*, 3: 62-71.
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- Martin, C.O., R. F. Lance, B. M. Sabol, D. K. Delaney, and L. L. Pater. 2004. An investigation of military noise impacts on endangered bats. Paper B9-03 in B.C. Alleman and S. A. Downs, eds., *Sustainable Range Management – 2004, Proceedings of the Conference on Sustainable Range Management*, New Orleans, LA, 5-8 Jan 2004. Batelle Press, Columbus, OH.
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- U.S. Fish and Wildlife Service. 2011. Indiana Bat section 7 and Section 10 Guidance for Wind Energy Projects, Revised Oct. 26, 2011.
- Washburn, B. E., M. J. Begier, and S. E. Wright. 2015. Collisions between eagles and aircraft: An increasing problem in the airport environment. *Journal of Raptor Research*, 49 (2): 192-200.

Mr. Ramón E. Ortiz
November 9, 2020

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cc:

Project File

Reader File

ES:WVFO:KStockton:skd:11/9/2020

Filename: 2019-I-0554_Evers Military Operations_jln.docx



June 21, 2019

National Guard Bureau
Attention: Ramón E. Ortiz, P.E.
3501 Fetchet Avenue
Joint Base Andrews, MD 20762

RE: BNGB/A4AM – Plans and Requirements
Environmental Assessment
Plans and Requirements Review

Dear Mr. Ortiz:

After reviewing the letter you provided us dated June 13, 2019, USDA – Rural Development has no objection to the description of the Proposed Action for Modification and Addition of Evers Operations Project.

If you should have any questions, contact Harry Taylor of this office at 304-284-4887.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kris Warner", written over a large, stylized blue flourish that extends to the left and underlines the signature.

Kris Warner
State Director



2 July 2019

Ramon E. Ortiz
3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157

Re: Green Bank Observatory Comments –
Evers MOA modification, expansion and utilization

Dear Mr. Ortiz,

The Green Bank Observatory (GBO) in Green Bank, WV is the origin site of the National Radio Astronomy Observatory (NRAO) and was formed in 1957 for the purpose of astronomical observations into the radio universe. The GBO operates and maintains several large, extremely sensitive radio telescopes for the purpose of collecting astronomical radio wavelength emissions for the study of the universe. In order to minimize harmful interference at the NRAO, Pocahontas County, WV and at the Naval Radio Research Observatory (NRRO), Sugar Grove, Pendleton County, WV, the Federal Communications Commission (FCC) re: Docket No. 11745, along with the National Telecommunications and Information Agency (NTIA), and through agreement with the Interdepartment Radio Advisory Committee (IRAC), created the National Radio Quiet Zone. This zone provides a unique area bounded by 39° 15' on the north, 78° 30' W on the east, 37° 30' N on the south and 80° 30' W on the west that provides for sensitive astronomical observations by NRAO and NRRO. An example of such observation is our collection of data for the Huygens lander on Titan, a moon of Saturn, with a transponder power equivalent of a single cellphone.

While GBO understands the reasoning behind the expansion of the Evers MOA, especially for refueling of aircraft, the protection of our airspace for the collection of extremely weak astronomical signals must be maintained. The Robert C. Byrd Green Bank Telescope (GBT), for example, operates at frequencies between 200MHz and 116GHz, with a collecting sensitivity of 10^{-32} watts/sq.meter/Hz. Additionally, it is the largest fully-steerable telescope in the world, standing at maximum height 485' AGL. Evers Low MOA would place flights above this telescope at only 500' above its highest point.

There are at least two considerations in the effect of this flight scenario. The first deals with focused noise at the feed location of the structure and the safety of our workforce. Multiplication of the noise levels due to the accumulated reflection of sound waves by the 2.3 acre collecting area could cause substantial danger to employees working on the structure, both in terms of potential physical damage to their hearing and sudden fall potential due to

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unanticipated atmospheric and structural disturbance. The second deals with unknown frequency and power level radio transmissions, from unplanned directions. Due to the sensitivity of the electronic components of the telescope receivers, unwanted transmissions above certain power levels have the potential to overload and destroy the components. Both considerations noted have greater threat of impact as distance to the telescope decreases. Our sister telescope facility near Socorro, NM (telescopes of much smaller collecting area) has maintained a "gentlemen's" agreement with the U.S. Air Force for just such reasons.

Present operation of the Evers MOA through the Greenbrier River Valley to the west of the GBO has been mostly successful, however past operations have largely been accomplished at low level flight over the river valley providing mountainous protection between the telescopes and the aircraft. As we maintain operations on additional telescopes on site besides the GBT, distance requirements from mission flights to each of them would be difficult and unreasonable.

It is, therefore, the suggestion/comment/request of the GBO and NRAO that a "no-fly" zone be created around the GBO facility at a distance of 3 miles in radius from the center of the GBT. This zone would protect the operation of the GBO from spurious radio noise that would affect astronomical observations and would also serve to protect our employees from potential physical harm during routine operation and maintenance of the telescopes. We understand and acknowledge that the two existing private, local airstrips and their associated flight paths included within this zone would necessarily be excluded from the zone.

Additionally, we suggest that any activity within the Evers MOA include notification to the GBO as to date, time, type of aircraft and frequencies utilized prior to mission so that we can attempt to actively avoid potential interference and/or log the activity.

Thank you for your consideration of this request. We look forward to working with you jointly for the mutual mission success of our organizations. Should you have any questions regarding this request please do not hesitate to contact me at 304-456-2231 or by email at [mholstin@nrao.edu](mailto:mholstin@nrao.edu) or [michaelholstine@gbobservatory.org](mailto:michaelholstine@gbobservatory.org).

Sincerely,



Michael J. Holstine, P.E.  
Business Manager

GREENBANKOBSERVATORY.ORG  




## NATIONAL GUARD BUREAU

3501 FETCHET AVENUE  
JOINT BASE ANDREWS 20762-5157

22 August 2019

Mr. Ramón E. Ortiz, P.E.  
Environmental Engineer/Program Manager  
Air National Guard Readiness Center  
3501 Fetchet Avenue  
Joint Base Andrews, MD 20762

Mr. Michael J. Holstine, P.E.  
Business Manager  
The Green Bank Observatory  
P.O. Box 2  
Green Bank, WV 24944

Dear Mr. Holstine,

Thank you for the opportunity to discuss the Green Bank Observatory, (GBO) airspace concerns by teleconference yesterday, 21 August 2019 with National Guard Bureau, (NGB) staff members and myself. I found the conversation to be both valuable and clarifying.

In addressing those concerns outlined in the GBO 2 July 2019 reply letter to the Evers Proposed Military Operations Area, (MOA) modification and the follow-up phone conversation; the NGB representing the 113th DC Air National Guard, agrees to minimize impacts to the GBO through the following accommodations:

1. To minimize noise and radio interference to the GBO, the NGB will propose a chart modification to establish a no-fly zone around the GBO facility that has a radius of 2.5 statute miles and a ceiling of 2,500 feet above ground level (AGL).
2. To address notification requirements requests from GBO, the NGB will provide notification to the GBO via email and via telephone of proposed activity every Friday with the proposed flight schedule for the following week. When circumstances warrant, weather changes and/or last minute changes will be forwarded to the GBO via telephone as soon as practicable but no later than one hour prior to the change actually occurring.
3. To prohibit NGB aircraft using the Evers MOA from targeting the GBO facility intentionally with any electromagnetic pulses.





**NATIONAL GUARD BUREAU**

3501 FETCHET AVENUE  
JOINT BASE ANDREWS 20762-5157

Should you have any questions regarding this letter, please feel free to contact me by phone at 240-612-7042 or by email at [ramon.e.ortiz2.civ@mail.mil](mailto:ramon.e.ortiz2.civ@mail.mil).

Sincerely

A handwritten signature in black ink, appearing to read "Ramón E. Ortiz", is written over a horizontal line. The signature is stylized and cursive.

RAMÓN E. ORTIZ, GS-14, P.E.  
Environmental Engineer/Program Manager



50 F St. NW, Suite 750  
Washington, D.C. 20001

T. 202-737-7950  
F. 202-273-7951

[www.aopa.org](http://www.aopa.org)

January 18, 2019

Mr. Jamie A. Flanders  
Airspace Manager  
NGB/A2/3/6/10TA  
3500 Fetchet Ave  
Joint Base Andrews, MD 20762

**Re: *Proposal by the District of Columbia Air National Guard 113<sup>th</sup> Wing, the United States Air Force, and the National Guard Bureau to Expand, Modify, and Establish Air-to-Air Training Airspace Areas Over Northern Virginia and West Virginia.***

Dear Mr. Flanders,

The Aircraft Owners and Pilots Association (AOPA), the world's largest aviation membership association, submits the following comments in response to the initial proposal by the District of Columbia Air National Guard 113th Wing, the United States Air Force, and the National Guard Bureau to expand, modify, and establish Special Use Airspace (SUA) over Northern Virginia and West Virginia. We understand from our meetings with the military that the existing Evers MOA does not facilitate the training space required for surrounding units, and that the surrounding SUA also does not meet mission requirements. The military's proposal would expand the area of the Evers MOA from 635 square miles to a complex of adjoined MOAs that would be over 5,000 square miles in size – a 700% increase. We support the military's mission and their need to have airspace that meets their unique requirements; however, we believe the proposed expansion of the Evers MOA will have an excessive impact on General Aviation and on surrounding airports. The location of the SUA expansion is a highly trafficked area; therefore, AOPA requests the military reduce the size of their requested SUA to efficiently accommodate civil airspace users and to limit any economic impact, or to consider alternative SUA elsewhere.

### **New permanent airspace must be justified**

As the Evers MOA expansion is still at an informal stage, we have yet to see documentation detailing airspace utilization rates or the specific justifications for why other preexisting SUA could not be utilized by military units. This information and justification is important, especially for an airspace proposal that is requesting an area nearly eight times as large as what is charted today. Additionally, it is not clear if the military aircraft that utilize the Evers MOA have changed or if their mission has changed such that it necessitates a noticeably different sized SUA. Clarification on what has changed is also important given the Evers MOA has been its current shape for many years.

### **Location of new airspace will have negative impact**

The location of the proposed airspace expansion, although over primarily a rural area, is a highly trafficked area by transient General Aviation. Most of these aircraft are flying through that airspace going to and from the Washington, DC, area and north-south along the eastern United States. For example, the expanded airspace would limit the utilization of V-37, the 64<sup>th</sup> busiest airway in the United States. This airway alone was filed and flown thousands of times in 2015. We question why the military would expand the Evers MOA versus look to less trafficked areas that would also offer accessibility to

surrounding units. The military must note what alternative areas or preexisting SUA were also discussed for either establishing new SUA or expanding other existing SUA.

The FAA's guidance on SUA, *Procedures for Handling Airspace Matters*, JO 7400.2L, is specific on avoiding establishment of SUA in congested areas. Per para. 21-1-7, Optimum Use of Airspace, it states, "SUA should be located to impose minimum impact on nonparticipating aircraft and [air traffic control] operations. This should be balanced with consideration of the proponent's requirements. To the extent practical, SUA should be located to avoid airways/jet routes, major terminal areas, and known high volume VFR routes." Evidence points to the Evers MOA area being one of the busier airspaces for transient General Aviation and air traffic control. The burden is on the military to show why this SUA will have a minimum impact on General Aviation.

Additionally, para. 25-1-5, Location, states "MOAs should be located to create minimum adverse impact on nonparticipating aircraft operations...To the extent possible, locate MOAs...Within 100 miles of the user's base of flight origin...Outside terminal area airspace, Federal airways, charted terminal VFR routes, and known high volume VFR flyways." Joint Base Andrews (ADW), the home of the 113<sup>th</sup> Wing, is over 100 NMs from the new SUA and other unit's bases are even further. The rationale for not meeting this documented standard should be addressed. There are many existing SUA areas within 100 NMs of ADW that should be given preferential consideration and that could be shared with other military branches.

As previously noted, there are several airways that transit the proposed Evers MOA complex. The Victor Airways will be canceled as their governing VORs are decommissioned as part of the FAA's VOR Minimum Operational Network initiative. AOPA supports the VOR MON and agrees that most pilots are flying point-to-point using GPS; however, at a December 2018 meeting at the Washington ARTCC to analyze the impacts of these decommissioning's, there was concurrence that there will be a need for T-Routes to transit this area as it is designated as mountainous per 14 CFR 95 and icing is routine during winter months. The working group identified several new T-Routes that would transit the proposed airspace. These routes were drawn without consideration of the military's proposal, which may adversely affect the military's proposal and the customer of the T-Routes: General Aviation. Mitigations to address the impact of this SUA on the airways has not yet been identified. The military must be proactive and collaborate with the FAA and civil users to identify T-Routes that will ensure efficient routing and minimize the effects of any new SUA, regardless of whether it is in the Evers MOA area or somewhere else.

Aircraft circumnavigating the increased size of the proposed Evers MOA complex will increase the cost for pilots flying in this area. A flight may need to fly tens of nautical miles out of their way to avoid active SUA. The cost per hour for operating a fighter jet is not insignificant, nor is the per hour cost of a Cessna 208. We discussed this proposal with several of AOPA's Airport Support Network volunteers that are located in proximity to Evers MOA. The responses indicated concern for the large size of the SUA and for it being at the altitudes many General Aviation aircraft normally cruise at. The military should consider moving the eastern boundary of the Evers South, Evers Center, and Evers North MOA boundaries to be in line with the western boundary of the Evers Low MOA. This reduction in size would shave many miles off a reroute for civil aircraft and create a mitigation worth thousands of dollars.

### **Pilots need advanced notification of activation**

We understand the proposal includes varying times of use:

The airspace will be charted sunrise-sunset, daily, other times by NOTAM. The military anticipates 1-2 hours of activation per day. The units expect to conduct night flying by NOTAM less than 10% of the time.

The proposal states activation of the MOAs could take place by NOTAM but fails to state how much advance notice pilots would receive. Pilots cannot adequately flight plan should this airspace be activated after they depart. Modern General Aviation aircraft can have over six hours of fuel endurance; however, having to deal with a long reroute can lead to issues of the pilot not having enough fuel and thus being forced to divert for fuel. At least four hours advanced notice is necessary to assist pilots with their flight planning and to help them avoid costly reroutes or the need for fuel diversions. This amount of time is included in many SUA legal descriptions. Furthermore, the FAA states in para. 21-2-4(b)(3)(e), “the minimum advance notice should be at least 4 hours prior to the activation time.” Therefore, we believe the times of use should be changed to “...other times by NOTAM at least 4 hours in advance.”

Any change in airspace configuration must coincide with the VFR charting cycles to ensure the flying public is aware of the change. Safety could be significantly impacted should the airspace change be made before the change is charted and widely disseminated to pilots. We appreciate the ANG’s long-standing commitment to General Aviation to ensure these steps do take place.

### **Requirements for lights-out training**

The Evers MOA is listed as approved for lights-out training per FAA exemption 7960I, issued August 10, 2017. Lights-out training allows military aircraft to turn off their exterior lights. In this exemption the FAA notes that the use of night vision goggles limits a pilot’s ability to perform see-and-avoid; therefore, monitoring activities must be conducted to ensure participating aircraft are alerted to the presence of non-participating aircraft.

AOPA considers lights-out training to be hazardous for non-participating aircraft. First, the mitigations in place for non-participating VFR traffic are one sided. In other words, every strategy has been predicated on the ability of the military pilots to see-and-avoid civilian traffic, and for controllers to de-conflict traffic they may not be talking to. This seems to be the logical focus, as lights-out operations would make it impossible for civilian pilots to meet their obligation to perform see-and-avoid. However, the inability of the General Aviation pilot to protect himself or herself is the cornerstone of our objection. It is concerning for a pilot to completely relinquish their responsibility for their safety, and the safety of their passengers, to the pilot of another aircraft, especially one with whom they have no contact (visual or otherwise).

As the Evers MOA would be increased significantly in size and would be used for lights-out training, the military should identify how this monitoring activity will be performed to ensure no increase in risk to General Aviation aircraft flying through the airspace VFR at night. A MOA floor of 1,000 feet AGL is effectively a floor to the surface given this is mountainous terrain and for safety reasons, such as known wind shear in the area, pilots will not be flying under the MOA – they will need to fly through it. Additional justification is needed on why lights-out training could not be limited to a finite area of the complex, such as the Evers Center MOA, instead of the entire complex. Limiting the area where this activity takes place would reduce the extent of the hazard. Regardless, communicating the activities

taking place in MOAs, per FAA requirements, is important so that General Aviation pilots are aware of any hazards.

### **Underlying airports affected by new airspace**

In reviewing the airspace proposal, we note additional public-use and private airports would underlie the SUA. In accordance with para. 25-1-4, MOA Floor, “if the MOA floor extends below 1,200 feet AGL over a charted private airport, coordination should be effected with the airport operator to determine whether there would be any conflict between the MOA activity and airport operations.” We believe it is a responsibility for the military to coordinate their proposal with Singleton Airport (97VA) and we encourage the military to engage with other private airports affected by this proposal. As a good neighbor, communicating with those affected assists with understanding the proposal and why the military is requesting the establishment of this airspace.

By increasing the dimensions of the SUA from 16 NMs by 30 NMs to 44 NMs by 80 NMs, several additional public-use airports will have overlying SUA, including: Upshur County Regional (W22); Elkins-Randolph County (EKN); Greenbrier Valley (LWB); and Ingalls Field (HSP). Although the MOA may not affect instrument approaches at these airports or the ability to fly there VFR, charting SUA can have the adverse effect of discouraging use of an airport as a fuel stop. There is documented evidence of there being a negative economic impact from establishment of military airspace over civil airports. The military should limit the size of SUA proposals to avoid overlying civil airports.

### **Airspace dynamic deactivation needs documentation**

During preflight planning pilots can access SUA information via NOTAMs and schedule information via SUA.FAA.gov. If a pilot sees the SUA along their route of flight is scheduled to be active, the pilot has no choice but to amend their flight to fly through that area before the SUA’s activation or after it is scheduled to be inactive. The General Aviation flying public does not have access to Letters of Agreement or other information that states air traffic control will coordinate with the military to give way to IFR General Aviation aircraft to allow them access during a SUA’s scheduled utilization. It is not reasonable to think a pilot will expend the money and time to fly IFR under the possibility the scheduled time in SUA.FAA.gov is incorrect. Pilots flying IFR are trained that they should plan to not have any access to that airspace when the SUA is active, and they will delay their flight if their destination is located below the SUA.

If there is to be “flexible use” or “dynamic deactivation” of the airspace formally documented with the FAA, that arrangement should be publicly disseminated so pilots can be informed that they will be provided access with minimal delay. Without clear communication of a mitigation to the pilot community, it is effectively non-existent and ineffective. Any arrangement must be noted for each airport in FAA publications utilized by pilots.

### **Conclusion**

AOPA recognizes and fully supports the military’s need to train as they fight. We appreciate being engaged early in the process and your willingness to enter into a dialogue about this new airspace. As we have noted, we expect significant impacts from several aspects of the proposed SUA, but we offer our ideas for mitigations and alternatives that we believe would still allow the military to conduct their mission successfully and would alleviate our concerns. Unfortunately, due to the government shutdown, we were unable to gather additional insight from the FAA so could not provide a complete assessment of the proposal.

Mr. Flanders  
January 18, 2019  
Page 5 of 5

We look forward to future discussions and, should the proponent move forward with the proposal, submitting formal comments on the environmental and aeronautical impacts of the SUA as viewed by our many thousands of Virginia and West Virginia members. Thank you for reviewing our comment on this important issue. Please feel free to contact me at 202-509-9515 if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Rune Duke', is written over a light blue rectangular background.

Rune Duke  
Senior Director, Airspace and Air Traffic

## Campo, Joe

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**From:** Valley AeroSpace Team <valleyaerospace@gmail.com>  
**Sent:** Monday, July 8, 2019 2:17 PM  
**To:** Flanders, Jamie A CIV USAF NGB A2/3/6 (USA)  
**Cc:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Subject:** Re: Evers MOA expansion proposal - request for information

**⚠ CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

Hello Jamie,

Thank you for your message! I did receive the letter from Mr. Ortiz and appreciate being included in the assessment announcement. You will find my answers to your questions inline below in **RED**.

Let me know if you have any other questions or need anything else.

Thanks,  
Chuck Neff  
Valley AeroSpace Team (VAST) - President

On Tue, Jul 2, 2019 at 11:09 AM Flanders, Jamie A CIV USAF NGB A2/3/6 (USA) <[jamie.a.flanders.civ@mail.mil](mailto:jamie.a.flanders.civ@mail.mil)> wrote:

Good morning, Mr. Neff,

Received your email and address from the FAA certificate of authorization for your rocket organization. You should have received, or will soon receive, a letter announcing the Air National Guard's intention to expand the Ever MOA in West Virginia/Virginia. Your operations area currently touches but does not encroach upon the current military airspace. Our expansion should not cross into your area as well – see attached picture.

We are in the process of completing an environmental assessment, and we welcome your consideration of this project. We have identified your rocket club as a point of interest that we want to include in our assessment. I clicked through your website ([www.valleyaerospace.com](http://www.valleyaerospace.com)) and would like to confirm some information.

- You normally conduct launches on the first weekend of every month unless there's conflicts, do you only launch on the weekends?

**Yes, we normally (but not always) conduct our launches on the first weekend of the month and they are always on weekends.**

- Can you provide any information on the types of rockets launched, average estimate of the number of launches each day, how long from first launch until last recovery, how high do they go, how far laterally can they travel?

The smaller Class 1 rockets are typically made of a cardboard airframe with plastic or balsa wood fins and nose cone. Class 2 rocket airframes typically made of cardboard, cardboard covered with fiberglass, phenolic (cardboard/epoxy), fiberglass, or carbon fiber. The fins are typically plywood, fiberglass, or carbon fiber while the nose cones are typically plastic, fiberglass, or carbon fiber.

We typically launch between 24-48 rockets per day depending upon the weather conditions, the time of year, and the participation by our members. It can vary sometimes a little less or a little more. Summer launches are typically more well attended so see the most launches. Winter launches are at the other end of the spectrum.

Due to the various rocket sizes and flight profiles, flights (launch to landing) can last anywhere from a few seconds to over 3 minutes. During the summer hours on Saturdays, we usually start around 10:00 AM local and end our daytime launch activities around 6:00 PM, break for supper, and then resume for nighttime launches until 9:30 PM-10:00 PM. Sunday's start around 10:00 AM but typically end by 3:00 PM local. Winter hours are typically 11:00 AM to 3:00 PM local both days.

Most of our flights are under 6,000' AGL (daytime) and 2,000' AGL (nighttime). The lateral distance is typically under 1,500'. Larger Class 2 rockets as well as those with an intended flight altitude of over 2,500' AGL require the use of electronic dual-deployment. In this case, the electronics will deploy a drogue chute or other small recovery device at apogee which allows the rocket to descend at a fast, but controlled, rate (~50-60 fps) which reduces the amount of horizontal drift. Then, at a set altitude between 400' and 1,000' AGL (depends upon the electronics manufacturer as well as site conditions), the electronics will deploy the main parachute so recovery the rocket safely for reuse. A flight that travels more than 1,500' is typically due to the main accidentally being deployed at apogee and therefore increasing the drift distance. We've never had a rocket travel more than 1 NM from the range area, which is well within our approved 2 NM radius area.

- What's the difference in the types of launches you list on your calendar (sport, night, research, etc)

Sport Launches use only commercially available rocket motors and are typically conducted under the purview of the National Association of Rocketry (NAR) Model and High Power Rocketry Safety Codes; Night Launches are the same as Sport Launches except conducted during early evening hours (typically end by 10:00 PM local); Research Launches are conducted under the purview of the Tripoli Rocketry Association (TRA) Research Safety Code. Research Launches are to foster the research and development of payloads, electronics, recovery devices, air frame design, construction materials and to provide members of TRA with a venue in which they can static test and use their own composite or hybrid rocket motors.

- How long has this organization been around?

The Valley AeroSpace Team (VAST) was formed in early 2005. We started launching at our current launch site in 2010.

- What safety procedures are in place to ensure the rockets remain within height restrictions or within the lateral dimensions of your approved COA?

We have the ability to run flight simulations using several different computer software programs. We don't typically fly that close to Certificate of Waiver or Authorization issued to us by the FAA due to the weather conditions and proximity of trees around our site. If someone would like to make a flight that could possibly come close to that limit, our Board of Directors will scrutinize the simulation to determine whether the flyer has done their due diligence in assuring their flight will not exceed the limit before approving it. Also, the maximum launch altitude for flights containing research motors is 90% of the authorized altitude established by the FAA.

As for the lateral dimensions, all rockets are launched from launch pads comprised of a sturdy base and a rod/rail that provides the initial stability until the rocket reaches the minimum speed required for stable flight. Launch angles from vertical are also limited per our Safety Codes.



**I'd also like to point out that all Class 2 flights as well as all research based flights are limited to high power certified individuals (i.e. they have passed a certification flight and test in order to be able to participate in high power rocketry).**

- I see in the COA that you are required to contact the FAA, the Navy, and the Air National Guard at least one hour prior to first launch of the day. Have you had any difficulty with those contacts?

**The 113th Wing Scheduling Office sometimes does not answer (I assume it's because it's on a weekend), but I just leave all my information about the launch as well as my contact information on the voicemail.**

- Finally, do you see difficulties or conflicts between our proposed military airspace and your rocket operations?

**I do not see any difficulties or conflicts based on our previous experiences. We appreciate to ability to fly our rockets and hope we can continue to do so without any disruptions to the military airspace.**

Any other information you can provide will be greatly appreciated. If you have any questions on our airspace proposal, I would be happy to answer as well. Thank you for your time and consideration.

**Our group has been looking at another site to the north of our existing site. It is a much larger site and would afford our group more recovery area. We would like to hold a couple of launches there a year while still holding launches at our current site at other times. The new site is located within the Evers East MOA (coordinates are 38.494614°, - 79.577846°). Would it be possible to get permission to fly within the MOA at this site? The scheduling would be the same as our other launches (only on weekends).**

Respectfully,

JAMIE A. FLANDERS, GS-13, DAF

Airspace Manager, NGB/A2/3/6/10TA

DSN 612-9253

Comm: 240-612-9253

Cell (Wed Only): 682-472-2185

## Campo, Joe

---

**From:** Ortiz, Ramon E CIV USAF NGB A4 (USA) <ramon.e.ortiz2.civ@mail.mil>  
**Sent:** Friday, October 4, 2019 7:56 AM  
**To:** Campo, Joe; Sundy, Joseph T (Joe) Lt Col USAF NGB A4 (USA); Houghton, Bonnie L CTR USAF NGB A4 (USA); Flanders, Jamie A CIV USAF NGB A2/3/6 (USA)  
**Cc:** Frisch, Melanie A CIV USAF NGB A7 (USA); Scott, Georganne F CTR USAF NGB A4 (USA)  
**Subject:** FW: [Non-DoD Source] RE: ANG Joint Base Andrews EA Airspace Modification  
**Attachments:** Extract Region 8 NF.PDF  
**Signed By:** ramon.ortiz.6@us.af.mil

Dr. Campo:

Email from Forest Service (Evers MOA) received while I was on leave.

RAMÓN E. ORTIZ, P.E., GS-14

 Comm: 240-612-7042 |  DSN: 612-7042 |  Cell: 210-265-9449

**From:** Morris, Troy - FS <troy.morris@usda.gov>  
**Sent:** Thursday, September 26, 2019 8:59 AM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA) <ramon.e.ortiz2.civ@mail.mil>  
**Subject:** [Non-DoD Source] RE: ANG Joint Base Andrews EA Airspace Modification

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

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This is in reference to the attached letter that was sent to Beth LeMaster, Deputy Forest Supervisor of the George Washington & Jefferson National Forests.

Thanks,



**Troy W. Morris, CWB, RF**  
**Integrated Resources Staff Officer**

**Forest Service**  
**George Washington & Jefferson National Forests**

**p: 540-265-5170**

**c: 540-520-7203**



**f: 540-265-5145**


[troy.morris@usda.gov](mailto:troy.morris@usda.gov) < Caution-mailto:troy.morris@usda.gov >

5162 Valleypoint Parkway

Roanoke, VA 24019

[Caution-www.fs.fed.us](http://www.fs.fed.us) < Caution-https://www.fs.fed.us/ >

 < Caution-https://usda.gov/ >  < Caution-

<https://twitter.com/forests-service> >  < Caution-

<https://www.facebook.com/pages/US-Forest-Service/1431984283714112> >

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**From:** Morris, Troy - FS  
**Sent:** Thursday, September 26, 2019 8:57 AM  
**To:** [ramon.e.ortiz2.civ@mail.mil](mailto:ramon.e.ortiz2.civ@mail.mil)  
**Subject:** ANG Joint Base Andrews EA Airspace Modification

Ramon,

It was recently brought to my attention that the ANG Joint Base Andrews are proposing to modify airspace operations that may overlap Federal lands managed by the US Forest Service on the George Washington & Jefferson National Forests. After reading through this proposal, I submit the following comments for consideration in development of the project:

- (1) Consider potential noise issues that could impact Federally designated wilderness areas within the air operations modifications zones, especially in the Low and East Zones where altitudes may be as low as 1000' AGL. I'm not sure what the minimum acceptable distance would be regarding wilderness but ask that considerations for noise impacts be considered for Federally designated wilderness.
- (2) Consider potential conflicts with both wildland fire and prescribed fire operations within the air operations modifications zones. Any air ops you plan may need to be coordinated with the Forest through the Virginia interagency Coordination Center. We also use aircraft on fire suppression and prescribed fire treatments, so we need to ensure coordination to de-conflict any airspace issues.
- (3) We've provided the Regional Foresters sensitive Species (RFSS) and locally rare species list for the Forest to Mr. Joe Campo. Consider any impacts regarding these species, especially avian and bat species. Also, consider any potential impacts to migratory bird species and certain raptors that could be impacted with regard to the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Thanks for the opportunity comment. Contact me if I can provide any further information.

Thanks,



**Troy W. Morris, CWB, RF**  
**Integrated Resources Staff Officer**

**Forest Service**  
**George Washington & Jefferson National Forests**

**p: 540-265-5170**

**c: 540-520-7203**



**f: 540-265-5145**


[troy.morris@usda.gov](mailto:troy.morris@usda.gov) < Caution-mailto:troy.morris@usda.gov >

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<https://twitter.com/forests-service> >  < Caution-

[https://www.facebook.com/pages/US-Forest-](https://www.facebook.com/pages/US-Forest-Service/1431984283714112)

[Service/1431984283714112](https://www.facebook.com/pages/US-Forest-Service/1431984283714112) >

**Caring for the land and serving people**



**File Code:** 1950; 6270  
**Date:** July 16, 2019

Ramon E. Ortiz, PE  
Technical Lead Environmental Planner  
3501 Fetchet Avenue  
Joint Base Andrews, MD 20762-5157

Dear Mr. Ortiz:

The Monongahela National Forest (MNF) would like to offer some concerns we have identified for consideration when preparing the Environmental Assessment (EA) for proposed Modification and Addition of Airspace Utilization of Evers Military Operations Airspace (MOA). The MNF encompasses more than 921,000 acres in federal ownership in 10 counties of the Potomac Highlands in West Virginia. This is the largest expanse of public land in West Virginia and is the fourth largest national forest in the 20 northeastern states. The majority of the MNF is within the counties identified in the proposed Evers MOAs.

The MNF contains eight congressionally designated wildernesses. All or portions of these wilderness may be within the proposed MOAs. They include: Big Draft, Cranberry, Dolly Sods, Laurel Fork North, Laurel Fork South, Otter Creek, Roaring Plains West, and Spice Run Wilderness. Flights are discouraged within 2,000 feet of the ground surface, except in emergencies or for essential military missions. However, specific legislative provisions regarding overflight may pertain to certain wildernesses.

The MNF contains an estimated 52 percent of the publicly available recreation land in West Virginia and draws users from across the state and surrounding states. The national importance of the recreation resource has been recognized with Spruce Mountain-Seneca Rocks Recreation Area; eight Wildernesses, three Scenic Areas, a National Scenic Highway, a National Recreation Trail, and two visitor centers. Please consider addressing impacts to recreation users.

We are one of the most ecologically diverse forest in the National Forest System. The forest contains the northern-most population of some southern species, and the southern-most species populations of northern species. The forest provides habitat for 11 federally listed threatened, endangered and proposed species; we expect these species will be addressed as part of the Endangered Species Act requirements. The forest also provides habitat for 159 Regional Forester Sensitive Species. Therefore, we ask you to consider disclosing impacts to these species.

The MNF conducts aerial controlled burn operations at various locations across the forest. We issue NOTAMs when conducting aircraft operations. Please consider additional coordination and/or methods to ensure the air traffic controllers and/or pilots are aware of MNF aircraft operations.

Thank you for providing an opportunity for the MNF to provide input for the proposed



modifications of the Evers MOA. Please contact Tami Conner, Ecosystem Staff Officer, if you need additional information. She can be reached via email at [tami.conner@usda.gov](mailto:tami.conner@usda.gov) or phone at 304-635-4457.

Sincerely,

A handwritten signature in blue ink, appearing to read "Shawn M. Cochran".

SHAWN M. COCHRAN  
Forest Supervisor

cc: Tami Conner, Karen Stevens



*The Delaware Nation*  
**Historic Preservation Department**  
31064 State Highway 281  
Anadarko, OK 73005  
Phone (405)247-2448

---

July 9, 2019

To Whom It May Concern:

The Delaware Nation Historic Preservation Department received correspondence regarding the following referenced project(s).

**Project: Modification and Addition of Airspace Utilization Evers Military Operations Airspace**

Our office is committed to protecting tribal heritage, culture and religion with particular concern for archaeological sites potentially containing burials and associated funerary objects.

The Lenape people occupied the area indicated in your letter during prior to European contact until their eventual removal to our present locations. According to our files, the location of the proposed project does not endanger cultural, or religious sites of interest to the Delaware Nation. **Please continue with the project as planned** keeping in mind during construction should an archaeological site or artifacts inadvertently be uncovered, all construction and ground disturbing activities should immediately be halted until the appropriate state agencies, as well as this office, are notified (within 24 hours), and a proper archaeological assessment can be made.

Please note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation Cultural Preservation Office to conduct proper Section 106 consultation. Should you have any questions, feel free to contact our offices at 405-247-2448 ext. 1403.



Erin Thompson  
Director of Historic Preservation  
Delaware Nation  
31064 State Highway 281  
Anadarko, OK 73005  
Ph. 405-247-2448 ext. 1403  
ethompson@delawarenation-nsn.gov

Charlotte area. of my really good a lot of time talking his pandemic and re- now those doctors are everything they have their personal life and sick, not sick, how at people," Harvick ally honored and re- all of our front line ally our doctors, but truck drivers, fire departments — you

name it "All of you front line workers are the reason that we're here today and our country is actually still running." The health care workers then virtually gave the command to start the engines. "Our drivers, race teams and officials have been eagerly awaiting the opportunity to get back to the race track and we want to assure you that we have taken the return to racing very seriously," NASCAR President Steve Phelps wrote in a letter to fans released Sunday morning.

and Slack said Oliver faces a misdemeanor charge for having the weapon.

## 2 drown at home of ex-Dodger Crawford

HOUSTON (AP) — A 5-year-old boy and a woman drowned in the backyard pool of former Los Angeles Dodgers player Carl Crawford's Houston home, according to reports.

Houston police were called about 2:40 p.m. Saturday for a reported drowning at a north Houston home that property and business records list as belonging to Crawford, The Houston Chronicle reports.

Police spokeswoman Jodi Silva told the paper that the boy was swimming in the pool when he began to have trouble breathing, and the woman jumped in to save him. Both were unresponsive when police arrived and later declared dead at a hospital, Silva said.

No further details were immediately available.

## McIlroy wins at Seminole

delivered the if returned to that revealed e than \$5 mil- s. who had not had a chance a \$1.1 million in the Taylor- l. Both missed 7th for a clos- ards, Matthew ole. His part- reen. Johnson ist shot, McIl- left of the pin,

measured at 13 feet. "Air five," McIlroy said, alluding to the social distancing in place at Juno Beach, Florida. The final carryover gave McIlroy and Johnson \$1.85 million for the American Nurses Foundation. Fowler, who made seven birdies, and Wolff made \$1.15 million for the CDC Foundation. "I'm proud to be part of an event to entertain people at home on a Sunday afternoon and to raise money for people who need it," McIlroy said as he played the 18th hole. Wolff, the 21-year-old Californian with big game and plenty of swagger, earned \$450,000 toward relief funds by having the longest drives on two par 5s — 356 yards on No. 2 and 368 yards on No. 14.

## NOTICE OF AVAILABILITY

The Air National Guard is announcing the availability of and requesting comments on the Draft Environmental Assessment (EA) on the potential impacts associated with the modification, expansion, and utilization of the Evers Military Operations Area (MOA) in the airspace over portions of Virginia and West Virginia to accommodate the training requirements of the 113th Wing of the District of Columbia Air National Guard. The Draft EA and Draft Finding of No Significant Impact (FONSI) are available for 30-day review and download at [www.113wg.ang.af.mil/EversMOA](http://www.113wg.ang.af.mil/EversMOA) or [www.wv.ng.mil/evers-moa](http://www.wv.ng.mil/evers-moa) and at the following libraries if they become open to the public when closures related to COVID-19 are lifted:

- Elkins-Randolph County Library, Elkins, WV
- Highland County Public Library, Monterey, VA
- Pocahontas County Library, Marlinton, WV
- Greenbrier County Public Library, Lewisburg, WV

To request an Evers MOA Draft EA/FONSI hard copy by mail or to submit your written comments, please contact Ramon E. Ortiz, National Guard Bureau, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or via email [usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil](mailto:usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil). To be most useful, comments should be postmarked by June 10, 2020.

State of West Virginia, County of Randolph, ss.

I, Steve Herron, Publisher of THE INTER-MOUNTAIN, a newspaper published at Elkins, in said county, do hereby certify that the annexed advertisement was published on the following dates:

5/4 5/18  
20 20 as required by law.

Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_, 20, \_\_\_\_\_

*[Handwritten Signature]*

Publisher

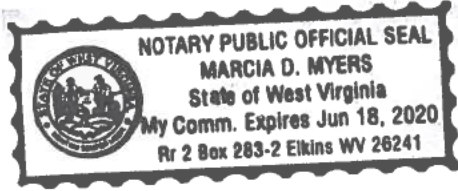
Printer's Fee: \$ 300.00

Subscribed and sworn to before me this \_\_\_\_\_ day of May, 2020

*[Handwritten Signature]*

Notary Public

My Commission Expires the 18th day of June, 2020













# sheriff's report

## Bath County

- April 26 — Deputy McRoberts assisted a person with speaking to magistrate.
- April 26 — Lt. Grimm responded to a report of livestock in the roadway.
- April 27 — Capt. Weaver responded to a report of an attempted breaking and entering at a business.
- April 27 — Deputy Randozzo responded to a report of a suspicious person in Millboro.
- April 28 — Sheriff Plecker responded to a report of a suspicious person in Millboro.
- April 28 — Deputy Bryan responded to conduct a well-being check in Hot Springs.
- April 28 — Bryan and Deputy Altizer responded to a report of an accident involving a deer in Hot Springs.
- April 29 — Grimm and Deputy Altizer conducted a traffic stop in Millboro.
- April 29 — Altizer arrested Vastal Patel for driving under the influence and he was transported to Alleghany Regional Jail.
- April 29 — Sgt. Smith responded to a report of a tree blocking the roadway in Hot Springs.
- April 30 — Sgt. Knick responded to a report of a tree blocking the roadway in Millboro.

- April 30 — McRoberts responded to a report of a dispute in Williamsville.
- April 30 — McRoberts responded to a report of a larceny in Millboro.
- May 1 — Bryan and Altizer responded to a report of debris in the roadway causing a traffic hazard in Hot Springs.
- May 1 — Bryan, Randozzo, and Altizer responded to a report of a vehicle crash involving a dog in Millboro.
- May 2 — Deputy D. Smith responded to a report of a vehicle crash in Millboro.
- May 2 — Altizer spoke with an individual in reference to a civil matter.
- May 2 — Bryan and Altizer responded to a report of a domestic dispute in Millboro.
- May 2 — Bryan responded to a report of a vehicle sitting in the roadway with an unresponsive driver in Healing Springs. Major Bryan and D. Smith assisted. Deputy Bryan arrested Shane Lamar Coles for driving under the influence of drugs, possession of marijuana, possession of schedule I or II drugs, and driving while revoked. He was transported to Alleghany Regional Jail.

## Highland County

- April 28 — Officer responded to a domestic situation, Mill Gap Road.
- April 29 — Officers responded to a domestic situation, Airport Terrace Road.

- April 29 — Officer responded to a report of a reckless driver, Potomac River Road.
- April 29 — Officer took individual into custody for assault.
- April 29 — Officer assisted an individual on a public relations call, Rich Hills Road.
- April 30 — Officer responded to a domestic animal complaint, Center Lane.
- May 1 — Officer responded to a medical emergency, Jackson River Road.
- May 1 — Officer responded to a

- security alarm, Bullpasture River Road.
- May 1 — Officer responded to a disturbance, Riverbend Road.
- May 2 — Officer responded to property dispute, Hevener Farm Drive.
- May 4 — Officer responded to a domestic animal complaint, Myers-Moon Road.
- May 4 — Officer responded to a report of destruction of property, The Pines Road.
- May 4 — Officer responded to a disturbance, The Pines Road.

## NOTICE OF PUBLIC HEARING

### PROPOSED REVISIONS TO THE HIGHLAND COUNTY SOLID WASTE ORDINANCE

The Highland County Board of Supervisors will hold a Public Hearing for the purpose of considering revisions to the Highland County Solid Waste Ordinance on Wednesday, May 20, 2020 at 7:30 p.m. in the Highland Modular Conference Center on Spruce Street, Monterey, Virginia.

The purpose of the proposed revisions is to remove Virginia Code Sections that have been repealed and to update definitions and references for older and disabled persons. A copy of the full text of the proposed revisions is on file and available from Roberta A. Lambert, Highland County Administrator, in the Highland County Courthouse, Main Street, Monterey, Virginia or by emailing [hcboard@htcnet.org](mailto:hcboard@htcnet.org). The public will be able to access the meeting electronically. Conference call and Google Meet information will be provided prior to the meeting.

HIGHLAND COUNTY BOARD OF SUPERVISORS

## TRUSTEE'S SALE

OF RT. 42, BOX 41, MILLBORO, VA 24460

In execution of a Deed of Trust in the original principal amount of \$30,000.00, with an annual interest rate of 8.700000% dated June 14, 2007, recorded among the land records of the Circuit Court for the County of Bath as Deed Instrument Number 070000554, the undersigned appointed Substitute Trustee will offer for sale at public auction all that property located in the County of Bath, on the courthouse steps at the front of the Circuit Court building for the County of Bath located at Court House Hill, Warm Springs, Virginia on June 1, 2020 at 3:00 PM, the property with improvements to wit: Tax Map No. 97-42 and 97-45 THIS COMMUNICATION IS FROM A DEBT COLLECTOR. TERMS OF SALE: ALL CASH. A bidder's deposit of 10% of the sale price, will be required in cash, certified or cashier's check. Settlement within fifteen (15) days of sale, otherwise Trustees may forfeit deposit. Additional terms to be announced at sale. Loan type: Conventional. Reference Number 20-287310. PROFESSIONAL FORECLOSURE CORPORATION OF VIRGINIA, Substitute Trustees, C/O SHAPIRO & BROWN, LLP, 10021 Balls Ford Road, Suite 200, Manassas, Virginia 20109 (703) 449-5800. Publication Dates: May 8 and 15, 2020

## NOTICE OF AVAILABILITY

The Air National Guard is announcing the availability of and requesting comments on the Draft Environmental Assessment (EA) on the potential impacts associated with the modification, expansion, and utilization of the Evers Military Operations Area (MOA) in the airspace over portions of Virginia and West Virginia to accommodate the training requirements of the 113th Wing of the District of Columbia Air National Guard. The Draft EA and Draft Finding of No Significant Impact (FONSI) are available for 30-day review and download at [www.113wg.af.mil/EversMOA](http://www.113wg.af.mil/EversMOA) or [www.wv.ng.mil/evers-moa](http://www.wv.ng.mil/evers-moa); and at the following libraries if they become open to the public when closures related to COVID-19 are lifted:

- Elkins-Randolph County Library, Elkins, WV
- Highland County Public Library, Monterey, VA
- Pocahontas County Library, Marlinton, WV
- Greenbrier County Public Library, Lewisburg, WV

To request an Evers MOA Draft EA/FONSI hard copy by mail or to submit your written comments, please contact Ramón E. Ortiz, National Guard Bureau, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or via email [jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil](mailto:jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil). To be most useful, comments should be postmarked by June 5, 2020.

## PUBLIC NOTICE STATE WATER CONTROL BOARD

An enforcement action has been proposed for American Hardwood Industries, LLC (AHI) for violations at the Warm Springs Mill and at the Lexington Mill. The State Water Control Board proposes to issue a consent order with penalty and injunctive relief to AHI to address noncompliance with State Water Control Law. A description of the proposed action is available at the DEQ office named below or online at [www.deq.virginia.gov](http://www.deq.virginia.gov). Eric Millard will accept comments by e-mail ([eric.millard@deq.virginia.gov](mailto:eric.millard@deq.virginia.gov)), fax (540-574-7878) or postal mail (DEQ, Valley Regional Office, 4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia, 22801) from May 11, 2020 to June 10, 2020.

## PUBLIC NOTICE

The Bath County Board of Supervisors will meet on May 12, 2020 at 6:00 p.m., or soon thereafter, at the Bath County High School Auditorium located at 464 Charger Lane, Hot Springs, VA 24445 to receive public input on, discuss, and consider amending Section 15 of the Bath County Code.

The proposed amendment provides a procedure for refunding erroneously paid taxes. A complete copy of proposed amendment is available on the Bath County website [www.bath-countyva.org](http://www.bath-countyva.org).

Please address all correspondence to: Bath County Administration, PO Box 309, Warm Springs, Virginia 24484. For more information, contact Bath County Administration by calling (540) 839-7221, or toll free for residents outside the local calling area at (888) 823-1710. Comments can also be submitted to [publiccomment@bathcountyva.org](mailto:publiccomment@bathcountyva.org).

*Bath County intends to comply with the requirements of the Americans with Disabilities Act. Should you need special assistance or accommodations in order to participate in the public hearing, please contact County Administration at least two work days prior to the hearing.*

# Education work group to help guide process for reopening schools

RICHMOND — This week, Gov. Ralph Northam announced a set of education stakeholders participating in the Commonwealth's COVID-19 Education Work Group to help chart a path forward for determining how schools can safely reopen later this year.

The group is comprised of representatives from Virginia's public and private early childhood, K-12, and higher education systems, and includes teachers, superintendents, parents, college presidents, state agency personnel, special education advocates, museum directors, and student perspectives.

This variety of education stakeholders represents the whole of Virginia's education system and they come from every region of the commonwealth.

Secretary of Education Atif Qarni formed the work group and chaired its

first meeting on April 23. Since then, the group has been focused on developing recommendations to align policies throughout the Commonwealth's preK-20 education system and ensure continuity of learning.

"I am deeply grateful for Virginia's educators, administrators, school nutrition workers, support staff, parents, and students for the ways they have adapted to new learning environments over the past two months," Northam said. "As we make decisions about the path forward, this panel will help ensure that we are best supporting rural students, English language learners, students of color, and students with special needs. School closures have been necessary to protect health and safety, but lost class time has a disproportionate impact on Virginia's most vulnerable and economi-

cally disadvantaged students. That's why equity will remain at the forefront as we determine when and how we can safely and responsibly return to in-person learning."

The group is chaired by Qarni, and staffed by Deputy Secretary Education Fran Bradford, State Council of Higher Education Director Peter Blake, and State Superintendent of Public Instruction Dr. James Lane. These four individuals comprise the steering committee for the COVID-19 Education Work Group.

"As we begin to think about how Virginia's education system can operate in the summer and fall, it is crucial that we have the advice of a diverse,

thoughtful group of education leaders," said Qarni. "This group will use their expertise to guide our approach and help ensure that all voices are heard and all recommendations are made through the lens of equity."

After guidance is developed, the group will transition to focus on long-term recovery plans to include addressing learning gaps and social emotional needs of students resulting from school closures.

In the coming weeks, Northam will outline a roadmap for Virginia schools, colleges, and universities to return to in-person learning.

**Falling icicles kill about 100 people per year in Russia.**

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To request an Evers MOA Draft EA/FONSI hard copy by mail or to submit your written comments, please contact Ramón E. Ortiz, National Guard Bureau, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or via email [usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil](mailto:usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil). To be most useful, comments should be postmarked by June 10, 2020.

## TRUSTEE'S SALE

of RT. 42, BOX 41, MILLBORO, VA 24460

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Tax Map No. 97-42 and 97-45

THIS COMMUNICATION IS FROM A DEBT COLLECTOR.

TERMS OF SALE: ALL CASH. A bidder's deposit of 10% of the sale price, will be required in cash, certified or cashier's check. Settlement within fifteen (15) days of sale, otherwise Trustees may forfeit deposit. Additional terms to be announced at sale. Loan type: Conventional. Reference Number 20-287310.

PROFESSIONAL FORECLOSURE CORPORATION OF VIRGINIA, Substitute Trustees, C/O SHAPIRO & BROWN, LLP, 10021 Balls Ford Road, Suite 200, Manassas, Virginia 20109 (703) 449-5800.



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LARRY FRESH, BROKER, (540) 997-5219, [fresh@cfw.com](mailto:fresh@cfw.com)  
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JIM GARCIA, AGENT  
(540) 691-5812, [standardp@aol.com](mailto:standardp@aol.com)  
MAGGIE PERDUE, AGENT  
(540) 968-3069, [perduemagnolia@gmail.com](mailto:perduemagnolia@gmail.com)  
TANNER SEAY, AGENT  
(540) 968-3921, [dtseay94@gmail.com](mailto:dtseay94@gmail.com)

## Public Comment Adjudication Matrix and Individual Comment Letters

Evers Draft EA Comments Received from the Notice of Availability Public Comment Period  
Response Approach Provided for Discussion with ANG.

20-Jul-20

| Comment No. | Commenter | Date      | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Response Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NGB A3 response to TT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | NGB A4 response to TT                                                                                                                            |
|-------------|-----------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Athanson  | 5/17/2020 | Opposes the proposed action over Highland County including the disruption of "unreadable script" in otherwise pristine land with no current air pollution.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Please refer to Section 3.2 on the noise assessment and Section 1.5 on air quality.<br><br>The Proposed Action to conduct flights at 1 000 ft AGL floor over the north part of Highland County would be no change from existing conditions that have been in operation for more than 20 years. The proposed Evers Low MOA would extend into Highland County along the western edge by another 0-15% of the county.<br><br>The proposed action would spread the noise effects from existing air operations in the north portion of the county to the west and southwest portions of the county and the new area will only see new aircraft 1 000 ft and above. Overall sound levels from aircraft operations under the Proposed Action would not exceed 65 dBA DNL and would be compatible with all land uses.                                                                                                                                                                                                                                                            | Refer to EA text on noise assessment and air quality. Clarify that the proposed action to conduct flights at 1 000 ft AGL floor over Highland County would be no change from existing conditions that have been in operation for more than 20 years.<br><br>The proposed action would redistribute the existing air operations in the NE portion of the county - to the W and SW portions of the county.                                                                                     | Concur with approach                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Concur                                                                                                                                           |
| 2           | Vinson    | 6/2/2020  | How does the proposed action protect the National Radio Quiet Zone?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Please refer to Section 3.1.2.7 on the Green Bank Observatory and National Radio Quiet Zone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Refer to EA text on GBO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Concur with approach                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Concur                                                                                                                                           |
| 3           | Denver    | 6/9/2020  | The Highland County Tourism Council is concerned about the impact of increased low level flights on the tourism business in the county. The serenity of the county attract visitors to get away from the noise, hustle and bustle of the urban areas and to observe the wildlife in the area especially bird watching. We do welcome the limiting of flights on nights and weekends we do not support an increase in flights during the day.                                                                                                                                                                                                                                                                                                                           | Please refer to Section 3.2 on the noise assessment.<br><br>The Proposed Action to conduct flights at 1 000 ft AGL floor over the north part of Highland County would be no change from existing conditions that have been in operation for more than 20 years. The proposed Evers Low MOA would extend into Highland County along the western edge by another 0-15% of the county.<br><br>The proposed action would spread the noise effects from existing air operations in the north portion of the county to the west and southwest portions of the county and the new area will only see new aircraft 1 000 ft and above. Overall sound levels from aircraft operations under the Proposed Action would not exceed 65 dBA DNL and would be compatible with all land uses.                                                                                                                                                                                                                                                                                           | Refer to EA text on noise assessment. Clarify that the proposed action to conduct flights at 1 000 ft AGL floor over Highland County would be no change from existing conditions.<br><br>The overall sound levels would be well below level that are completely compatible with recreational land uses. On average individuals would be exposed to approximately one loud overflight every ten days - which would primarily occur M-F with none between 10 pm and 7 am.                      | Mostly concur with the approach. The current Evers MOA covers the north half of Highland County. The proposed Evers Low will extend into Highland County along the western edge by about another 10-15% of the county. So yes there will be additional areas in Highland County that will see Evers aircraft. The rest of the response approach is sound. The current portion of Highland County under Evers MOA will see a reduction in aircraft operations and the new area will only see new aircraft 1 000 ft and above - "overall sound levels are compatible blah blah blah" | Concur with A3. Address MTR Issue.                                                                                                               |
| 4           | English   | 6/9/2020  | As a resident of Bath County I strongly oppose the proposed Evers military operations area expansion. The commenter referenced a fatal jet accident due to exercises (without further information).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | There have been no recorded mishaps within the charted Evers MOA. There was one aircraft crash in 2014 but it was flying from one airport to another when the pilot suffered a medical condition (hypoxia) and crashed. It was not related to any aircraft airspace training or low-level flight activity that currently occurs along the MTRs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Add text in mishaps section regarding the incident of a military aircraft in transit between New Orleans and Boston when it crashed in the Shenandoah Valley in 2014.                                                                                                                                                                                                                                                                                                                        | Concur. Point out that there have been no recorded mishaps within the charted Evers MOA. There was one aircraft crash in 2014 but it was simply flying from one airport to another when the pilot suffered a medical condition (hypoxia) and crashed. It was not related to all to any aircraft airspace training or low-level flight activity that currently occurs along the MTRs.                                                                                                                                                                                               | Concur with A3. Clarify occurrence and use of MTRs                                                                                               |
| 5           | Henning   | 6/9/2020  | Concerned that a proposed industrial wind farm at 37°42' 23 N /79°43' 00 W poses a very real risk to military flights. Strongly suggest that all avenues possible be used to stop the creation of the wind farm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Apex Clean Energy has coordinated with DoD to avoid potential impacts to airspace. The proposed wind farm has been added to Section 4.0 Cumulative Effects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Add text and references to clarify that coordination has been conducted with DoD to avoid potential impacts to airspace.                                                                                                                                                                                                                                                                                                                                                                     | Concur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Concur and ADD to Cumulative Effects Section                                                                                                     |
| 6           | Swecker   | 6/2/2020  | The Highland County Chamber of Commerce continues to hold serious concerns for local businesses and individuals regarding an increase in low flying aircraft particularly regarding our agricultural sector. As stated before we have had reports of low-flying jets causing major disruption to horse, cattle and poultry operations in our county due to the sudden loud noise. The safety and well-being of our community is of utmost importance to us. We are appreciative of your outlets for providing feedback about aircraft noise which we plan to share with our members and other areas of the public. In order to help the public prepare and be aware we welcome any additional info about flight patterns and frequency in relation to Highland County. | Please refer to Section 3.2 on the noise assessment.<br><br>The Proposed Action to conduct flights at 1 000 ft AGL floor over the north part of Highland County would be no change from existing conditions that have been in operation for more than 20 years. The proposed Evers Low MOA would extend into Highland County along the western edge by another 0-15% of the county.<br><br>The proposed action would spread the noise effects from existing air operations in the north portion of the county to the west and southwest portions of the county and the new area will only see new aircraft 1 000 ft AGL and above. Overall sound levels from aircraft operations under the Proposed Action would not exceed 65 dBA DNL and would be compatible with all land uses.<br><br>There are existing MTRs in Highland County with airspace floors below 1 000 ft AGL. Aircraft flying low-level training along these MTRs are conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1000 ft AGL and above. | Refer to EA text on noise assessment. Clarify that the proposed action to conduct flights at 1 000 ft AGL floor over Highland County would be no change from existing conditions that have been in operation for more than 20 years.<br><br>Maybe add a quick assessment of the number of individual in each area of the county?                                                                                                                                                             | Mostly concur with the approach. This one also focuses on existing low-level military flights. We need to spell out that there are existing MTRs in Highland County. Many of them have airspace floors well below 1 000ft AGL - for example IR-714 is down to the surface through Highland County. These MTRs belong to other units like the Navy base in NAS Oceana VA. These MTRs are completely separate from our airspace proposal and the people will continue to see aircraft flying low-level along these MTRs. Our Evers MOA aircraft will remain 1000ft and above.        |                                                                                                                                                  |
| 7           | King      | 6/3/2020  | Requested that the number of fly overs not be increased. They have experienced what seems like almost a daily fly over directly above their home & property in Burnsville VA since 2001. It's normally at least three jets that pass over sometimes doing a roll as they go. The fly overs cause significant disruption. The commenter referred to an unfortunate accident that claimed the life of one of the pilots. We saw them fly over and heard the tremendous crash when it occurred.                                                                                                                                                                                                                                                                           | Please refer to Section 3.1.2.3. Military Training Routes. The flyovers referenced in the comment are outside the proposed airspace and are attributable to MTR activities that are conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1 000 ft AGL and above.<br><br>As outlined in Section 3.1.2.3 there is existing military air traffic on MTRs throughout the areas beneath the existing and proposed Evers MOAs. These air operations are both lower to the ground more frequent and along designated routes. These activities are not under the direct control of the NGB and would not change under the Proposed Action.<br><br>There have been no recorded mishaps within the charted Evers MOA. There was one aircraft crash in 2014 but it was flying from one airport to another when the pilot suffered a medical condition (hypoxia) and crashed. It was not related to any aircraft airspace training or low-level flight activity that currently occurs along the MTRs.                         | Note that the commenter residence is outside the proposed airspace and the reference to flyovers may be attributable to MTR operations. Add text in mishaps section regarding the incident of a military aircraft in transit between New Orleans and Boston when it crashed in the Shenandoah Valley in 2014.<br><br>The time of aircraft in the airspace per square mile would decrease from 23 minutes each year the existing MOA to less than 5 minutes each year over the proposed MOAs. | Mostly concur with the approach. Want to ensure that they are aware that the response saying aircraft in airspace per square mile will decrease is only attributable to those operations within the existing Evers MOA space. All operations within the MTRs will continue and are not considered nor are a part of this activity.                                                                                                                                                                                                                                                 | <b>NON-CONCUR - This is a MTR issue and should be acknowledged more clearly in the MTR section. Mishap addressed in the appropriate section.</b> |
| 8           | Stonewall | 6/5/2020  | I am in full support of expanding the Evers MOA boundary. Stated that the proposed wind turbine farm known as Rocky Forge poses risks to military personnel and operations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Apex Clean Energy has coordinated with DoD to avoid potential impacts to airspace. The proposed wind farm has been added to Section 4.0 Cumulative Effects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Add text and references to clarify that coordination has been conducted with DoD to avoid potential impacts to airspace.                                                                                                                                                                                                                                                                                                                                                                     | Concur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Concur and ADD to Cumulative Effects Section                                                                                                     |



|    |          |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                |
|----|----------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9  | Tribe    | 5/26/2020 | I reside near Blue Grass Virginia. I am not opposed to the EVERS MOA or it's expansion as long as military operators do not loiter over a specific area for lengthy periods do not descend below the floor of the MOA and military operators indicate via NOTAM or other means when the MOA will be hot. There have been a few occasions during the last 26 years when military aircraft have clearly flown below the floor of the MOA above my home.                                                                                                                                   | <p>Please refer to Section 2.2 Proposed Action. The charted use of the proposed airspace would be sunrise to sunset and other times by NOTAM.</p> <p>The Proposed Action to conduct flights at 1 000 ft AGL floor over Blue Grass VA would be no change from existing conditions that have been in operation for more than 20 years.</p> <p>Please refer to Section 3.1.2.3 Military Training Routes. The reference to low-level aircraft is attributable to MTR activities that are conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1 000 ft AGL and above.</p> <p>As outlined in Section 3.1.2.3 there is existing military air traffic on MTRs throughout the areas beneath the existing and proposed Evers MOAs. These air operations are both lower to the ground more frequent and along designated routes. These activities are not under the direct control of the NGB and would not change under the Proposed Action.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Refer to EA text on NOTAM. Clarify that the proposed action to conduct flights at 1 000 ft AGL floor over Blue Grass VA would be no change from existing conditions that have been in operation for more than 20 years.</p> <p>The time of aircraft in the airspace per square mile would decrease from 23 minutes each year the existing MOA to less than 5 minutes each year over the proposed MOAs.</p> | <p>Same as above. The reference to already seeing low-level aircraft is attributable to MTRs and they will continue to see those.</p>                                                                                                                                                                                                                | <p>Concur with first paragraph. Non-concur with 2nd paragraph. Address MTR issue same as above.</p>                                                                                            |
| 0  | Witschey | 6/9/2020  | Loud and significant noise pollution when jets fly over quiet areas in Highland County. The economic impact is primarily to poultry growers. One solution would be to identify those areas with poultry farms and mark them as areas to avoid. If you are willing to consider this option our Virginia and West Virginia counties would undertake a project to provide mapping. Suggested that the training missions be limited to only once each month and the time flying over a particular area to ten minutes or less.                                                              | <p>Please refer to Section 3.2 on the noise assessment.</p> <p>The Proposed Action to conduct flights at 1 000 ft AGL floor over the north part of Highland County would be no change from existing conditions that have been in operation for more than 20 years. The proposed Evers Low MDA would extend into Highland County along the western edge by another 0-15% of the county.</p> <p>The proposed action would spread the noise effects from existing air operations in the north portion of the county to the west and southwest portions of the county and the new area will only see new aircraft 1 000 ft AGL and above. Overall sound levels from aircraft operations under the Proposed Action would not exceed 65 dBA DNL and would be compatible with all land uses.</p> <p>Please refer to Section 3.1.2.3 Military Training Routes. There are existing MTRs in Highland County with airspace floors below 1 000 ft AGL. Aircraft flying low-level training along these MTRs are conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1000 ft AGL and above. As outlined in Section 3.1.2.3 there is existing military air traffic on MTRs throughout the areas beneath the existing and proposed Evers MOAs. These air operations are both lower to the ground more frequent and along designated routes. These activities are not under the direct control of the NGB and would not change under the Proposed Action.</p> <p>Although some studies report that the effects of aircraft noise on domestic animals is inconclusive a majority of the literature reviewed indicates that domestic animals 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 some forms of sound disturbance (Mandi 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 even very low-altitude flights over agricultural areas would be small (USAF 1990).</p> | <p>Clarify that the proposed action to conduct flights at 1 000 ft AGL floor over Highland County would be no change from existing conditions that have been in operation for more than 20 years.</p> <p>The proposed action would redistribute the existing air operations in the NE portion of the county - to the W and SW portions of the county.</p>                                                     | <p>Mostly concur. We're not exactly "redistributing from the NE portion of the county to the W and SW..." We're spreading out the noise. Reference the comment about poultry. Recommend Tetra Tech review the DoD Noise Bulletin titled Effects of Aircraft Overflights on Domestic Fowl. Reference and pull the conclusions from that document.</p> | <p>Concur with A3. Address MTR issue. Update Livestock Noise section per DOD bulletin</p>                                                                                                      |
| 11 | Peuleche | 6/2/2020  | Comments from the point of view of a full time farmer in very rural southern Randolph County West Virginia to be affected by the Evers Low MOA. One of my main concerns is that the flights may be going below 1000 feet. They certainly did about a year ago when I had to drop everything and put my hands over my ears.                                                                                                                                                                                                                                                              | <p>Please refer to Section 3.1.2.3 Military Training Routes. The flyovers referenced in the comment are attributable to MTR activities that are conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1 000 ft AGL and above.</p> <p>As outlined in Section 3.1.2.3 there is existing military air traffic on MTRs throughout the areas beneath the existing and proposed Evers MOAs. These air operations are both lower to the ground more frequent and along designated routes. These activities are not under the direct control of the NGB and would not change under the Proposed Action.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Note that commenter's address is in the proposed Evers Low MOA airspace with 1 000 ft AGL floor. The commenter's reference to flyovers may be related to MTR operations.</p>                                                                                                                                                                                                                               | <p>Concur</p>                                                                                                                                                                                                                                                                                                                                        | <p>Concur MTR clarification needed, as well as Existing Evers 1000'</p>                                                                                                                        |
|    |          |           | Certain things do not seem very clearly stated: the existing number of flights the proposed number of flights per year and the % of increase that this represents especially for the low level flights; the existing size of the MOA and the proposed size and the % of increase.                                                                                                                                                                                                                                                                                                       | <p>Please refer to Section 2.0 and Table 2-3 on the proposed action specifying the flights and size of the airspace.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>Refer to EA text in the DOPAA on the proposed action specifying the flights and size of the airspace.</p>                                                                                                                                                                                                                                                                                                  | <p>Concur</p>                                                                                                                                                                                                                                                                                                                                        | <p>Table 2-3 Air Operations</p>                                                                                                                                                                |
|    |          |           | I think that some sort of complaint hotline should be made easily available to those of us who have endured the noise that is clearly much more than 65dBA. I also feel that some form of warning is essential the sudden surprise of painfully loud screaming jets is what really makes the quiet lovers angry.                                                                                                                                                                                                                                                                        | <p>113WG is willing to post a noise complaint line on their website</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Need ANG response approach.</p>                                                                                                                                                                                                                                                                                                                                                                            | <p>113WG is willing to post a noise complaint line on their website</p>                                                                                                                                                                                                                                                                              | <p>Concur with A3, formulate generic sentence regarding the availability of information and complaint communication avenues for the public. Address MTR issue.</p>                             |
| 12 | Bernier  | 6/2/2020  | Objections to any increase in the number or frequency of aircraft flights over my residence in Marlinton WV. Flights are often lower than 1000 ft AGL. Noise levels are not simply annoying they are deafening.                                                                                                                                                                                                                                                                                                                                                                         | <p>Please refer to Section 3.1.2.3 Military Training Routes. The flyovers referenced in the comment are attributable to MTR activities that are conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1 000 ft AGL and above.</p> <p>As outlined in Section 3.1.2.3 there is existing military air traffic on MTRs throughout the areas beneath the existing and proposed Evers MOAs. These air operations are both lower to the ground more frequent and along designated routes. These activities are not under the direct control of the NGB and would not change under the Proposed Action.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Note that commenter's address is in the proposed Evers Low MOA airspace with 1 000 ft AGL floor. The commenter's reference to flyovers may be related to MTR operations.</p> <p>Resident would likely see a decrease in the amount of time in airspace.</p>                                                                                                                                                | <p>More MTR concerns.</p>                                                                                                                                                                                                                                                                                                                            | <p>Concur with A3. Address MTR issue.</p>                                                                                                                                                      |
| 13 | Johnson  | no date   | Resident of Pocahontas County West Virginia since 1975. My wife is an children's librarian in Marlinton WV. Often low flying jets will roar through the sky above the library in Marlinton WV as they follow the course of the Greenbrier River. The noise distracts the students. Frequently the jets are at a low altitude clearly well under 1000 feet. Believes some of these flyovers have been in the range of 500 feet above town. Recommended that altitudes must be checked after every flight to ensure that no jet has violated the 1000 feet directly above ground surface. | <p>Please refer to Section 3.1.2.3 Military Training Routes. The flyovers referenced in the comment are attributable to MTR activities that are conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1 000 ft AGL and above.</p> <p>As outlined in Section 3.1.2.3 there is existing military air traffic on MTRs throughout the areas beneath the existing and proposed Evers MOAs. These air operations are both lower to the ground more frequent and along designated routes. These activities are not under the direct control of the NGB and would not change under the Proposed Action.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Note that commenter's address is in the proposed Evers Low MOA airspace with 1 000 ft AGL floor. The commenter's reference to flyovers may be related to MTR operations.</p>                                                                                                                                                                                                                               | <p>Concur</p>                                                                                                                                                                                                                                                                                                                                        | <p>Concur with A3. Address MTR issue.</p>                                                                                                                                                      |
|    |          |           | I would appreciate an informed and clear response to the points in my letter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>&lt;same as above&gt;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Need ANG response approach.</p>                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                |
| 14 | Ball     | 6/1/2020  | Resident of Lexington VA. Concerned that the proposed wind farm Rocky Forge could lead to a very dangerous situation for both the military personnel and civilians in the area.                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Apex Clean Energy has coordinated with DoD to avoid potential impacts to airspace. The proposed wind farm has been added to Section 4.0 Cumulative Effects.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>Add text and references to clarify that coordination has been conducted with DoD to avoid potential impacts to airspace.</p>                                                                                                                                                                                                                                                                               | <p>Concur</p>                                                                                                                                                                                                                                                                                                                                        | <p>Concur and ADD to Cumulative Effects Section</p>                                                                                                                                            |
|    |          |           | Feels that ANG should take into account the radical change to the terrain and how the windmills will affect every aspect of flight and training safety.                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Apex Clean Energy has coordinated with DoD to avoid potential impacts to airspace. The proposed wind farm has been added to Section 4.0 Cumulative Effects.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>Add text and references to clarify that coordination has been conducted with DoD to avoid potential impacts to airspace.</p>                                                                                                                                                                                                                                                                               | <p>Concur</p>                                                                                                                                                                                                                                                                                                                                        | <p>Concur and ADD to Cumulative Effects Section</p>                                                                                                                                            |
| 15 | EPA      | 6/10/2020 | The proposal is a substantial expansion from the existing Evers MOA and appears to exceed the 80 x 40 NM required. We recommend that the EA clearly describe the proposed conditions including the area of the proposed MOA Complex in both NM and square miles as well as the need for this extent.                                                                                                                                                                                                                                                                                    | <p>Please refer to Section 2.0 on the proposed action specifying the flights and size of the airspace. The proposed expansion is 80 x 40 NM. The purpose and need to expand the Evers MOA is presented in Section 1.3</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Refer to EA text in the DOPAA on the proposed action specifying the size of the airspace.</p>                                                                                                                                                                                                                                                                                                              | <p>Concur</p>                                                                                                                                                                                                                                                                                                                                        | <p>Non-Concur - The real issue here is the Airspace multiple segments being available to turn on-and-off per Air Traffic Control requirements. That is why the Airspace exceeds the 80x40.</p> |

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| <p>To clarify impacts we recommend that the narrative also explain proposed conditions including: frequency and timing of sorties operations and events in days per year and hours per day; increases in number and changes in types of aircraft; the busiest months days of the week or times of day; MOAs or areas of MOAs that may be more frequently used; and the expected frequency of potential operations at night.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Please refer to Section 2.0 and Table 2-3 on the proposed action specifying the flights and size of the airspace. Weekend and night time operations at all altitudes would be limited; that there would be no nighttime air operations between 10:00 p.m. and 7:00 a.m..</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>Refer to EA text in the DOPAA on the proposed action specifying the operations. Add text to clarify as necessary.<br/><br/>Recommend adding a list of statistics as outlined in above comments.</p>                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>Concur</p>                                                                                                                                                                                                                                                                                | <p>Concur -Clarify as needed. Table 2-3 Air Operations is Good</p>                                                                                                                                                                                                                                                                                                      |
| <p>A narrative discussion would be helpful to explain the expected use of each MOA as it is unclear how the operations in Table 2-3 reflect the Ready Aircrew Program(RAP) or other training requirements for the 113th WG as described in Section 1.3 and Appendix C (2 144 total training sorties; 968 or 1000 over land training sorties with 1440 weapons employment events.) It would also be helpful to explain how the training needs of the "other users" are expected to be met and whether other users are expected to increase with the expanded SUA.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Please refer to Section 2.0 and Table 2-3 on the proposed action specifying the flights and size of the airspace.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Refer to EA text in the DOPAA on the proposed action specifying the operations. Add text to clarify as necessary. Need ANG response approach to RAP and AP.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>Concur</p>                                                                                                                                                                                                                                                                                | <p>NG8 recommend to address the comment by pointing to the current paragraphs.</p>                                                                                                                                                                                                                                                                                      |
| <p>Socioeconomic impacts were not carried forward for detailed analysis. However we recommend that this be further examined given potential impacts on recreational uses and tourism.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Text has been added to the resources section not carried forward that most of the proposed airspace would have an 11 000 ft MSL floor and the proposed expansion of the low airspace would mostly be same as the existing 1 000 ft AGL floor that has been in operation for more than 20 years. In addition expansion of the low airspace under the proposed action would spread the existing operations over a larger area further reducing perceived effects to negligible level.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Add text to resources section not carried forward that most of the proposed airspace would have an 11 000 ft MSL floor and the proposed expansion of the low airspace would be same as the existing 1 000 ft AGL floor that has been in operation for more than 20 years. In addition expansion of the low airspace under the proposed action would spread the existing operations over a larger area further reducing perceived effects to negligible level.</p>                                                                                                                                                            | <p>Concur</p>                                                                                                                                                                                                                                                                                | <p>Concur</p>                                                                                                                                                                                                                                                                                                                                                           |
| <p>US Census block group level data were used to determine the population exposed to aircraft noise; we recommend the use of block group data to identify EJ communities instead of the coarser county-level data.<br/><br/>The EA describes that a threshold of State Poverty level plus 20 percent was used to identify a potential EJ community. This may not an appropriate methodology; instead we suggest addition of 20 percent of the State level adding 5.4 percent (to a level of about 32.4%). We note that this may identify more communities of potential EJ concern but does not imply disproportionate impact.<br/><br/>To assess impacts we recommend comparing the percent low-income and minority averages for the block groups in the Low MOA area to the other MOAs as well as county averages.</p>                                                                                                                                                                                                                                                                                                                 | <p>Text has been added to the resources section not carried forward that most of the proposed airspace would have an 11 000 ft MSL floor and the proposed expansion of the low airspace would be same as the existing 1 000 ft AGL floor that has been in operation for more than 20 years. In addition expansion of the low airspace under the proposed action would spread the existing operations over a larger area further reducing perceived effects to negligible level.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Further analysis not warranted. Add text to resources section not carried forward that most of the proposed airspace would have an 11 000 ft MSL floor and the proposed expansion of the low airspace would be same as the existing 1 000 ft AGL floor that has been in operation for more than 20 years. In addition expansion of the low airspace under the proposed action would spread the existing operations over a larger area further reducing perceived effects to negligible level.</p>                                                                                                                            | <p>Concur to a point. We're at the 4-yard line with this EA and the request to redo the analysis using a different set of group data is not necessary to carry this project over the goal line. However we need to realize that this argument may not carry forward for the Duke MOA EA.</p> | <p>Concur with A3. The altitude levels of Evers both the 11,000 proposed and the 1000 existing are not directly impacting the population. In hindsight, we should have gotten a better handle on MTR traffic and affected individuals. I believe that we can safely move forward with this EA as written population wise, however it will not work for Duke Low EA.</p> |
| <p>The noise analysis would benefit from further discussion including:<br/>- Expanding the discussion to address specific impacts to sensitive receptors such as schools and churches; as well as impacts to children and learning.<br/>- Clarifying the number of people impacted. If based on US Census data we assume that the 6 540 individuals in the Low MOA are residents; if so we recommend estimating the number of part-time residents and visitors impacted.<br/>- Discussing the potential occurrence of nighttime operations which are likely to be more disruptive.<br/>- Discuss noise from all aircraft types. Noise impacts from F-22 A-10 F-15 and F-16 aircraft are discussed in Figure 3-12 and Table 3-13; however based on Table 2-3 seven different types of aircraft may operate at low altitudes.<br/>- Noise typically varies based on flight operations. We recommend discussing how flight activities or operations may influence noise.<br/>- We recommend including potential impacts to livestock including potential injury to or from livestock startled by the aircraft appearance and/or noise.</p> | <p>There are numerous potentially sensitive receptors beneath the existing and proposed Evers MOA including residences schools churches hospitals wilderness areas and recreational areas. In the Proposed Evers Low MOA there would be periodic low overflights loud enough to cause brief interruptions in communication. These overflights would be brief intermittent distributed though the newly proposed low MOA and would not normally occur repeatedly at any one location. These overflights would be neither loud enough nor frequent enough to be incompatible with any land uses or any noise sensitive activities. Noise from aircraft operations for all potential sensitive receptors and all areas under the proposed MOAs would be well below 65 dBA DNL and would be compatible with all noise sensitive activities.<br/><br/>The census does not track part-time residents and visitors. There would be no nighttime air operations between 10:00 p.m. and 7:00 a.m.<br/><br/>The primary and loudest jet aircraft are included in the noise analysis.<br/><br/>Although some studies report that the effects of aircraft noise on domestic animals is inconclusive a majority of the literature reviewed indicates that domestic animals 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 some forms of sound disturbance (Mandi 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 even very low-altitude flights over agricultural areas would be small (USAF 1990).</p> | <p>Add figure showing schools and churches – Add a small section indicating the average number of overflights.<br/><br/>The census does not track part-time residents and visitors.<br/><br/>Clarify that there would be no nighttime air operations between 10:00 p.m. and 7:00 a.m.<br/><br/>Should we add additional aircraft to table and figure – and add to consequences sections OR use the analysis of the primary aircraft ?<br/><br/>Add additional language to describe the variety of air operations and noise at different altitudes.<br/><br/>Add text to clarify the effects of aircraft noise on livestock.</p> | <p>Concur</p>                                                                                                                                                                                                                                                                                | <p>Concur with All. ADD clear distinction between MTRs and Proposed Action.</p>                                                                                                                                                                                                                                                                                         |
| <p>We recommend that impacts of noise and the visual effects on recreational users or visitors including those who are camping hunting hiking or generally experiencing the wilderness be fully evaluated in the Study. We recommend a detailed analysis of impacts and minimization measures and strongly recommend reaching out to outfitters recreational user groups and others who may be impacted particularly in the designated Wilderness areas and the Low MOA area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Please refer to Section 3.1.2.3 Military Training Routes. The reference to low-level aircraft is attributable to MTR activities that are conducted separately from this airspace proposal.<br/><br/>As outlined in Section 3.1.2.3 there is existing military air traffic on MTRs throughout the areas beneath the existing and proposed Evers MOAs. These air operations are both lower to the ground more frequent and along designated routes. These activities are not under the direct control of the NGB and would not change under the Proposed Action.<br/><br/>&lt;insert NGB clarifying text&gt; Cranberry Wilderness Needs Altitude Sensitive Area Zone of 2000' incorporated into the EA and flight guidance. Add the avoidance area in the appropriate maps and text sections. <b>Tim will send the NPS publication and also incorporate the AFI</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Add text to clarify the low frequency of flyovers that could be experienced by campers hikers and hunters. Need ANG response approach to outreach.<br/><br/>Recommend adding a list of statistics as outlined in above comments.</p>                                                                                                                                                                                                                                                                                                                                                                                         | <p>Concur with the approach. Don't agree with outreach to recreation outfitters user groups etc. This EA was published and everyone has had a chance to download and review.</p>                                                                                                             | <p>Concur -MTR clarification again. Cranberry Wilderness Needs Altitude Sensitive Area Zone of 2000' incorporated into the EA and flight guidance. No need for further consult recreation outfitters.</p>                                                                                                                                                               |
| <p>We recommend evaluating current literature to more effectively assess noise and aircraft impacts on recreational users of wilderness areas.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Add text to clarify the effects of aircraft noise on recreational users of wilderness areas.<br/><br/>&lt;insert NGB clarifying text&gt; Cranberry Wilderness Needs Altitude Sensitive Area Zone of 2000' incorporated into the EA and flight guidance.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>Add text to clarify the effects of aircraft noise on recreational users of wilderness areas.<br/><br/>Recommend adding a list of statistics as outlined in above comments.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Concur</p>                                                                                                                                                                                                                                                                                | <p>Concur. Wilderness Noise publications are available from the NPS. See note above regarding altitude restriction.</p>                                                                                                                                                                                                                                                 |

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|   |         | <p>The EA states that avoidance of noise-sensitive areas "would be emphasized to all flying units where overflights at low altitudes should be avoided to the maximum extent practicable." Further we suggest consideration of specific avoidance measures and practices over or adjacent to designated Wilderness areas to reduce impacts such as no-fly zones banning night flights maintaining higher minimal altitudes time of year restrictions or other measures to protect the integrity of these areas. We recommend working with the Forest Service (FS) to identify ways to avoid and minimize impacts on these valuable public lands.</p>                                                                                                                                                                                                                                                                                                                    | <p><b>insert NGB clarifying text</b>- Cranberry Wilderness Needs Altitude Sensitive Area Zone of 2000' incorporated into the EA and flight guidance. All other charted wilderness areas are underneath the proposed 11 000 ft MSL floor.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>Need ANG response approach to mitigation measures and FS coordination.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>113WG agrees to 2 000ft avoidance area around Cranberry Wilderness. All other charted wilderness areas are underneath the 11 000R MSL floor</p>                                                                             | <p>Concur - See above.</p>                                                                                                              |                                                                                           |
|   |         | <p>We recommend a robust discussion of the potential impacts on wildlife supported by range of recent research to support the conclusions of the EA.</p> <p>The EA states that low-level overflight avoidance of sensitive areas such as wildlife management areas "would be emphasized in flight planning". We recommend identifying and avoiding sensitive habitat areas to minimize potential impacts and fully consider comments from the relevant agencies including US Fish and Wildlife Service and the FS. We also recommend including comments received from the agencies in the EA.</p>                                                                                                                                                                                                                                                                                                                                                                       | <p>The 113 WG would coordinate with the appropriate regulatory agency subject matter experts to follow standard measures for wildlife impact avoidance to the maximum extent practicable.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>Add research references on noise effects to wildlife.</p> <p>Need ANG response approach to mitigation measures and FS coordination. Note that no response was received from VA USFWS and WV USFWS response is in Appendix A.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>Concur to a point. We'll avoid the wilderness areas. If there are specific other areas we are willing to enter into discussions with the appropriate USEPA/FWS SMEs after the EA is signed and the airspace is charted.</p> | <p>Concur - Standard Wildlife Avoidance if needed (ie. Eagle Nests)</p>                                                                 |                                                                                           |
|   |         | <p>The FS provided a list of Threatened and Endangered Species and Regional Foresters Sensitive Species (RFSS) in MNF potentially impacted by the proposed project activities which was included in Appendix D.</p> <p>We concur that a literature review is needed to provide a full analysis of potential impacts and recommend that time of year restrictions or buffers should be evaluated to minimize potential disturbance. In addition the specific timing of operations would be helpful in discussing the potential for collisions with bats.</p> <p>Likewise we recommend that the EA address impacts to other RFSS mammals and birds supported with a literature review as requested by the FS; this includes Neotoma magister the Allegheny Woodrat. We suggest that impacts on nesting breeding and migrating birds consistent with the Migratory Bird Treaty Act should be further discussed and time of year restrictions on activities considered.</p> | <p>Please refer to Section 2.0 and Table 2-3 on the proposed action specifying the flights and size of the airspace. Weekend and night time operations at all altitudes would be limited; that there would be no nighttime air operations between 10:00 p.m. and 7:00 a.m..</p> <p>Most of the proposed airspace would have an 11 000 ft MSL floor and the proposed expansion of the low airspace would be same as the existing 1 000 ft AGL floor that has been in operation for more than 20 years.</p> <p>Please refer to Section 3.1.2.3 Military Training Routes. Low-level flight training on MTRs is conducted separately from this airspace proposal. Aircraft operating under the Proposed Action would remain 1 000 ft AGL and above.</p> <p>Flight operations would be restricted based on BASH conditions which is consistent with migratory patterns.</p> | <p>Add text in wildlife section to clarify that nighttime operations would be a small part of the proposed action and contact between bats and aircraft would be unlikely.</p> <p>Do not concur with assessment of ground-dwelling animals because the proposed action would not cause any ground disturbance.</p> <p>Need ANG response approach for any consideration of time of year restrictions.</p>                                                                                                                                                                                                                                                                                                                                                           | <p>Concur. No we will not mitigate by restricting operations based on seasonality. We will restrict flight operations based on BASH conditions which is also consistent with migratory patterns.</p>                           | <p>Concur with A3. MTRs again for low flyovers need to be acknowledged and clearly identified as separate from our 11,000' actions.</p> |                                                                                           |
|   |         | <p>As indicated the Green Bank Observatory (GBO) is located beneath the existing and proposed Evers MOA. Included in the EA is a July 2 2019 letter from GBO outlining concerns regarding impacts and potential damage related to noise and radio transmissions. The EA would benefit from a brief discussion of any further discussion with GBO including whether GBO is satisfied that the proposed measures are sufficiently protective of its operations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Please refer to Section 3.1.2.7 on the Green Bank Observatory and National Radio Quiet Zone. Also please refer to Appendix A letter response from ANG to GBO.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>Refer to Appendix A letter response from ANG to GBO.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>Concur</p>                                                                                                                                                                                                                  | <p>GBO and NRQZ Sections of the EA are Sufficient</p>                                                                                   |                                                                                           |
|   |         | <p>As previously indicated given the potential impact to recreational users particularly in the Low MOA the EA would benefit from additional outreach to outfitters campgrounds recreational user groups (trail clubs hunting organization etc.) that could be impacted. It may also be helpful to post notices or hold meetings within the MNF.</p> <p>It would also be informative for the EA to indicate how commenters' concerns were addressed or incorporated in the Study. For example the AOPA outlined a number of concerns in their January 2019 letter; it would be helpful to detail how these concerns were addressed including the safety concern they expressed regarding potential hazards to civilian aircraft by lights-out training.</p>                                                                                                                                                                                                             | <p>Please refer to Section 2.2.6 Air Operations on lights-out training. As authorized by FAA (Exemption No. 7960) night vision goggle lights-out training may be conducted in the Evers MOA. The FAA Eastern Service Center stated that the Evers MOA modification does not create a unique situation that would increase the level of risk to flight safety beyond that which already exists for every other MOA where lights out is approved. The ESC concurred with the USAF assessment of the risk to be minimal as long as all requirements in the waiver are in place and complied with.</p>                                                                                                                                                                                                                                                                     | <p>Need ANG response approach to outreach.</p> <p>Refer to EA text that lights-out training MAY be conducted in the existing Evers MOA that has been in operation from more than 20 years. Note that the proposed airspace has been fully coordinated with FAA as a cooperating agency in the preparation of the EA.</p> <p>(see Jamie's email 4/3/20) Note that the Eastern Service Center stated that the Evers MOA modification does not create a unique situation that would increase the level of risk to flight safety beyond that which already exists for every other MOA where lights out is approved. The ESC concurred with the USAF assessment of the risk to be minimal as long as all requirements in the waiver are in place and complied with.</p> | <p>Concur</p>                                                                                                                                                                                                                  | <p>Concur - Review EA language for layperson clarity, otherwise covered.</p>                                                            |                                                                                           |
|   |         | <p>We also request that you correct your contact information for EPA Region 3. The EPA Region 3 office mailing address is: 1650 Arch Street Philadelphia PA 19103. We also note that all NEPA reviews should be directed to the Office of Communities Tribes and Environmental Assessment at EPA Region 3; Samantha Phillips Beers is the Director of this Office. Carrie Traver is the staff contact for federal facilities.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>The IICEP list has been updated.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>The IICEP list has been updated.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                |                                                                                                                                         |                                                                                           |
| 6 | VA SHPO | 6/23/2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | This project will affect historic resources. Based on the information provided the effect will not be adverse.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | This is a SHPO consultation determination letter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No action required.                                                                                                                                                                                                            |                                                                                                                                         | This is a SHPO consultation determination letter, incorporate into the EA as appropriate. |

Current Pollution!  
Please Stop Land Use and Noise Pollution!

5/17/20

Dear Mr. Ortiz -

This letter is written to oppose the use of the airspace over HIGHLAND COUNTRY, VIRGINIA for use by the 113th WING of D.C. Natl. Guard.

I oppose the Draft Environmental Assessment and Draft Findings of No! - Significant Impact (FONSI) on the expansion of the Evers MOA in VIRGINIA !!

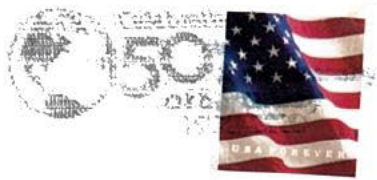
There will be environmental concerns for this proposed expansion of the Evers Military Operations area - Also I oppose these flyovers for the horrible noise + disruption to the current quiet existence of local populace + animal population.

Please fly over the ocean  
where you will not disturb  
people's ears + their  
size of solitude - Thank you.  
Sincerely, Nicole Johnson

including the dropping of bombs/bombardment

NICHE  
[Redacted]

CAPITAL DISTRICT 2083  
13 MAY 2020 PM 3 L



Ramon E. Ortiz  
National Guard Bureau  
3501 Fatchet Avenue  
Joint Base Andrews, MD



20762-515701

20762-5157

## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Tuesday, June 2, 2020 4:56 PM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Houghton, Bonnie L CTR USAF NGB A4 (USA); Flanders, Jamie A CIV USAF NGB A2/3/6 (USA)  
**Subject:** FW: [Non-DoD Source] Evers MOA expansion

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**From:** Danny Vinson [REDACTED]  
**Sent:** Tuesday, June 02, 2020 1:14 PM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Subject:** [Non-DoD Source] Evers MOA expansion



How does the proposed Evers MOA expansion properly protect the National Radio Quiet Zone that supports the Greenbank Observatory?  
Fighter jets running through combat simulations aren't likely to be considered radio-quiet objects.

Thank you,  
-Dany Vinson

## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Tuesday, June 9, 2020 3:34 PM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Flanders, Jamie A CIV USAF NGB A2/3/6 (USA); Houghton, Bonnie L CTR USAF NGB A4 (USA)  
**Subject:** FW: Evers MOA

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**From:** Gene Dever [REDACTED]  
**Sent:** Tuesday, June 09, 2020 7:10 AM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Cc:** Marty Leech; ginseng@htcnet.org; Patti Reum; Highland County Chamber of Commerce  
**Subject:** [Non-DoD Source] Evers MOA

Dear Mr. Ortiz

We want to thank you for providing information about changes in the use of the airspace above our county. We, the Highland County Tourism Council, have concerns about the impact of increased low level flights on the tourism business in our county. Highland County is a remote rural area; we have many visitors that come here for the serenity of our county to get away from the noise, hustle and bustle of the urban areas. We also have many visitors that come here to observe the wildlife in the area, especially bird watching. We do welcome the limiting of flights on nights and weekends, we do not support an increase in flights during the day. We would ask that you would take these concerns into consideration.



Sincerely,

Gene Dever  
Chairman  
Highland Tourism Council

## Campo, Joe

---

**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Tuesday, June 9, 2020 3:39 PM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Flanders, Jamie A CIV USAF NGB A2/3/6 (USA); Houghton, Bonnie L CTR USAF NGB A4 (USA)  
**Subject:** FW: [Non-DoD Source] Bath/Highland flyover comment

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**From:** Jimmy English [REDACTED]  
**Sent:** Friday, June 05, 2020 2:27 PM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Subject:** [Non-DoD Source] Bath/Highland flyover comment

Attn:  
Ramón E. Ortiz  
National Guard Bureau  
3501 Fetchet Avenue  
Joint Base Andrews Md. 20762-5157

Dear Mr. Ortiz:

As a resident of Bath County I strongly oppose the proposed Evers military operations area expansion.

Our county has a small population and is victimized because of anticipated weak opposition. We rely on agriculture, retirement, and tourism to survive, and all will be crushed by the terrifying and invasive disruptions of pain threshold noise from military exercises. There has already been one local fatal jet accident due to exercises, and thankfully, there were no collateral deaths. Next time it could just as easily be the high school or resort hotel in the fatal flight path.

There are plenty of unpopulated regions where your inexperienced weekend warriors can practice Top Gun fantasies: how about the costal dismal swamp, the Atlantic Ocean, or the vast national forest southwest of here? The whole concept of practicing flyovers on small towns to simulate actual warfare conditions is doubtful, unless you are practicing to make war on the citizenry; even the Pentagon asserts that it is unlikely that low level flight combat is paramount in the nature of anticipated conflicts.

This seems to be much more about rationalizing budget expenditures than national security.

Regardless, we stand vehemently opposed to be unwitting victims of reckless target practice.

Best,  
Jim English





## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Thursday, June 11, 2020 8:01 AM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Flanders, Jamie A CIV USAF NGB A2/3/6 (USA); Houghton, Bonnie L CTR USAF NGB A4 (USA)  
**Subject:** FW: [Non-DoD Source] Evers Military Operations Area (MOA) Expansion Draft EA

**⚠ CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

---

**From:** Traver, Carrie [Traver.Carrie@epa.gov]  
**Sent:** Wednesday, June 10, 2020 10:53 PM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Cc:** Rudnick, Barbara  
**Subject:** [Non-DoD Source] Evers Military Operations Area (MOA) Expansion Draft EA

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

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Dear Mr. Ortiz,

The U.S. Environmental Protection Agency (EPA) received the draft Environmental Assessment (EA or Study) prepared by the Air National Guard (ANG) to consider the potential impacts associated with the modification, expansion, and utilization of the Evers Military Operations Area (MOA) to accommodate the training requirements of the 113th Wing (WG). The 113 WG, District of Columbia Air National Guard (DCANG) is located at Joint Base Andrews, Maryland. The proposed Evers MOA Complex would occur over portions of Harrison, Barbour, Tucker, Pendleton, Lewis, Upshur, Randolph, Braxton, Webster, Pocahontas, Nicholas, and Greenbrier counties in West Virginia and portions of Highland, Alleghany, Bath, and Botetourt counties in Virginia.

Thank you for providing the draft EA for our review. In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), we have the following comments for your consideration in the final EA and FONSI:

### Background, Purpose and Need

The purpose of the action is to expand the Evers MOA laterally and vertically to train and prepare military pilots and aircrews for current and future conflicts. The EA states that the existing Evers MOA is 16 x 30 nautical miles (NM) and is located over an area of 635 square miles and discusses the inadequacies of that air space for training.

The EA indicates that 80 x 40 NM represents the minimum lateral airspace required for the WG to effectively train. As described, the Evers Center MOA dimensions would be 40 x 40 NM; the Evers North and South MOAs are each 25 x 40 NM, and the proposed Evers East MOA is "approximately half the size in lateral dimensions of the existing." The proposal is a substantial expansion from the existing Evers MOA and appears to exceed the 80 x 40 NM

required. We recommend that the EA clearly describe the proposed conditions, including the area of the proposed MOA Complex in both NM and square miles as well as the need for this extent.

To clarify impacts, we recommend that the narrative also explain proposed conditions, including: frequency and timing of sorties, operations, and events in days per year and hours per day; increases in number and changes in types of aircraft; the busiest months, days of the week, or times of day; MOAs or areas of MOAs that may be more frequently used; and the expected frequency of potential operations at night.

Based on Table 2-3, it appears that there will be an increase in single aircraft sorties annually from 1,305 to 1,819, an increase in time in Special Use Airspace (SUA) and number of training missions, and addition of C-17 and C-130 aircraft (which appear to be associated with the 167th and 130th Airlift Wing.) However, a narrative discussion would be helpful to explain the expected use of each MOA as it is unclear how the operations in Table 2-3 reflect the Ready Aircrew Program (RAP) or other training requirements for the 113<sup>th</sup> WG as described in Section 1.3 and Appendix C (2,144 total training sorties; 968 or 1000 over land training sorties with 1440 weapons employment events.) It would also be helpful to explain how the training needs of the "other users" are expected to be met and whether other users are expected to increase with the expanded SUA.

### Resources Not Carried Forward for Detailed Analysis

#### *Socioeconomic impacts*

Socioeconomic impacts were not carried forward for detailed analysis. However, we recommend that this be further examined given potential impacts on recreational use and tourism. According to West Virginia Travel Impacts 2000- 2018p (prepared by Dean Runyan Associates for the West Virginia Tourism Office) "West Virginia's \$4.6 billion in travel-generated spending is a vital part of the state and local economies. In some areas of the state, it is one of the primary sources of earnings and employment." Vacation homes, camping, hunting and fishing, hiking, and outdoor recreational experiences contribute substantially to the state and local economy. Impacts that may adversely impact visitor experiences could potentially reduce tourism. We recommend that these impacts be fully evaluated.

For clarity, we also suggest that the economic impact of military airspace should also be further discussed. The Aircraft Owners and Pilots Association (AOPA) indicated in their comments that there may be negative economic impacts from establishment of military airspace over civil airports. This was not specifically addressed in the EA, although Page 1-13 states that military airspace has not been shown to affect the economic values beneath it. It would be helpful to assess potential economic impacts further and include the references used for the evaluation.

#### *Environmental Justice*

EPA appreciates information provided in the EA regarding environmental justice (EJ) communities and potential disproportionate impacts from the proposed action. We do have several recommendations regarding this assessment:

- US Census block group level data were used to determine the population exposed to aircraft noise; we recommend the use of block group data to identify EJ communities instead of the coarser county-level data.
- The EA describes that a threshold of State Poverty level plus 20 percent was used to identify a potential EJ community. This may not be an appropriate methodology; instead we suggest addition of 20 percent of the State level, adding 5.4 percent (to a level of about 32.4%). We note that this may identify more communities of potential EJ concern but does not imply disproportionate impact.
- To assess impacts, we recommend comparing the percent low-income and minority averages for the block groups in the Low MOA area to the other MOAs as well as county averages.

This information may assist in approaches to communities for appropriate outreach as well as evaluation and context of impacts. We would be pleased to discuss methodology for identification of EJ communities with you at your convenience.

## Noise

The noise analysis would benefit from further discussion, including:

- Expanding the discussion to address specific impacts to sensitive receptors such as schools and churches; as well as impacts to children and learning.
- Clarifying the number of people impacted. If based on US Census data, we assume that the 6,540 individuals in the Low MOA are residents; if so, we recommend estimating the number of part-time residents and visitors impacted.
- Discussing the potential occurrence of nighttime operations, which are likely to be more disruptive.
- It would be helpful to discuss noise from all aircraft types. Noise impacts from F-22, A-10, F-15, and F-16 aircraft are discussed in Figure 3-12 and Table 3-13; however, based on Table 2-3, seven different types of aircraft may operate at low altitudes.
- Noise typically varies based on flight operations. We recommend discussing how flight activities or operations may influence noise.
- We recommend including potential impacts to livestock, including potential injury to or from livestock startled by the aircraft appearance and/or noise.

## Wilderness, Land Use, and Recreation

Most of the land beneath the proposed SUA Complex is rural or remote. Over 4.7 million acres of public lands were identified under the proposed MOAs, including the Monongahela National Forest (MNF). MNF offers more than half of the publicly available recreation land in West Virginia, consisting of more than 921,000 acres. Additionally, there are 5 designated Wilderness Areas located under the proposed MOAs, including the 47,815-acre Cranberry Wilderness Area below the Evers Low MOA. Therefore, we recommend that impacts of noise and the visual effects on recreational users or visitors, including those who are camping, hunting, hiking or generally experiencing the wilderness be fully evaluated in the Study. We recommend a detailed analysis of impacts and minimization measures, and strongly recommend reaching out to outfitters, recreational user groups, and others who may be impacted, particularly in the designated Wilderness areas and the Low MOA area.

- The estimated increase in average noise level is 5.2 dBA DNL beneath the proposed Evers Low MOA. For the four wilderness areas under the other MOAs, the noise level increase from the Proposed Action would be 0.9 to 1.0 dBA DNL above the estimated background rural “noise” level of 42 dBA DNL. Remote areas, as indicated by Table 3-11 in the EA average less than 42 dBA DNL, and this estimated noise level does not seem to take into account the source of the sound. Noise is considered unwanted sound; in a wilderness or remote area, the natural soundscape is typically considered part of the experience whereas human-created noises will likely be perceived as disruptive. Low-flying aircraft may also create visual intrusion. We recommend evaluating current literature to more effectively assess noise and aircraft impacts on recreational users of wilderness areas.
- The EA concludes that noise from aircraft operations under the Proposed Action would be less than significant and compatible with all land uses because it would not exceed 65 dBA DNL. However, as discussed, DNL is the average sound energy in a 24-hour period (with a nighttime penalty.) DNL is a way to estimate impact on communities but does not measure the impact of a sudden, loud artificial noise in a rural or remote area<sup>1</sup>. As described, areas beneath the proposed Evers Low MOA would intermittently experience aircraft overflights that would range from loud to very loud (>75 dBA L<sub>max</sub>) on the ground; this noise would interfere with communication indoors within approximately 1-3 miles of the aircraft's flight. Although these events may be infrequent and relatively short duration, this could have a substantial impact on those who are outdoors, seeking a rural or wilderness experience.

The EA states that avoidance of noise-sensitive areas “would be emphasized to all flying units where overflights at low altitudes should be avoided to the maximum extent practicable.” Further, we suggest consideration of specific avoidance measures and practices over or adjacent to designated Wilderness areas to reduce impacts such

as no-fly zones, banning night flights, maintaining higher minimal altitudes, time of year restrictions, or other measures to protect the integrity of these areas. We recommend working with the Forest Service (FS) to identify ways to avoid and minimize impacts on these valuable public lands.

### Wildlife

We recommend a robust discussion of the potential impacts on wildlife supported by range of recent research to support the conclusions of the EA. A single source was cited (Dufour 1980); however, a number of studies have been published since 1980 regarding noise impacts on wildlife (both generally and from aircraft.)

The EA states that low-level overflight avoidance of sensitive areas such as wildlife management areas “would be emphasized in flight planning”. We recommend identifying and avoiding sensitive habitat areas to minimize potential impacts and fully consider comments from the relevant agencies, including US Fish and Wildlife Service and the FS. We also recommend including comments received from the agencies in the EA.

### *Eastern Region Forester Sensitive Species*

The FS provided a list of Threatened and Endangered Species and Regional Foresters Sensitive Species (RFSS) in MNF potentially impacted by the proposed project activities, which was included in Appendix D.

- The RFSS list indicated that bat species potentially impacted by project activities include *Myotis leibii* (Eastern Small-footed Myotis), *Myotis lucifugus* (Little Brown Myotis), *Perimyotis subflavus* (Tri-colored Bat), *Myotis sodalists* (Indiana Bat), *Corynorhinus townsendii virginianus* (Virginia Big-eared Bat) and *Myotis septentrionalis* (Northern Long-eared Bat). *Myotis sodalists* and *Corynorhinus townsendii virginianus* are listed as Endangered and *Myotis septentrionalis* is Threatened. The RFSS list indicated that potential impacts to these species could occur from disruption of communication, damage to sensory cells of the inner ear, and interference with ability to forage. The FS also noted that the noise and vibration could disturb vulnerable and critical stages in these species’ life cycles. We concur that a literature review is needed to provide a full analysis of these impacts and recommend that time of year restrictions or buffers should be evaluated to minimize potential disturbance. In addition, the specific timing of operations would be helpful in discussing the potential for collisions with bats.
- Likewise, we recommend that the EA address impacts to other RFSS mammals and birds supported with a literature review as requested by the FS; this includes *Neotoma magister*, the Allegheny Woodrat. We suggest that impact on nesting, breeding, and migrating birds consistent with the Migratory Bird Treaty Act should be further discussed and time of year restrictions on activities considered.

### Green Bank Observatory

As indicated, the Green Bank Observatory (GBO) is located beneath the existing and proposed Evers MOA. Included in the EA is a July 2, 2019 letter from GBO outlining concerns regarding impacts and potential damage related to noise and radio transmissions. The letter included a request for a “no-fly” zone at a distance of 3 miles from the center of the Robert C. Byrd Green Bank Telescope to protect the operation of the GBO and its employees. Minimization measures in the EA were listed to reduce potential impacts, including a chart modification to establish a no-fly zone around the GBO facility with a radius of 2.5 statute miles and a ceiling of 2,500 ft AGL. The EA would benefit from a brief discussion of any further discussion with GBO, including whether GBO is satisfied that the proposed measures are sufficiently protective of its operations.

### Outreach

As previously indicated, given the potential impact to recreational users, particularly in the Low MOA, the EA would benefit from additional outreach to outfitters, campgrounds, recreational user groups (trail clubs, hunting organization, etc.) that could be impacted. It may also be helpful to post notices or hold meetings within the MNF.

It would also be informative for the EA to indicate how commenters’ concerns were addressed or incorporated in the Study. For example, the AOPA outlined a number of concerns in their January 2019 letter; it would be helpful to detail how these concerns were addressed, including the safety concern they expressed regarding potential hazards to civilian aircraft by lights-out training.

We also request that you correct your contact information for EPA Region 3. The EPA Region 3 office mailing address is: 1650 Arch Street, Philadelphia, PA 19103. We also note that all NEPA reviews should be directed to the Office of Communities, Tribes, and Environmental Assessment at EPA Region 3; Samantha Phillips Beers is the Director of this Office. I am the staff contact for federal facilities.

Thank you for notifying us of the availability of the EA. We ask that you consider our comments in the EA and FONSI. We would welcome the opportunity to discuss any of these comments. Please feel free to contact me at 215-814-2772 or [traver.carrie@epa.gov](mailto:traver.carrie@epa.gov) < Caution-mailto:traver.carrie@epa.gov > .

Sincerely,

Carrie Traver

*<sup>1</sup>As stated in Technology for a Quieter America (National Academy of Engineering 2010): "Neither day-night average sound level nor percent highly annoyed is an appropriate metric for measuring noise in naturally quiet areas. Because of the logarithmic nature of the decibel, short-duration sounds of high amplitude compared with background noise can significantly increase the day-night level, even though the sound remains at the background level most of the time. As for percent highly annoyed, this is hardly the best measure of satisfaction for areas where quiet and solitude are valued."*

**Carrie Traver**

Life Scientist  
Office of Communities, Tribes, & Environmental Assessment  
U.S. Environmental Protection Agency, Region 3  
1650 Arch Street – 3RA10  
Philadelphia, PA 19103  
215-814-2772  
[traver.carrie@epa.gov](mailto:traver.carrie@epa.gov) < Caution-mailto:traver.carrie@epa.gov >

## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Tuesday, June 9, 2020 3:32 PM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Flanders, Jamie A CIV USAF NGB A2/3/6 (USA); Houghton, Bonnie L CTR USAF NGB A4 (USA)  
**Subject:** FW: [Non-DoD Source] Public comment Evers MOA

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**From:** michael henning [REDACTED]  
**Sent:** Tuesday, June 09, 2020 11:29 AM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Subject:** [Non-DoD Source] Public comment Evers MOA

To whom it may concern,

This is a public comment as it relates to the expansion of the Evers MOA.

First, a little history, we are the Henning's, Michael and Barkley and we reside at 37° 43' 59.02' N / 79° 37' 12.11" W, at 1702 feet. I have been very fortunate in life and have had the opportunity to experience many things. As luck would have it, my ex father-in-law was a civilian contractor based out of Warner Robbins. He was the crew chief for a group that traveled world wide applying PTF's and complete upgrades to avionics packages in the fighters of the day. In the mid to late 80's I was fortunate enough to be able to visit him on two of his TDY assignments, once at Tyndall AFB and once at Holloman AFB. On both occasions I was allowed to sit in the cockpit of aircraft that they were installing avionics packages in. It was a thrill and I never even left the ground. My one other tie to military aviation was while in college. I was regularly on base at NAS Pensacola Corey Station. The lady who typed all of my papers was the base commander's secretary. I swear that lady got me through college, my spelling and punctuation was, and still is, atrocious. During that period in history getting on a base was no big deal and I used to sit there, sometimes for hours and watch the jets come and go.

Well about 15 years ago we built our house on the hill. As soon as we put that big shiny metal roof up, I think we became a way point for military flights in our area. Seems like some days, we have our own private air show and we love it. Our English Setter Ruger, has taken to patrolling our airspace and anything large that flies, crows, buzzards, and yes even the occasional Hornet ( F-16) or the more common Falcon (F-18) get chased out. Not to worry, if Ruger ever meets one of your pilots he is really friendly, just give him a pet on the head. Now if he were to get a hold of one of your air frames, all bets are off.

I tell you all of this to convey my deep respect and admiration for our military, especially our aviators. With that said, I am concerned about a proposed industrial wind farm at 37° 42' 23 N /79° .43' 00 W, at a height of 3290 feet with wind turbines of 680 feet having grown from the previous height of 550 feet. At an overall altitude of **3970'** they pose a very real risk to our military flights. After researching I can assure you, based on wind data captured every twenty minutes at nearby Hot Springs airport, there is not enough wind to justify the wind turbines' existence. I would strongly suggest that all avenues possible be used to stop the creation of the wind farm. It will put in place potentially dangerous obstacles for your air crews, especially with proposed expansion, and hopefully increased traffic, of the Evers MOA.



The training and safety of our military has got to take precedence over a few windmills that won't even provide enough power for a microwave.

Sincerely,  
Michael Henning

## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Tuesday, June 2, 2020 4:55 PM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Houghton, Bonnie L CTR USAF NGB A4 (USA); Flanders, Jamie A CIV USAF NGB A2/3/6 (USA)  
**Subject:** FW: [Non-DoD Source] Evers Draft EA and Draft FONSI Comment from HCCC

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**From:** Chris Swecker [director@highlandcounty.org]  
**Sent:** Tuesday, June 02, 2020 10:38 AM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Subject:** [Non-DoD Source] Evers Draft EA and Draft FONSI Comment from HCCC

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

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Dear Mr. Ortiz

Thank you for the chance to provide feedback on the Evers Draft EA and Draft FONSI. We appreciate the thorough review and explanations.

The Highland County Chamber of Commerce continues to hold serious concerns for local businesses and individuals regarding an increase in low flying aircraft, particularly regarding our agricultural sector. As stated before, we have had reports of low-flying jets causing major disruption to horse, cattle, and poultry operations in our county due to the sudden loud noise. The safety and well-being of our community is of utmost importance to us. We are appreciative of your outlets for providing feedback about aircraft noise, which we plan to share with our members and other areas of the public.

In order to help the public prepare and be aware, we welcome any additional info about flight patterns and frequency in relation to Highland County.

Thank you, and take care.

Chris Swecker  
Executive Director  
Highland County Chamber of Commerce  
P.O. Box 223  
Monterey VA 24465  
540-468-2550  
[director@highlandcounty.org](mailto:director@highlandcounty.org) < Caution-mailto:findyourescape@highlandcounty.org >  
[Caution-www.highlandcounty.org](http://www.highlandcounty.org/) < Caution-http://www.highlandcounty.org/ >



## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Thursday, June 4, 2020 3:50 PM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Houghton, Bonnie L CTR USAF NGB A4 (USA); Flanders, Jamie A CIV USAF NGB A2/3/6 (USA)  
**Subject:** FW: [Non-DoD Source] Air National Guard Fly-over Input from a Resident

**⚠ CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

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**From:** lesliejking@mgwnet.com [REDACTED]  
**Sent:** Wednesday, June 03, 2020 1:27 PM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Subject:** [Non-DoD Source] Air National Guard Fly-over Input from a Resident

I need to state that we appreciate all that the Air National Guard does for the safety of our country. We have lived with what seems like almost a daily fly over, although I realize is less often in reality, directly above our home & property, 7304 Dry Run Rd, Burnsville, VA since we bought our home in 2001. It's normally at least three jets that pass over sometimes doing a roll as they go. We were here when the unfortunate accident claimed the life of one of the pilots. We saw them fly over and heard the tremendous crash when it occurred. It was a tragic loss of life. Some of our volunteer fire dept members and EMT's were among those who responded to the crash site. We are both members of the fire dept and my husband is also an EMT.

That said, to state that the fly overs don't cause significant disruption is a bit of an understatement. When we had horses, they would bolt and run wildly in the field until the noise had passed. Our house dogs would and still bark constantly, running around the house frightened and for a while after the jets had passed. Their hearing is far superior to ours and it since it hurts my ears when it occurs and all conversation has to stop as a result of the sound level generated by the jets, I have to feel it is extremely uncomfortable for them. They have not become accustomed to the noise at all. 'Existing conditions' here does not include this type noise nor the levels. We'll hear owls screech, coyotes howling, piliated woodpeckers tapping away, etc and those are normal existing conditions for this area. Do you get to a point where you realize it is going to happen as a person, yes. Do you enjoy it, no. It is a disruption and takes away from the enjoyment and peaceful nature of our area which thrives mainly on tourism and those seeking the peaceful outdoors.

I kindly request that the number of fly overs not be increased.

Sincerely,

Leslie J. King  
[REDACTED]

June 2,2020

Ramon E. Ortiz, P.E.

Technical Lead Environmental Planner

3501 Fetchet Avenue

Joint Base Andrews, MD 20762-5157

Re: Draft Environmental Assessment for Modification and Addition of Evers Military Operations Area

Dear Mr. Ortiz

Thank you for the opportunity to review this draft document and provide comments from the point of view of a full time farmer in very rural southern Randolph County, West Virginia to be affected by the Evers Low MOA.

One of my main concerns is that the flights may be going below 1000 feet. They certainly did about a year ago when I had to drop everything and put my hands over my ears. It was so without warning and so loud and frightening that I spent the whole afternoon on the phone to try to get to the right person to whom I could complain. My farm animals, including a mule and numerous goats went completely haywire! I don't believe the document ever mentions consideration for farm animals, but it should. The document infers that there are cases when lower than 1000 foot flights may occur and I feel that there should be some warning to the residents to be impacted; if you know ahead of time we should too.

Certain things do not seem very clearly stated: the existing number of flights, the proposed number of flights per year and the % of increase that this represents especially for the low level flights; the existing size of the MOA and the proposed size and the % of increase.

I would like to emphasize that we both want to be in a sparsely populated place, I chose to live here because of the quiet and you want to make lots of noise here because the area is sparsely populated. These two facts are just not compatible. The ANG will doubtless get its way, but I think that some sort of complaint hotline should be made easily available to those of us who have endured the noise that is clearly much more than 65dBA. I also feel that some form of warning is essential, the sudden surprise of painfully loud screaming jets is what really makes the quiet lovers angry.

I appreciate the chance to have input and hope my comments are taken seriously.

Sincerely,



Tolly Peuleche



Ramon E. Ortiz

June 02, 2020

3501 Fatchet Ave

Joint Base Andrews, Md 20762-5157

Re: Evers MOA modification

Mr. Ortiz,

I would like to express my objections to any increase in the number or frequency of aircraft flights over my residence. If my interpretation of the pertinent information is accurate, flights in my area are required to be 1000 ft AGL. It is my observation that quite often they are lower than that - pilots are just not following the rules. Consequently, the noise levels are not simply annoying, they are deafening. Many friends and neighbors have made similar observations. Again, I would strongly object to any increase in these activities.

Sincerely

Douglas H. Bernier

Ramón E. Ortiz,  
National Guard Bureau  
3501 Fetchet Avenue  
Joint Base  
Andrews Md. 20762-5157

Re: Evers MOA Draft Environmental Assessment airspace over WV and VA

Dear Mr. Ortiz,

I am responding to the public invitation to respond to the proposed use and increased use of airspace over parts of West Virginia and Virginia for the stated purpose of training for the 113<sup>th</sup> Wing of the District of Columbia National Guard.

My wife and I have lived in Pocahontas County, West Virginia since 1975. We raised our four sons to adulthood. Our employment has included professional jobs. We also raise some small livestock.

Here is my concern. My wife is an children's librarian in Marlinton, WV (Pocahontas County seat). She teaches a lesson to each school class weekly. Often low flying jets will roar through the sky above as they follow the course of the Greenbrier River. Often there are two or more jets in tandem. The noise of course distracts the students from their lesson, essentially taking a couple minutes of instructional time for the class to refocus. No doubt the same effect is occurring in the other classes at the school.

I have been outdoors on numerous occasions watching the jets fly over Marlinton. Frequently the jets are at a low altitude, clearly well under 1000 feet!. Although I cannot accurately gauge the exact altitude when very-low flying jets pass over, I can readily estimate their altitude by comparing the jets against the background of the surrounding mountains. Marlinton is approximately 2100 feet above sea level. The highest mountain visible background is about 3400 feet above sea level. I have observed some jets that I estimate (conservatively) are well under half way up the mountain backdrop. In other words, I believe some of these flyovers have been in the range of 500 feet above town.

Are these low flights legal? I doubt it. For me, the plausible reason is that the pilots are "hotdogging." Swooping low over a small town nestled along a river flanked by mountains is a thrill.

Personally I do not like my area used for practice bombing (without the bombs). This proposal is just another exploitation of rural areas. This would not happen in densely populated urban areas.

**RECOMMENDATION:** I presume that all jet flights are electronically logged, which would include altitudes over landscape. These altitudes must be checked after every flight to ensure that no jet has violated the 1000 feet directly above ground surface. Violators must be reprimanded and grounded if repeated or flagrant. In addition, perhaps, to hold the National Guard accountable, perhaps small towns such as Marlinton could have access to technology that ascertains flyover altitude.

The noise even at 1000 feet is loud. Planes flying considerably lower are startling and offensive.

I would appreciate an informed and clear response to the points in my letter. Thank you.

Allen Johnson



P.S. National Guard. You are  
to defend us, not attack us.

June 1, 2020

Dear Mr. Ortiz -

I want to register my concern about the proposed Evers MOA expansion in light of the windmill farm to be built at Rocky Forge in Botetourt Co., Virginia.

It is my understanding that the expansion proposal does not take into consideration the extreme change of environment to be caused by these enormous windmills.

This could lead to a very dangerous situation for both the military personnel and civilians in the area!

Surely, this expansion needs to be re-evaluated in light of the very real hazard these 50-story structures will present.


Also, your environmental impact study will need to consider the

destruction to wildlife and lay-of-the-land which the Rocky Forge development will cause.

I realize you need to train pilots over land and mountains such as our unique area possesses, in order to keep our forces in readiness. I support that mission and wish to ensure that it is protected.

Thus, I feel you should take into account this radical change to the terrain and how the windmills will affect every aspect of flight and training safety.



Respectfully,  
Kathleen Ball



## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Monday, June 8, 2020 9:26 AM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Houghton, Bonnie L CTR USAF NGB A4 (USA); Flanders, Jamie A CIV USAF NGB A2/3/6 (USA)  
**Subject:** FW: [Non-DoD Source] EVERS MOA

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**From:** Stowell4Sheriff [REDACTED]  
**Sent:** Friday, June 05, 2020 11:58 AM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Subject:** [Non-DoD Source] EVERS MOA

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To Whom it may concern,

My Name is WilliamStowell, I am a USAF Security Forces veteran and candidate forSheriff of Botetourt county, just south of the proposed MOA boundary. I am writing today with information that may seriously affectoperational security and mission readiness of the ANG.

I'd like to beginby saying that I am in full support of expanding the Evers MOAboundary and this letter is not an attempt to oppose or dissuade youfrom the expansion. Rather I wish to inform you of a proposed windturbine farm, known as Rocky Forge, championed by Apex Clean Energy.

There are manycomponents to this wind farm so for the sake of brevity I willhighlight the main points.

- 1) The proposedturbines will be within approximately 7 miles of the southeast borderof the proposed MOA reaching an altitude of 3,945 feet. This willlimit airspace in this area which may be required for various reasonsat various times.
- 2) The wind farmproject will require mountain top removal (explosive demolition)which will drastically restructure the current ecosystem. This inturn will nullify any work that has been done in regards to thecurrent Environmental Assessment that your team has worked so hard toproduce.
- 3) An onshore,mountain top wind farm of this size does not exist anywhere else inthe world and is therefore untested. Experts who have examined thisproposed farm have called it irresponsible and dangerous.

4) The presence of these windmills will pose an unmitigated fire risk for the entire valley. Wind farms such as this are well known for bursting into flame, as well as throwing blades miles away, due to the momentum of the turbine. Disasters such as this do not respect man-made boundaries and will certainly encroach into the MOA.

5) Apart from the physical dangers there are electromagnetic and RF dangers that, I am told, will interfere with radar and navigation equipment that the military relies upon.

I am grateful that you have taken the time to read and consider these points. As you may know the Security Forces creed is Defensor Fortis- Defender of the Force, something I take very seriously, even as a civilian. This windfarm is not inevitable and should not obtain FAA approval as the project poses risks to military personnel and operations.

I hope you will use the experts at your disposal to look further into this matter and do not hesitate to reach out to me if I can be of service.

Thank you for your devotion to our country and the work you do to keep our military the best in the world.

Sincerely,

-William Stowell







## Campo, Joe

---

**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Wednesday, May 27, 2020 11:21 AM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Houghton, Bonnie L CTR USAF NGB A4 (USA); Flanders, Jamie A CIV USAF NGB A2/3/6 (USA)  
**Subject:** FW: [Non-DoD Source] EVERS MOA Expansion

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From: Paul Tribble [REDACTED]  
Sent: Tuesday, May 26, 2020 4:54 PM  
To: USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
Subject: [Non-DoD Source] EVERS MOA Expansion

Dear Sirs:

I'm a Captain for a major US airline and have over four decades of aviation experience. I reside near Blue Grass, Virginia and also own property near Hightown, VA (the crossroads of US 250 and the Blue Grass Valley Road).

For many years I flew from W99 to DCA/IAD/BWI for work. Just recently I've been in discussions to build a hangar and base a private aircraft @ Hannah Field, near Monterey, VA (7VA9). I am not opposed to the EVERS MOA or it's expansion, however I feel it is vitally important operators within the MOA clearly understand several items.

First, almost everyone who lives here likes solitude. One of the most significant selling points for property in our area is peace and quiet. Obviously, military aircraft disrupt peace and quiet. That's fine as long as military operators do not loiter over a specific area for lengthy periods AND do not descend below the floor of the MOA.

Second, while not many people reside here, those who choose to live here... especially those who moved to the area...do so because they want it quiet. Numerous individuals, like myself, made tremendous sacrifices to live in a peaceful area. Personally I drive over three hours one way to work, and have done so almost every week for over 26 years.

Third, there is going to be an increase in GA activity from 7VA9. Military pilots need to be briefed on GA aircraft in the area and military operators must religiously indicate via NOTAM or other means when the MOA will be hot.

Fourth, raising livestock is the primary means of income for many local residents. That often includes being in close proximity to large farm animals. Military operators need to grasp their presence is not always welcome.

Finally, there have been a few occasions during the last 26 years when military aircraft have clearly flown below the floor of the MOA above my home. This is unsafe and unprofessional, yet trying to find the unit responsible was a significant undertaking for someone with an aviation background. I understand being 25 and having an F-22 strapped to your buttocks...I really do get it! However, those who bust the floor of the MOA need to be held accountable. It is my view there needs to be an easy, readily available contact for reporting perceived inappropriate flying outside the boundaries of the MOA.

Please brief pilots and keep the above in mind when operating in the EVERS MOA.

Sincerely,

Paul S. Tribble





# COMMONWEALTH of VIRGINIA

## Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Matt Strickler  
Secretary of Natural Resources

Julie V. Langan  
Director

Tel: (804) 367-2323  
Fax: (804) 367-2391  
www.dhr.virginia.gov

### MEMORANDUM

**DATE:** 23 June 2020 **DHR File #** 2019-0428

**TO:** Mr. Ramon E. Ortiz  
NGB

**FROM:** Marc E. Holma, Architectural Historian (804) 482-6090  
Office of Review and Compliance

**PROJECT:** Draft EA and FONSI for expansion of Evers Military Operations Area in West Virginia

- This project will have an effect on historic resources. Based on the information provided, the effect will not be adverse.
- This project will have an adverse effect on historic properties. Further consultation with DHR is needed under Section 106 of the NHPA.
- Additional information is needed before we will be able to determine the effect of the project on historic resources. **Please see below.**
- No further identification efforts are warranted. No historic properties will be affected by the project. Should unidentified historic properties be discovered during implementation of the project, please notify DHR.
- We have previously reviewed this project. Attached is a copy of our correspondence.
- Other (Please see comments below)

### COMMENTS:

Administrative Services  
10 Courthouse Ave.  
Petersburg, VA 23803  
Tel: (804) 862-6408  
Fax: (804) 862-6196

Eastern Region Office  
2801 Kensington Avenue  
Richmond, VA 23221  
Tel: (804) 367-2323  
Fax: (804) 367-2391



Western Region Office  
962 Kime Lane  
Salem, VA 24153  
Tel: (540) 387-5443  
Fax: (540) 387-5446

Northern Region Office  
5357 Main Street  
PO Box 519  
Stephens City, VA 22655  
Tel: (540) 868-7029  
Fax: (540) 868-7033

## Campo, Joe

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**From:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS <usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil>  
**Sent:** Wednesday, June 10, 2020 11:38 AM  
**To:** Ortiz, Ramon E CIV USAF NGB A4 (USA); Campo, Joe  
**Cc:** Flanders, Jamie A CIV USAF NGB A2/3/6 (USA); Houghton, Bonnie L CTR USAF NGB A4 (USA)  
**Subject:** FW: Flying Over Virginia and West Virginia for Training

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**From:** Nancy Witschey [highlandedawitschey@htcnet.org]  
**Sent:** Tuesday, June 09, 2020 4:52 PM  
**To:** USAF JB A-NAFW NGB A4 Mailbox A4A NEPA COMMENTS  
**Subject:** [Non-DoD Source] Flying Over Virginia and West Virginia for Training

Dear Sir or Madam:

There is loud and significant noise pollution when jets fly over our quiet areas. The economic impact is primarily to poultry growers. Contrary to your findings, these farmers lose a high percentage of animals when frightened. For the rest of the environment, the impact is a disruption to quiet solitude.

The military does need to train.

One solution would be to identify those areas with poultry farms and mark them as areas to avoid. If you are willing to consider this option, our Virginia and West Virginia counties would undertake a project to provide mapping.

While not a solution to loss of product, it would be helpful if the training missions were limited to only once each month, and the time flying over a particular area to ten minutes or less.

Yours truly,  
Nancy Witschey  
Highland County Economic Development Authority

**Appendix B Record of Non-Applicability**

**RECORD OF NON-APPLICABILITY  
In Accordance with the Clean Air Act - General Conformity Rule for the  
Proposed Environmental Assessment for Modification and/or Addition of  
Airspace Utilization of the Evers Military Operating Airspace**

2 April 2020

This Record of Non-Applicability supports ANG's Environmental Assessment for Modification and/or Addition of Airspace Utilization of the Evers Military Operating Airspace. The proposed airspace would replace the existing Evers MOA and creates four MOAs (Evers North, Evers Central, Evers South [11,000ft MSL to 18,000ft MSL], and Evers Low [1,000ft AGL to 11,000ft MSL]) and three Air Traffic Control Assigned Airspaces (ATCAA) [Diesel North, Diesel Central, and Diesel South [FL180 to FL230)]. ATCAA boundaries are coincidental with the proposed boundaries of Evers North, Central, and South.

General conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of 40 CFR §93, Subpart B. The requirements of this rule are not applicable to the Proposed Action because:

Activities would occur within areas designated full attainment for the National Ambient Air Quality Standards, and partially include emissions that were clearly *de minimis*, such as emissions from aircraft operations above the mixing height of 3,000 ft AGL (i.e. the height above which air emissions do not directly affect individuals on the ground.) (40 CFR §93.153 (c) (xxii)).

Supported documentation and emission estimates:

- Are Attached
- Appear in the NEPA Documentation
- Other (Not Necessary)

**Appendix C Aeronautical Proposal**

## FAAO 7400.2J Section 3. SUA PROPOSALS

### 21-3-3. PROPOSAL CONTENT

a. Proponent's Transmittal Letter. See proceeding.

b. Area Description.

#### Evers MOA, WV - Rescind

#### Evers Low MOA, WV

|                            |           |                                                                                                                                                                                                                                         |
|----------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Boundaries.</b>         | Beginning | at lat. 38°38'51"N, long. 79°34'41"W;<br>to lat. 38°24'00"N, long. 79°38'44"W;<br>to lat. 38°08'13"N, long. 79°43'13"W;<br>to lat. 38°10'49"N, long. 80°25'30"W;<br>to lat. 38°38'51"N, long. 80°00'00"W;<br>to the point of beginning. |
| <b>Altitudes.</b>          |           | 1,000 feet AGL up to but not including<br>11,000 feet MSL                                                                                                                                                                               |
| <b>Times of use.</b>       |           | Sunrise to Sunset, Daily; other times by<br>NOTAM                                                                                                                                                                                       |
| <b>Expected usage.</b>     |           | 2 hours per day; 260 days per year                                                                                                                                                                                                      |
| <b>Controlling agency.</b> |           | FAA, Washington, D.C. ARTCC                                                                                                                                                                                                             |
| <b>Using agency.</b>       |           | D.C. Air National Guard, 113 <sup>th</sup> Wing,<br>JB Andrews, MD                                                                                                                                                                      |

#### Evers East MOA, WV

|                      |           |                                                                                                                                                                                                |
|----------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Boundaries.</b>   | Beginning | at lat. 38°38'51"N, long. 79°34'41"W;<br>to lat. 38°38'51"N, long. 79°19'49"W;<br>to lat. 38°24'00"N, long. 79°19'49"W;<br>to lat. 38°24'00"N, long. 79°38'44"W;<br>to the point of beginning. |
| <b>Altitudes.</b>    |           | 1,000 feet AGL up to but not including<br>FL180                                                                                                                                                |
| <b>Times of use.</b> |           | Sunrise to Sunset, Daily; other times by<br>NOTAM                                                                                                                                              |

**Expected usage.** 2 hours per day; 260 days per year

**Controlling agency.** FAA, Washington, D.C. ARTCC

**Using agency.** D.C. Air National Guard, 113<sup>th</sup> Wing,  
JB Andrews, MD

**Evers North MOA. WV**

**Boundaries.** Beginning at lat. 38°08'13"N, long. 79°43'13"W;  
to lat. 37°46'49"N, long. 79°49'14"W;  
to lat. 37°49'51"N, long.  
80°44'02"W;  
to lat. 38°11'36"N, long.  
80°38'15"W;  
to the point of beginning.

**Altitudes.** 11,000 feet MSL up to but not  
including FL180

**Times of use.** Sunrise to Sunset, Daily; other times by  
NOTAM

**Expected usage.** 2 hours per day; 260 days per year

**Controlling agency.** FAA, Washington, D.C. ARTCC

**Using agency.** D.C. Air National Guard, 113<sup>th</sup> Wing,  
JB Andrews, MD

**Evers Center MOA. WV**

**Boundaries.** Beginning at lat. 38°45'14"N, long. 79°32'49"W;  
to lat. 38°08'13"N, long. 79°43'13"W;  
to lat. 38°11'36"N, long. 80°38'15"W;  
to lat. 38°47'14"N, long. 80°28'50"W;  
to the point of beginning.

**Altitudes.** 11,000 feet MSL up to but not  
including FL180.

**Times of use.** Sunrise to Sunset, Daily; other times by  
NOTAM

**Expected usage.** 2 hours per day; 260 days per year



**Controlling agency.** FAA, Washington, D.C. ARTCC  
**Using agency.** D.C. Air National Guard, 113<sup>th</sup> Wing, JB Andrews, MD

**Evers South MOA. WV**

**Boundaries.** Beginning at lat. 39°05'19"N, long. 79°27'09"W; to lat. 38°45'14"N, long. 79°32'49"W; to lat. 38°47'14"N, long. 80°28'50"W; to lat. 39°07'42"N, long. 80°23'25"W; to the point of beginning.

**Altitudes.** 11,000 feet MSL up to but not including FL180

**Times of use.** Sunrise to Sunset, Daily; other times by NOTAM

**Expected usage.** 2 hours per day; 260 days per year

**Controlling agency.** FAA, Washington, D.C. ARTCC

**Using agency.** D.C. Air National Guard, 113<sup>th</sup> Wing, JB Andrews, MD

**c. Airspace Statement of Need and Justification.**

**1. Describe the purpose and need for the proposed airspace.**

Modify the existing Evers MOA by expanding laterally to the North, South, and West, in addition to creating three Air Traffic Control Assigned Airspaces (ATCAAs) to meet military training needs and maximize efficient use of the airspace structure. This proposed action would provide a marked improvement by increasing the size of the training airspace necessary to meet the changing needs and evolutionary requirements of air-to-air combat, air-to-ground combat, and platform technology.

The primary drivers of airspace shape, size, and feature requirements are the F-16C Block 30 Ready Aircrew Program (RAP) Tasking Memorandum, in conjunction with AFI 11-2F-16V1 that outlines the continuing training program for ACC units. These requirements define the minimum number and type of annual sorties, simulator missions and specific training events specialized aircrews must accomplish to sustain Combat Mission Readiness (CMR). Per AFI 11-2F-16V1, an effective RAP mission requires accomplishment of a complete tactical scenario or a basic skills mission.

The 113 WG maintains 30 CMR F-16C pilots, requiring a combined 1,000 overland sorties to meet annual RAP requirements. The training environment must enable effective and accurate simulation several F-16C mission sets, to include Defensive Counter Air (DCA), Offensive Counter Air – Attack Operations (OCA-AO) Combat Search and Rescue (CSAR), Close Air Support (CAS), Forward Air Control (FAC-A), and Air Interdiction (AI). Considering a notional air-to-air intercept timeline of the F-16C and realistic surface attack/close air support scenario, 80 nautical mile (NM) x 40 NM represents the minimum lateral airspace required to effectively train for Basic Fighter Maneuvering (BFM), Aerospace Control Alert (ACA), Tactical Intercepts (TI), and Air Combat Maneuvering (ACM). This is over twice the lateral area of the current Evers MOA, which is 30 NM x 16 NM. Moreover, due to the F-16C's air-to-ground utility, low altitude (LOWAT) airspace is essential for maintaining currency and proficiency to execute safe and effective combat operations, including OCA-AO, Basic Surface Attack (BSA), CAS, FAC/A. These surface attack missions represent 45% of all 113th Wing RAP sorties.

113<sup>th</sup> Wing RAP reporting from CY2017 demonstrates the negative impacts of “over land” training airspace non-availability and its weakening effect on pilot combat mission readiness. This report details that over 70% of aircrew assigned (21 of 30 pilots) were unable to meet the RAP required training for OCA-AO due to local airspace availability. The impact of this RAP deficiency was determined to be SEVERE and directly impacting the 113<sup>th</sup> Wing's ability to deploy and attack the enemy in a near peer engagement. Equally troubling was the Inertial Aided Munitions / Laser Guided Bomb Delivery (IAMS/LGB) events, with 0% of required training accomplished due to lack of available “over land” airspace.

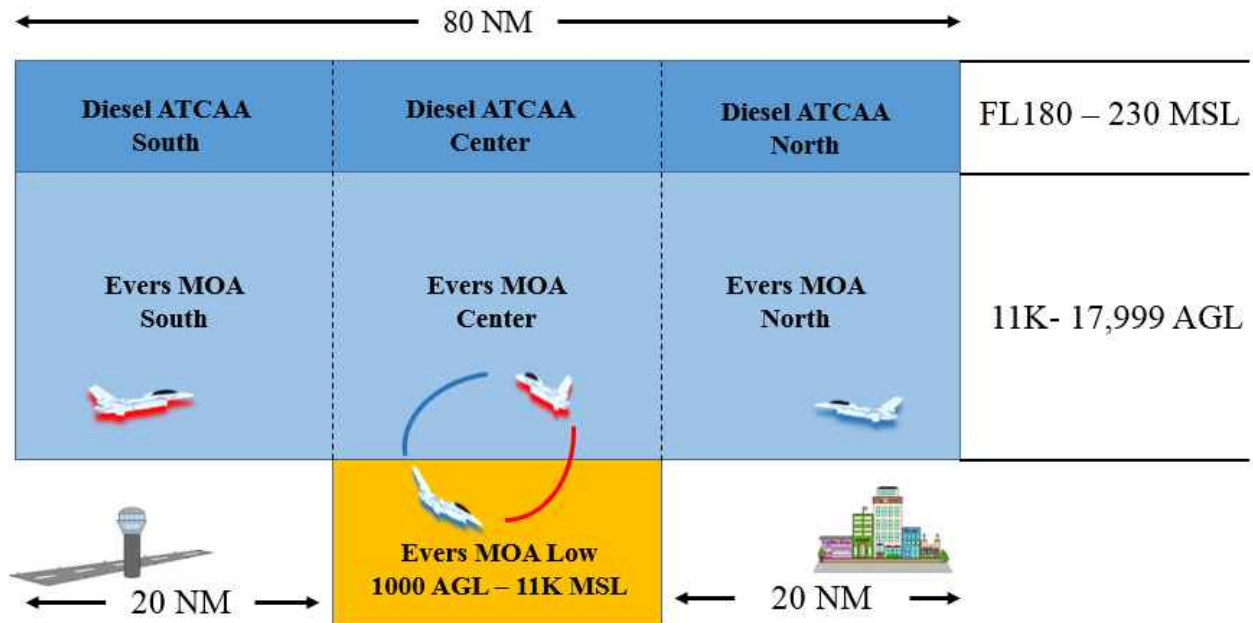
Additionally, the current configuration of the Evers MOA is too small for air-to-air refueling (AAR) operations. Regular and predictable AAR operations has become a critical training multiplier as the F-16C fleet grows older and less healthy. The Evers MOA expansion conceives an organic ARCT track that would effectively double the training opportunities of every fighter in the MOA.

The creation of three ATCAAs over the proposed MOA expansion would provide a vertical airspace that creates opportunities for full-spectrum, doctrinally driven, tactical training. The 113 WG requires access to airspace that provides a spatially viable combat training environment to qualify and maintain aircrew capabilities, preserve readiness, and ultimately achieve our national objectives. Failure to create the minimum lateral airspace for 113th WG missions will result in training shortfalls and negatively impact combat readiness and pilot safety.

## **PROPOSED ACTION**

Laterally and vertically expand the existing Evers MOA, and segregate it into Evers Low, Evers East, Evers North, Evers Center, and Evers South MOAs. Additionally, create three ATCAAs directly over the Evers North, Center, and South MOAs, and

name these ATCAAs Diesel North, Diesel Center, and Diesel South.



**Aeronautical impact:** Participation with Washington, D.C. ARTCC was instrumental in designing the proposed changes to Evers MOA. The MOA was de-conflicted with Standard Terminal Arrivals (STARs), Victor Routes, and approach corridors for underlying airports. Additionally, all proposed airspace falls within the scope of a single Washington, D.C. ARTCC sector, enabling single frequency communications. In the event that the EVERS MOA airspace will be needed by ARTCC, a Letter of Agreement with Washington, D.C. ARTCC will specify options the controllers can use to curtail military operations in order to allow joint use of the airspace.

**2. Joint use.** The Airspace will be available for joint use. The FAA joint-use policy per FAAO 7400.2J para 21-1-8 will be recognized. A Letter of Agreement with Washington, D.C. ARTCC will outline procedures for scheduling, activating, and de-activating the airspace.

**d. Air Traffic Control Assigned Airspace (ATCAA).** Yes, the proposal includes expanding the airspace to include 3 ATCAAs.

**Diesel North ATCAA, WV**

**Boundaries.** Beginning at lat. 38°08'13"N, long. 79°43'13"W; to lat. 37°46'49"N, long. 79°49'14"W; to lat. 37°49'51"N, long. 80°44'02"W; to lat. 38°11'36"N, long. 80°38'15"W; to the point of beginning.

**Altitudes.** FL180 to FL230

**Times of use.** Sunrise to Sunset, Daily; other times by NOTAM

**Expected usage.** 2 hours per day; 260 days per year

**Controlling agency.** FAA, Washington, D.C. ARTCC

**Using agency.** D.C. Air National Guard, 113<sup>th</sup> Wing, JB Andrews, MD

**Diesel Center ATCAA. WV**

**Boundaries.** Beginning at lat. 38°45'14"N, long. 79°32'49"W; to lat. 38°08'13"N, long. 79°43'13"W; to lat. 38°11'36"N, long. 80°38'15"W; to lat. 38°47'14"N, long. 80°28'50"W; to the point of beginning.

**Altitudes.** FL180 to FL230

**Times of use.** Sunrise to Sunset, Daily; other times by NOTAM

**Expected usage.** 2 hours per day; 260 days per year

**Controlling agency.** FAA, Washington, D.C. ARTCC

**Using agency.** D.C. Air National Guard, 113<sup>th</sup> Wing, JB Andrews, MD

**Diesel South ATCAA. WV**

**Boundaries.** Beginning at lat. 39°05'19"N, long. 79°27'09"W; to lat. 38°45'14"N, long. 79°32'49"W; to lat. 38°47'14"N, long. 80°28'50"W; to lat. 39°07'42"N, long. 80°23'25"W; to the point of beginning.

**Altitudes.** FL180 to FL230

**Times of use.** Sunrise to Sunset, Daily; other times by NOTAM

**Expected usage.** 2 hours per day; 260 days per year

**Controlling agency.**

FAA, Washington, D.C. ARTCC

**Using agency.**

D.C. Air National Guard, 113<sup>th</sup> Wing,  
JB Andrews, MD

**e. Activities.**

**1. For areas that will contain aircraft operations.**

**(a) Average number and types of aircraft that will use the area.**

|         |                                                  |
|---------|--------------------------------------------------|
| F-16C:  | 3 aircraft, 2 sorties per day, 10 days per month |
| A-10C:  | 2 aircraft, 1 sortie per day, 3 days per month   |
| F-22:   | 3 aircraft, 1 sortie per day, 10 days per month  |
| T-38A:  | 3 aircraft, 1 sortie per day, 5 days per month   |
| F-15E:  | 4 aircraft, 2 sorties per day, 12 days per month |
| C-17:   | 1 aircraft, 1 sortie per day, 2 days per month   |
| C-130:  | 2 aircraft, 1 sortie per day, 4 days per month   |
| KC-135: | 1 aircraft, 1 sortie per day, 4 days per month   |

**(b) Specific Activities and the maximum altitudes required for each type of activity planned.**

Tactical combat maneuvering by fighter and transport category fixed wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight. Maximum altitude FL230.

Tactical Intercepts (TI). Maximum altitude FL230

Air Combat Maneuvering (ACM). Maximum altitude FL230

Basic Surface Attack (BSA). Maximum altitude FL230

Offensive Counter Air (OCA-AO). Maximum altitude FL230

Air Combat Tactics (ACT). Maximum altitude FL230

Non-standard formation flights. Maximum altitude FL230

Close Air Support (CAS). Maximum altitude FL230

Surface Attack Tactics (SAT). Maximum altitude FL230

Forward Airstrike Control – Airborne (FAC-A). Maximum altitude FL230

Combat Search and Rescue (CSAR). Maximum altitude FL230

Air Interdiction (AI). Maximum altitude FL230

Opposed Surface Attack Tactics (OPSAT). Maximum altitude FL230

Defensive Counter Air (DCA). Maximum altitude FL230

Large Force Employment (LFE) combat training. Maximum altitude FL230  
Basic Fighter Maneuvering (BFM). Maximum altitude FL230  
Air-to-air Refueling. Maximum altitude FL230

**(c) Supersonic Flight.** N/A. Supersonic flight operations will be prohibited in the proposed airspace.

**(d) Firing, Ordnance Delivery Runs, and Weapons Impact areas.** N/A. Weapons, Chaff, Flairs and Ordnance will not be used in EVERS MOA or DIESEL ATCAA.

**2. Surface-to-surface or surface-to-air weapons firing.** N/A.

**f. Environmental and land use information.**

1. Mr. Ben Mains  
113th Environmental Protection Specialist  
[benjamin.r.mains.nfg@mail.mil](mailto:benjamin.r.mains.nfg@mail.mil)  
(240) 857-0434
2. 113th Wing agrees to provide reasonable and timely aerial access to the underlying public and private land. This access will be coordinated via a proposed direct communication line with the 113th Wing Airfield Management Office.
3. Not applicable.

**g. Communications and Radar.**

1. Ground based radar and radio communications will be used by Washington, D.C. ARTCC to monitor the airspace.
2. N/A.

**h. Safety considerations.**

1. Activity will be contained within the MOA using geographic references, inertial navigation, global positioning systems and TACAN radial/DME references. In addition, the 113th Wing uses a Situational Awareness DATA Link (SADL) display in which airspace boundaries are depicted and area borders easily defined.
2. Malfunctions will be handled in accordance with aircraft technical orders, Service Directives, and FARs.
3. The employment of ordnance, flares, and chaff will not be authorized.

**4.** Eye-safe laser operations will be conducted within boundaries of the EVERS MOAs. The training laser beam does not actually emit energy and will not penetrate outside approved DoD boundaries.

**i. Coordination summary.**

National Guard Bureau/A3/3/6/10TA, Mr. Jamie Flanders, Airspace Manager  
Washington, D.C. ARTCC, Mr. Thomas Hall, Air Traffic Control  
Washington, D.C. ARTCC, Mr. Dan Glancey, Airspace & Procedures  
JB Andrews, MSgt Sheila King, Airspace Manager  
AFREP, Lt Col Vilachack Ladara  
ATREP, Mr. Derreck Boring

**j. Area Chart**

**k. Environmental Documents.** All applicable environmental documents will be provided separately.

**l. Graphic Notice Information. N / A**

**m. Other**

**Appendix D**  
**Final Noise Study Report**



**FINAL**

**Noise Study for  
Modification and Addition of  
Evers Military Operations Airspace**

District of Columbia Air National Guard  
113th Wing, Joint Base Andrews, MD

2 April 2020



**Guarding America - Defending Freedom**



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# TABLE OF CONTENTS

|                                                                          |           |
|--------------------------------------------------------------------------|-----------|
| <b>1.0 INTRODUCTION.....</b>                                             | <b>4</b>  |
| 1.1 LOCATION AND BACKGROUND.....                                         | 4         |
| <b>2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES .....</b>         | <b>6</b>  |
| <b>2.1 SELECTION CRITERIA.....</b>                                       | <b>6</b>  |
| <b>2.2 PROPOSED ACTION .....</b>                                         | <b>6</b>  |
| 2.2.1 <i>Evers North MOA and Evers South MOA.....</i>                    | <i>12</i> |
| 2.2.2 <i>Evers Center MOA.....</i>                                       | <i>12</i> |
| 2.2.3 <i>Evers Low MOA.....</i>                                          | <i>12</i> |
| 2.2.4 <i>Evers East MOA .....</i>                                        | <i>12</i> |
| 2.2.5 <i>Diesel ATCAAs (North, Center and South).....</i>                | <i>12</i> |
| 2.2.6 <i>Aircraft Operations.....</i>                                    | <i>13</i> |
| 2.2.6.1 <i>Other Expected Users .....</i>                                | <i>13</i> |
| 2.2.6.2 <i>Air Operations .....</i>                                      | <i>13</i> |
| <b>3.0 NOISE MODELING.....</b>                                           | <b>15</b> |
| 3.1 NOISE OVERVIEW .....                                                 | 15        |
| 3.2 METHODOLOGY.....                                                     | 16        |
| 3.3 AFFECTED ENVIRONMENT .....                                           | 18        |
| 3.3.1 <i>Population.....</i>                                             | <i>18</i> |
| 3.3.2 <i>Background Noise Levels.....</i>                                | <i>18</i> |
| 3.3.3 <i>Existing Overall Aircraft Noise .....</i>                       | <i>20</i> |
| 3.3.4 <i>Existing Individual Overflight Noise .....</i>                  | <i>22</i> |
| 3.4 SIGNIFICANCE THRESHOLD .....                                         | 24        |
| 3.5 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION.....               | 24        |
| 3.5.1 <i>Overall Aircraft Noise .....</i>                                | <i>25</i> |
| <b>4.0 REFERENCES.....</b>                                               | <b>30</b> |
| <b>5.0 LIST OF PREPARERS .....</b>                                       | <b>32</b> |
| <b>APPENDIX A - AIR OPERATIONAL DATA .....</b>                           | <b>1</b>  |
| <b>APPENDIX B - US AIR FORCE LAND USE COMPATIBILITY GUIDELINES .....</b> | <b>48</b> |

## LIST OF TABLES

|                                                                                        |    |
|----------------------------------------------------------------------------------------|----|
| TABLE 2-1. VERTICAL LIMITS AND CHARTED TIMES OF USE OF PROPOSED AIRSPACE .....         | 11 |
| TABLE 2-2. COORDINATES OF THE PROPOSED AIRSPACE .....                                  | 11 |
| TABLE 2-3. AIR OPERATIONS - EXISTING AND PROPOSED ACTION.....                          | 14 |
| TABLE 3-1. RELATIONSHIP BETWEEN ANNOYANCE AND DNL.....                                 | 16 |
| TABLE 3-2. ESTIMATED POPULATION BENEATH THE PROPOSED EVERS SUA COMPLEX.....            | 18 |
| TABLE 3-3. ESTIMATED BACKGROUND SOUND LEVELS .....                                     | 20 |
| TABLE 3-4. OVERALL SOUND LEVELS AND PERCENT HIGHLY ANNOYED - EXISTING CONDITIONS ..... | 20 |
| TABLE 3-5. ESTIMATED SOUND LEVELS FOR INDIVIDUAL OVERFLIGHTS.....                      | 22 |
| TABLE 3-6. LATERAL DISTANCE FROM FLIGHT TRACK FOR SPEECH INTERFERENCE .....            | 24 |
| TABLE 3-7. OVERALL SOUND LEVELS AND PERCENT HIGHLY ANNOYED - PROPOSED ACTION .....     | 25 |

## LIST OF FIGURES

|                                                                                     |    |
|-------------------------------------------------------------------------------------|----|
| FIGURE 2-1. PROPOSED EXPANSION OF THE EVERS MOA .....                               | 7  |
| FIGURE 2-2. PROPOSED AIR TRAFFIC CONTROLLED ASSIGNED AIRSPACES .....                | 8  |
| FIGURE 2-3. CROSS-SECTION OF PROPOSED MODIFICATION AND ADDITION OF EVERS MOA.....   | 10 |
| FIGURE 3-1. POPULATION DENSITY .....                                                | 19 |
| FIGURE 3-2. OVERALL SOUND LEVELS AND PERCENT HIGHLY ANNOYED - EXISTING .....        | 21 |
| FIGURE 3-4. OVERALL SOUND LEVELS AND PERCENT HIGHLY ANNOYED - PROPOSED ACTION ..... | 26 |
| FIGURE 3-5. CHANGE IN OVERALL SOUND LEVELS - PROPOSED ACTION VS. EXISTING .....     | 27 |

## ACRONYMS AND ABBREVIATIONS

|            |                                               |
|------------|-----------------------------------------------|
| AGL        | above ground level                            |
| AFI        | Air Force Instruction                         |
| ANG        | Air National Guard                            |
| dB         | decibels                                      |
| dBA        | A-weighted decibels                           |
| DNL        | day-night sound level                         |
| DOD        | Department of Defense                         |
| EA         | environmental assessment                      |
| FAA        | Federal Aviation Administration               |
| ft         | feet                                          |
| FL         | flight level                                  |
| IFR        | instrument flight rule                        |
| %HA        | percent highly annoyed                        |
| $L_{dnmr}$ | onset-adjusted monthly DNL                    |
| $L_{eq}$   | equivalent continuous sound level             |
| $L_{max}$  | maximum sound level                           |
| MSL        | mean sea level                                |
| MOA        | military operations area                      |
| MTR        | military training route                       |
| NEPA       | National Environmental Policy Act             |
| NGB        | National Guard Bureau                         |
| NAS        | national airspace system                      |
| NM         | nautical miles                                |
| NOTAM      | notice to airmen                              |
| OSHA       | Occupational Safety & Health Administration   |
| SEL        | sound exposure level                          |
| SUA        | special use airspace                          |
| USAF       | United States Air Force                       |
| USEPA      | United States Environmental Protection Agency |

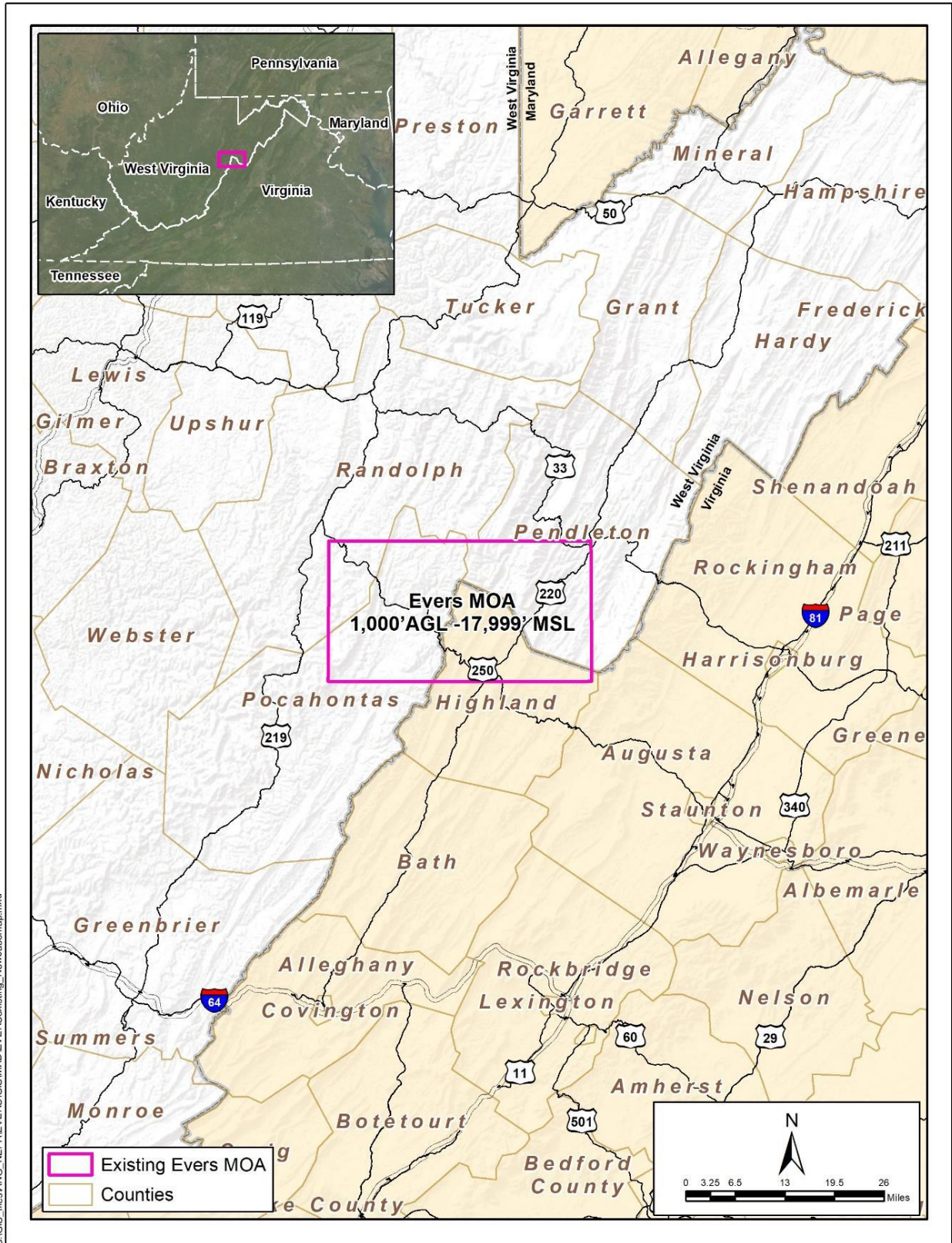
## **1.0 INTRODUCTION**

This Noise Assessment Report is in support of the Environmental Assessment (EA) for the Modification and Addition of Evers Military Operations Airspace. Specifically, this study includes noise modeling to identify the noise exposure and associated effects from the operations conducted in the SUA complex. This report includes modeling aircraft-generated noise under the proposed SUAs with and without the Proposed Action. It provides existing and future overall noise levels, as well as noise levels for individual overflights.

### **1.1 LOCATION AND BACKGROUND**

The 113th Wing, District of Columbia Air National Guard is located at Joint Base Andrews, Maryland. The 113 WG is the air component of the District of Columbia National Guard and is the only federal National Guard unit. The 113 WG's mission is to maintain a well-trained and well-equipped F-16C squadron available for prompt mobilization during war and to aid Allies during emergencies. The federal mission during peacetime has the combat-ready unit assigned to the Air Combat Command (ACC) to carry out missions compatible with training, mobilization readiness, humanitarian and contingency operations such as Operation Enduring Freedom and Inherent Resolve. The state mission includes defending the National Capital Region, providing support to the District of Columbia and local communities, providing emergency relief support, and providing support for other contingency operations.

The existing Evers MOA is above West Virginia and Virginia (Figure 1-1). Approximately half of the MOA is above Highland County, Virginia and the remainder of the MOA is in Pocahontas and Randolph counties, West Virginia. The airspace begins at 1,000 feet (ft) above ground level (AGL) and continues to 17,999 ft above mean sea level (MSL). The proposed Evers MOA complex would be an expansion and modification of the existing airspace and is described in detail on Chapter 2.



**Figure 1-1. Existing Evers MOA**

## **2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

This chapter presents a detailed description of the Proposed Action, including the requirement to provide an integrated, year-round, realistic training environment in accordance with F-16C RAP and AFI 11-2F-16V1 training requirements. The details of the Proposed Action form the basis for the analyses of potential environmental effects presented in Chapter 3 of the EA. This chapter includes a discussion of alternatives considered but dismissed from further analysis, as well as the No Action Alternative. No viable alternatives to the Proposed Action were identified.

### **2.1 SELECTION CRITERIA**

The current airspace limitations of the Evers MOA impede efficient military aircraft exercises. To allow for the required exercises, the proposed airspace must be of sufficient, contiguous size and altitude to train and prepare military aircrews for current and future conflicts in a realistic training environment. In addition, the airspace must be and within F-16C average sortie duration range to accomplish 113 WG training requirements. The selection criteria are summarized below.

- Must be within a reasonable distance (200 miles) of the primary end-user
- Must provide an adequate size and shape for both air-to-air and air-to-ground training (i.e. 40 x 80 NM)
- Must have adequate availability to the primary end-user
- Must be controlled by a single ARTCC

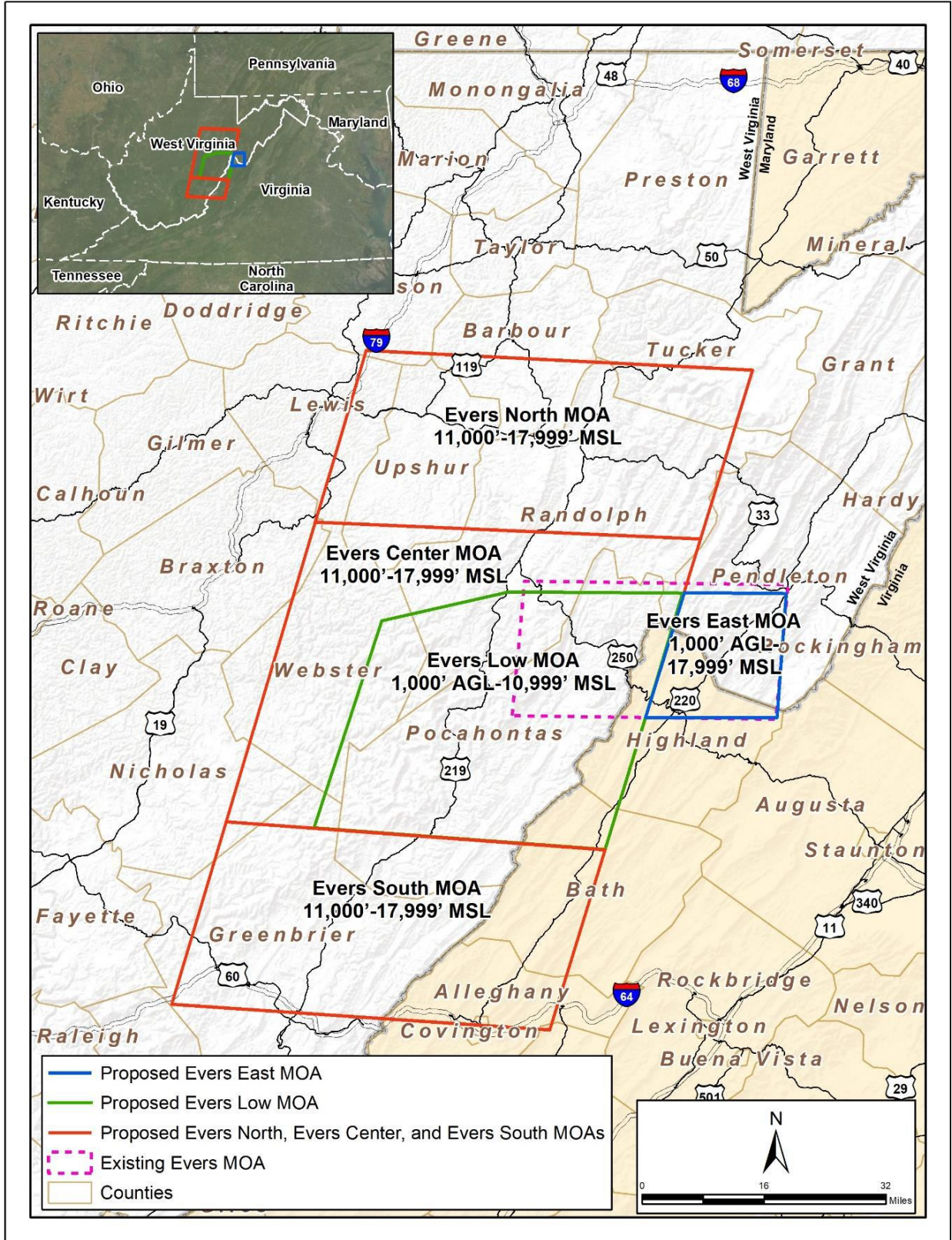
Without airspace that meets these selection criteria, exercising units would be severely constrained while trying to achieve their required training goals. Failure to create airspace of suitable dimensions will result in training shortfalls and negatively impact combat readiness and pilot safety.

### **2.2 PROPOSED ACTION**

The proposed Evers MOA expansion and modification is in West Virginia and Virginia (Figures 2-1 and 2-2). The Proposed Action would expand beyond the lateral footprint of the current Evers MOA, subdivide this new airspace volume into five portions that increase Washington ARTCC's ability to accommodate civil operations, and establish three ATCAAs above the MOAs (Figure 2-2). The components of the Proposed Action include:

- Delineate new airspace
  - Evers North, Center and South MOAs (11,000 ft – 17,999 ft above MSL)
  - Evers Low MOA (1,000 ft AGL – 10,999 ft above MSL)
  - Evers East MOA (1,000 ft AGL to 17,999 ft above MSL)
- Create three ATCAAs
  - Diesel North, Center and South ATCAA (Flight Level [FL]180 – FL230 MSL)





**Figure 2-1. Proposed Expansion of the Evers MOA**

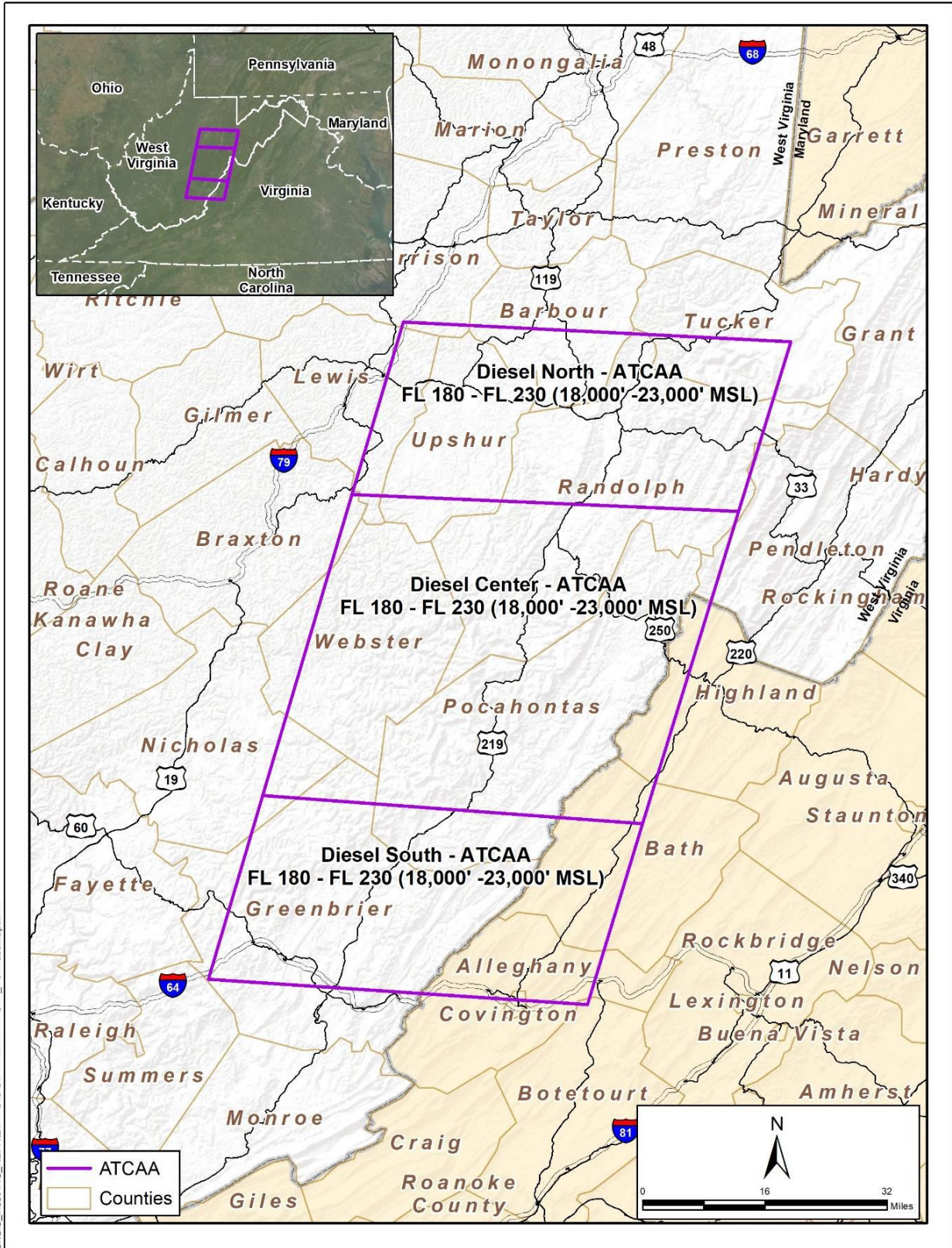


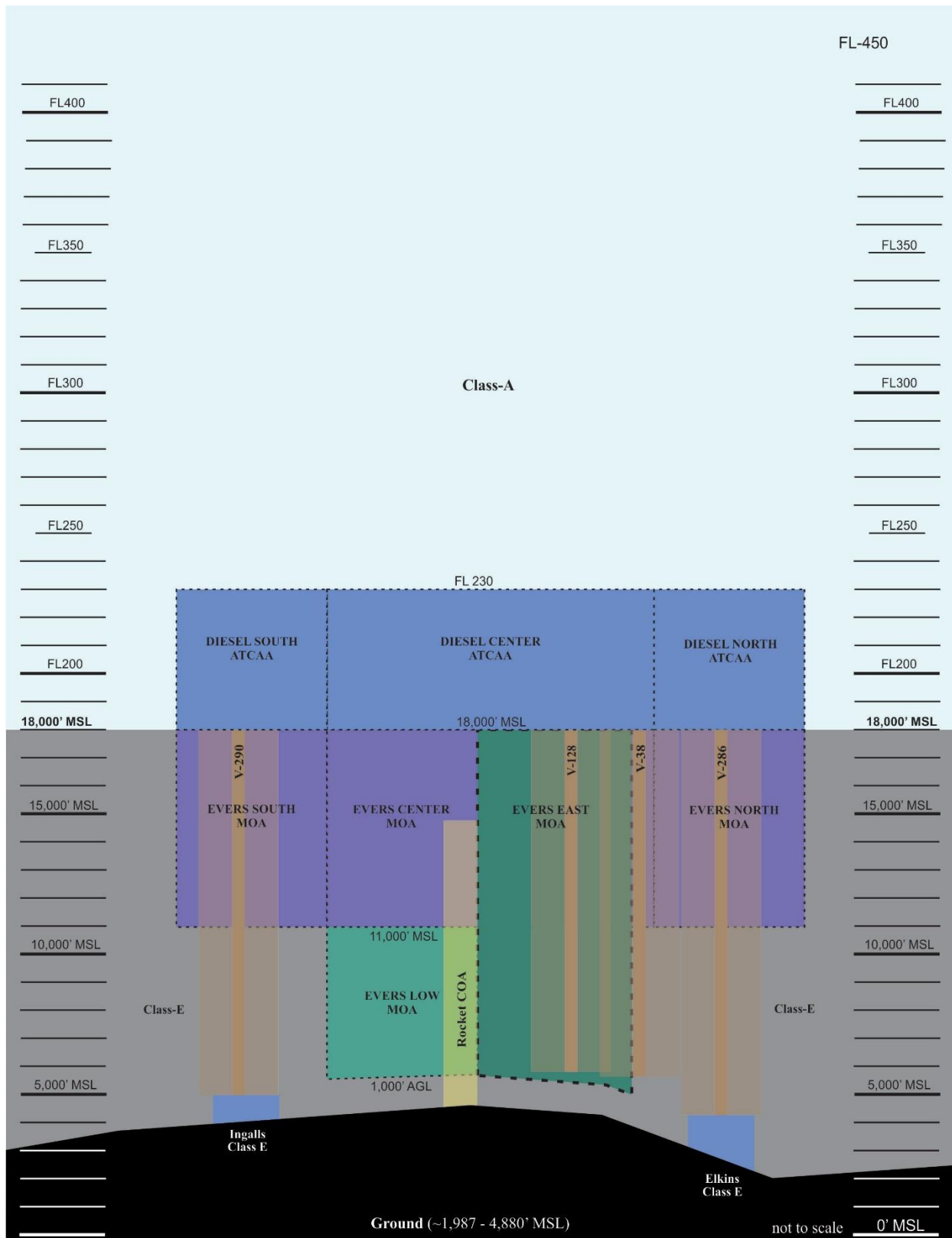
Figure 2-2. Proposed Air Traffic Controlled Assigned Airspaces

The proposed Evers MOA complex would occur over all or parts of the following West Virginia counties: Harrison, Barbour, Tucker, Pendleton, Lewis, Upshur, Randolph, Braxton, Webster, Pocahontas, Nicholas, and Greenbrier. In addition, parts of the following Virginia counties would underlie the proposed expansion and modification: Highland, Alleghany, Bath, and Botetourt. The landscape of West Virginia is rugged, as the Appalachian Mountain system passes from north to south through the state. The elevation within the proposed Evers MOA complex is approximately 2,100 ft above MSL in the lowest valleys to the highest point (Spruce Knob in Pendleton County) in West Virginia at 4,863 ft above MSL. Therefore, the proposed low airspace would rise and fall according to surface elevation to remain at least 1,000 ft AGL (i.e., approximately 3,100 ft above MSL at the lowest point).

The proposed SUA complex is 80 NM north-south and 40 NM east west. The lowest portions of the proposed SUA complex would begin at 1,000 ft AGL and continue to 17,999 ft above MSL. The proposed SUA complex would include three ATCAAs above the proposed MOAs extending up to FL 230 (23,000 ft AGL) (Figure 2-3).

Under the Proposed Action, there would be no infrastructure changes, no ground-disturbing activities, no supersonic flight activities, no release of chaff and flares, no weapons firing, and no ordnance deployment within the proposed airspace.

The proposed expansion and modification of the Evers MOA would create for USAF aircraft a tactically diverse and valuable “over land” training environment on the eastern seaboard. The proposed shape and depth would allow fighter and cargo units to simulate weapons and stores delivery at both low and medium altitudes while targeting and being targeted, at a realistic range, from surface and air threats. The proposed expansion was conceived and built in coordination with FAA representatives to minimize civilian air traffic encroachment and conflict while maintaining the boundaries within a single air traffic controlling center. Through coordination with the Washington ARTCC, the subsections of the proposed MOAs and ATCAAs could be activated or deactivated as needed and distinguishable for aircrew adherence.



**Figure 2-3. Cross-Section of Proposed Modification and Addition of Evers MOA**

Table 2-1 provides the vertical limits and the charted times of use of the proposed SUA components. Table 2-2 outlines the lateral coordinates of the proposed airspace.

**Table 2-1. Vertical Limits and Chartist Times of Use of Proposed Airspace**

| Airspace            | Low-Level<br>(1,000' AGL –<br>10,999' MSL) | Mid-Level<br>(11,000' –<br>17,999' MSL) | ATCAA Level<br>(FL180-FL230) | Charted Use                |
|---------------------|--------------------------------------------|-----------------------------------------|------------------------------|----------------------------|
| Evers North MOA     |                                            | •                                       |                              | Sunrise to Sunset<br>Daily |
| Evers Center MOA    |                                            | •                                       |                              |                            |
| Evers South MOA     |                                            | •                                       |                              | Other times by<br>NOTAM    |
| Evers Low MOA       | •                                          |                                         |                              |                            |
| Evers East MOA      | •                                          | •                                       |                              |                            |
| Diesel North ATCAA  |                                            |                                         | •                            |                            |
| Diesel Center ATCAA |                                            |                                         | •                            |                            |
| Diesel South ATCAA  |                                            |                                         | •                            |                            |

**Table 2-2. Coordinates of the Proposed Airspace**

|                         |                            |
|-------------------------|----------------------------|
| <b>Evers North MOA</b>  | <b>Diesel North ATCAA</b>  |
| N39°05'00" W80°18'00"   | N39°05'00" W80°18'00"      |
| N39°04'00" W79°26'00"   | N39°04'00" W79°26'00"      |
| N38°44'27" W79°31'43"   | N38°44'27" W79°31'43"      |
| N38°45'29" W80°23'31"   | N38°45'29" W80°23'31"      |
| <b>Evers Center MOA</b> | <b>Diesel Center ATCAA</b> |
| N38°45'29" W80°23'31"   | N38°45'29" W80°23'31"      |
| N38°44'27" W79°31'43"   | N38°44'27" W79°31'43"      |
| N38°05'31" W79°43'15"   | N38°05'31" W79°43'15"      |
| N38°06'27" W80°34'28"   | N38°06'27" W80°34'28"      |
| <b>Evers South MOA</b>  | <b>Diesel South ATCAA</b>  |
| N38°06'27" W80°34'28"   | N38°06'27" W80°34'28"      |
| N38°05'31" W79°43'15"   | N38°05'31" W79°43'15"      |
| N37°46'00" W79°49'00"   | N37°46'00" W79°49'00"      |
| N37°47'00" W80°40'00"   | N37°47'00" W80°40'00"      |
| <b>Evers Low MOA</b>    | <b>Evers East MOA</b>      |
| N38°36'06" W80°12'04"   | N38°38'43" W79°33'25"      |
| N38°38'34" W79°59'29"   | N38°38'48" W79°19'57"      |
| N38°38'43" W79°33'25"   | N38°23'58" W79°19'50"      |
| N38°05'31" W79°43'15"   | N38°23'34" W79°37'54"      |
| N38°06'10" W80°21'49"   |                            |

### **2.2.1 Evers North MOA and Evers South MOA**

Evers North and South MOAs are 25 x 40 NM areas on either side of Evers Center MOA. Each area can be combined with Evers Center to enable a 55 NM intercept range for air-to-air training or used individually as a 25 NM holding/marshalling area (Figure 2-1). The Evers North and South MOAs would begin at 11,000 ft above MSL and extend to 17,999 ft above MSL. The proposed North and South MOAs are deconflicted with the FAA air traffic control routes in a northeasterly-southeasterly direction with 20 NM length x 40 NM width dimensions. The proposed vertical limits, times-of-use, and charted coordinates of the Evers North and Evers South MOA are provided in Tables 2-1 and 2-2.

### **2.2.2 Evers Center MOA**

The Evers Center MOA would have the same northeasterly-southeasterly orientation as the Evers North and South MOAs for contiguous airspace and have the same vertical limits of 11,000 ft above MSL to 17,999 ft above MSL (Figure 2-1). The dimensions would be 40 x 40 NM. The proposed vertical limits, times-of-use, and charted coordinates of the Evers North and Evers Center MOA are provided in Tables 2-1 and 2-2.

### **2.2.3 Evers Low MOA**

The proposed Evers Low MOA would be under the proposed Evers Center MOA, but with reduced north and west boundaries such that north-south and east-west transit corridors remain and allow traffic flow departing or recovering from civilian airfields (Figure 2-1). The Evers Low MOA would be geographically relocated to isolate low altitude training over sparsely populated areas and offset from civilian air traffic. The northern boundary and northeast corner of the proposed Evers Low MOA would be relocated to provide a 3-mile buffer from the southern boundary of the Clarksburg Airport Radar Approach Control area. The buffer would eliminate the need for redundant control coordination between Washington ARTCC and Clarksburg Airport. The proposed vertical limits, times-of-use, and charted coordinates of the Evers Low MOA are provided in Tables 2-1 and 2-2.

### **2.2.4 Evers East MOA**

The proposed Evers East MOA would be approximately half the size in lateral dimensions of the existing Evers MOA (Figure 2-1). Establishment of the Evers East MOA would not in-and-of-itself constitute a change to the vertical or lateral boundaries when compared to the existing Evers MOA. The proposed vertical limits, times-of-use, and charted coordinates of the Evers East MOA are provided in Tables 2-1 and 2-2.

### **2.2.5 Diesel ATCAAs (North, Center and South)**

The proposed Diesel North, Center, and South ATCAAs would overlay the lateral boundaries of the Evers North, Center, and South MOAs (Figure 2-1), beginning at 18,000 ft above MSL and

extending to 23,000 ft above MSL. According to FAA coordination, the proposed ATCAAs would be altitude de-conflicted with terminal arrivals while providing maximum weapon simulations at the designated altitudes. The proposed vertical limits, times-of-use, and charted coordinates of the Diesel ATCAAs are provided in Tables 2-1 and 2-2.

## **2.2.6 Aircraft Operations**

The 121st Fighter Squadron (FS) operates the F-16C which is a multi-role fighter platform currently in service worldwide. The F-16C is responsible for Defensive Counter Air (DCA), Offensive Counter Air – Attack Operations (OCA-AO), Combat Search and Rescue (CSAR), Close Air Support (CAS), Forward Air Control (FAC-A), and Air Interdiction (AI). Operational activities would consist of typical MOA flight operations to include tactical combat maneuvering with abrupt, unpredictable changes in altitude and direction of flight.

### **2.2.6.1 Other Expected Users**

Other expected users of the Evers MOA complex include 104 FS (A-10C), 27 FS (F-22), 71st Fighter Training Squadron (T-38A), 333 FS (F-15E), 167th Airlift Wing (AW, C-17), and 130 AW (C-130). Military (Navy) users would conduct exercises with F-16, A-10C, F-22, T-38A, F-15E, C-17, and C-130 aircraft. Other users may conduct exercises with FA-18 aircraft.

The 104 FS's state mission is to maintain a well-trained and well-equipped A-10C squadron available for prompt mobilization during war and also provide assistance to Allies during emergencies; its federal mission is during peacetime has the combat-ready unit assigned to ACC. The 27 FS's mission is to rapidly deploy combat ready F-22 aircraft and airmen to perform air dominance and air defense missions worldwide in support of all United States operations. The 71st Fighter Training Squadron's mission is to provide professional adversary air (T-38A) support to enhance the 1st Fighter Wing's F-22 combat capability. The 333 FS is one of six F-15E squadrons in the U.S. Air Force, its mission is to be prepared to deploy anywhere in the world on short notice and deliver an array of air-to-ground weapons. The 167 AW operates C-17 Globemaster III aircraft to deliver people and equipment to locations around the globe. The 130 AW's mission is to deploy a force capable of conducting effective and sustained C-130 combat airlift operations in support in support of the United States Air Force and the State of West Virginia.

### **2.2.6.2 Air Operations**

The overall aircraft utilization within the proposed airspace is presented in Table 2-3. The data are grouped into low level (below 11,000 ft above MSL) and mid-level (11,000 to 17,999 ft above MSL) to represent the limits of the MOA. High-level (above 17,999 ft MSL) represents ATCAA use. The Proposed Action would (1) be within 200 miles of the primary end-user, (2) establish a 40 x 80 NM airspace, (3) provide adequate availability to the primary end-user, and (4) be controlled by a single ARTCC. The Proposed Action fully meets the purpose and need; therefore, it has been carried forward for detailed analysis in the EA.

**Table 2-3. Air Operations - Existing and Proposed Action**

| Aircraft                   | Annual Usage        |                             |                         |                                           | Individual Mission Parameters          |                                   |              |               |
|----------------------------|---------------------|-----------------------------|-------------------------|-------------------------------------------|----------------------------------------|-----------------------------------|--------------|---------------|
|                            | Time in SUA (hours) | Number of Training Missions | Single Aircraft Sorties | Percentage of Operations in Busiest Month | Average Number of Aircraft Per Mission | Time at Altitude (minutes/sortie) |              |               |
|                            |                     |                             |                         |                                           |                                        | Low-Altitude                      | Mid-Altitude | High-Altitude |
| <b>Existing Operations</b> |                     |                             |                         |                                           |                                        |                                   |              |               |
| <b>F-16</b>                | 109                 | 194                         | 485                     | 20%                                       | 2.5                                    | 16.9                              | 16.9         | -             |
| <b>A-10C</b>               | 40                  | 52                          | 192                     | 37%                                       | 2.0                                    | 15.0                              | 15.0         | -             |
| <b>F-22</b>                | 40                  | 119                         | 357                     | 20%                                       | 3.0                                    | 3.0                               | 17.0         | -             |
| <b>T-38A</b>               | 36                  | 63                          | 189                     | 20%                                       | 3.0                                    | 5.1                               | 28.9         | -             |
| <b>F-15E</b>               | 21                  | 41                          | 82                      | 15%                                       | 4.0                                    | 15.0                              | 5.0          | -             |
| <b>Total/Average</b>       | <b>245</b>          | <b>469</b>                  | <b>1,305</b>            |                                           | <b>2.5</b>                             | <b>11.0</b>                       | <b>16.6</b>  | <b>-</b>      |
| <b>Proposed Operations</b> |                     |                             |                         |                                           |                                        |                                   |              |               |
| <b>F-16</b>                | 136                 | 243                         | 606                     | 20%                                       | 2.5                                    | 10.1                              | 10.1         | 13.5          |
| <b>A-10C</b>               | 21                  | 41                          | 82                      | 37%                                       | 2.0                                    | 11.3                              | 9.4          | 9.4           |
| <b>F-22</b>                | 40                  | 119                         | 357                     | 20%                                       | 3.0                                    | 3.0                               | 12.0         | 5.0           |
| <b>T-38A</b>               | 36                  | 63                          | 189                     | 20%                                       | 3.0                                    | 5.1                               | 20.4         | 8.5           |
| <b>F-15E</b>               | 44                  | 120                         | 480                     | 15%                                       | 4.0                                    | 13.2                              | 13.2         | 17.6          |
| <b>C-17</b>                | 25                  | 25                          | 25                      | 8%                                        | 1.0                                    | 15.0                              | 15.0         | 30.0          |
| <b>C-130</b>               | 20                  | 40                          | 80                      | 15%                                       | 2.0                                    | 22.5                              | 6.0          | 1.5           |
| <b>Total/Average</b>       | <b>365</b>          | <b>651</b>                  | <b>1,819</b>            |                                           | <b>2.5</b>                             | <b>11.4</b>                       | <b>12.3</b>  | <b>12.2</b>   |

Low Altitude = 1,000' AGL – 10,999' MSL. Mid-Altitude = 11,000' – 17,999' MSL. High Altitude = FL180 – FL230.



## 3.0 NOISE MODELING

### 3.1 NOISE OVERVIEW

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise is often generated by activities essential to a community's quality of life, such as aircraft operations, construction, or vehicular traffic.

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz are used to quantify sound frequency. The human ear responds differently to different frequencies. "A-weighting", measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans. The sound pressure level noise metric describes steady noise levels, although few noises are, in fact, constant; therefore, additional noise metrics have been developed to describe noise including:

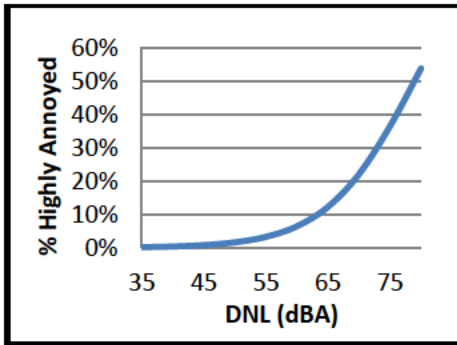
- Maximum Sound Level ( $L_{\max}$ ) –  $L_{\max}$  is the maximum sound level of an acoustic event in decibels (e.g. when an aircraft is directly overhead).
- Equivalent Sound Level ( $L_{\text{eq}}$ ) -  $L_{\text{eq}}$  is the average sound level in decibels.
- Sound Exposure Level (SEL) – SEL is a measure of the total energy of an acoustic event. It represents the level of a one-second long constant sound that would generate the same energy as the actual time-varying noise event such as an aircraft overflight. SEL provides a measure of the net effect of a single acoustic event, but it does not directly represent the sound level at any given time.
- Day-night Sound Level (DNL) – DNL is the average sound energy in a 24-hour period with penalty added to the nighttime levels. Because of the potential to be particularly intrusive, noise events occurring between 10:00 p.m. and 7:00 a.m. are assessed a 10 dB penalty when calculating DNL. DNL is a useful descriptor for aircraft noise because: (1) it averages ongoing yet intermittent noise, and (2) it measures total sound energy over a 24-hour period. DNL provides a measure of the overall acoustical environment, but as with SEL, it does not directly represent the sound level at any given time.
- Onset-Adjusted Monthly DNL ( $L_{\text{dnmr}}$ ) is the average sound energy in a 24-hour period with a 10 dB penalty added to the nighttime levels, and up-to an additional 11 dB penalty for acoustical events with onset rates greater than 15 dB per second, such as high-speed jets operating near the ground.  $L_{\text{dnmr}}$  is assessed for the month with the highest number of

events, and as with DNL and SEL, it does not directly represent the sound level at any given time. Because of the penalties for rapid onset,  $L_{dnmr}$  is always equal to or greater than DNL.

- **Percent Highly Annoyed (%HA).** The concept of long-term annoyance is used to account for all negative aspects of noise, including activity interference, including speech interference and sleep disturbance for nighttime activities, and is the basis for determining impacts due to aircraft noise associated with military and civilian aircraft operations. DNL or  $L_{dnmr}$  are highly correlated with and used to determine the %HA (Table 3-1). It is not possible to accurately predict the exact annoyance responses to aircraft noise exposure in any specific community and %HA is not designed to be used to determine exactly how many or which individuals may be annoyed by aircraft noise. Annoyance is reported as the change in the percent of population expected to be highly annoyed, and individuals or populations outlined as highly annoy within this EA are for reference purposes and to determine the potential for effects.

**Table 3-1. Relationship Between Annoyance and DNL**

| DNL/ $L_{dnmr}$ (dBA) | % Highly Annoyed |
|-----------------------|------------------|
| 35                    | 0.2%             |
| 40                    | 0.4%             |
| 45                    | 0.8%             |
| 50                    | 1.7%             |
| 55                    | 3.3%             |
| 60                    | 6.5%             |
| 65                    | 12.3%            |
| 70                    | 22.1%            |
| 75                    | 36.5%            |
| 80                    | 53.7%            |



Source: USAF 2016

### 3.2 METHODOLOGY

Baseline data for the Ever SUA Complex was collected during a site visit and personnel interviews in 2018. Air operational data for the proposed SUA Complex was provided by ANG operational personnel and checked for consistency with the traditional use of the existing airspace. The primary users of the proposed Evers SUA Complex would conduct exercises with F-15, A-10, F-16, C-17, C-130 and F-22 aircraft.

This noise analysis uses the MR\_NMAP (v3.0) as part of the NoiseMAP computer suite to predict noise levels (DNL) associated with aircraft operations beneath the proposed Bison SUA Complex (USAF 2016a). The parameters considered in the modeling included aircraft type, airspeed, power settings, aircraft operations, vertical training profiles, and the time spent within each airspace block. Notably, MR\_NMAP is the FAA- and DoD-Approved noise model for aircraft operations beneath special use airspace (USAF 2016b and FAA 2015).

$L_{dnmr}$  is the accepted noise metric for the ANG when determining noise levels from aircraft operations within SUA; however, DNL is the accepted noise metric for the FAA when determining noise levels from aircraft operations within SUA. MR\_NMAP was used to model the overall sound levels with both  $L_{dnmr}$  and DNL and both have been carried forwarded for use in this analysis to meet the requirements for both agencies.  $L_{dnmr}$  based on average busiest month aircraft operations with rapid onset penalty, whereas DNL is based on actual air operations without rapid onset penalty. Due to the onset penalty and the use of busiest month operations,  $L_{dnmr}$  always equals or exceeds DNL.

As the action encompassed an area that is larger than the immediate vicinity of an airport and includes actions above 3,000 feet AGL, the noise analysis includes a discussion on a change-in exposure and examines the change in noise levels as compared to population and demographic information from the U.S. Census blocks. The assessment includes depictions of (1) the population within areas exposed at or above DNL 65 dB, at or above DNL 60 but less than DNL 65 dB, and at or above DNL 45 dB but less than DNL 60 dB has been included in the discussion (FAA 2015)

Since the study encompasses a large geographical area, the effects are of medium intensity over a large area, as opposed to high intensity over a smaller area (e.g., noise near an air installation), change-of-exposure tables were developed to identify where noise will change by 1.5, 3, and 5 dBA (FAA 2015 FAA Order 1050.1F defines the thresholds for “significant” noise impacts and the thresholds for “reportable” noise impacts. To make certain the ANG is meeting FAA requirements, during the release and transmittal of the Draft EA, the ANG will "report" the greater than 5 dBA day-night Sound Level (DNL) increase to interested parties. In addition, the ANG will include a brief discussion to outline that, as described above, changes in overall noise levels would only introduce a minute incremental changes in the percent highly annoyed for areas under the proposed Evers Low MOA, as the noise in such areas would not normally solicit complaints and noise would be "essentially the least important of various factors" in these areas. In addition, the ANG will outline that the change in noise under the Proposed Action would decrease noise levels by 2.6 to 7.8 dBA DNL throughout 634 square miles (SM) and for individuals beneath the existing Evers MOA.

**Supplemental Metrics.** Both the USAF and the FAA encourage the inclusion of supplemental noise metrics in the assessment of noise from airspace actions (USAF 2016b and FAA 2015). It is understood that the sole use of DNL and land-use compatibility cannot accurately describe the nature and effects from aircraft noise. This is particularly true for airspace actions which have effects of medium intensity over large geographical areas, as opposed to high-intensity effects over a smaller area (e.g., noise near an airport or air installation). MR\_NMAP was used to determine the %HA for each SUA to account for all negative aspects of noise, including activity interference, including speech interference, and was used as an additional basis for determining impacts due to aircraft noise associated with the action. MR\_NMAP was also used to calculate  $L_{max}$  and SEL for individual overflights, and  $L_{dnmr}$  levels and the average daily number of events that would exceed 75 dBA ( $L_{max}$ ) beneath the proposed Bison SUA Complex. These metrics were used to assess the

potential for disturbance to speech and sleep, to determine if individual acoustic events would be loud enough to damage hearing or structures, and to provide the public with a better understanding of the specific effects. (USAF 2016b and FAA 2015)

### 3.3 AFFECTED ENVIRONMENT

#### 3.3.1 Population

U.S. Census block data was used to determine the population exposed to aircraft noise. Other than visual counts, this is the narrowest available geo-referenced data set available. The SUA complex is vast, covering 4,827 square miles, and the census block data was appropriate for this scale activity. Table 3-2 and Figure 3-1 outline the population under the proposed Evers SUA Complex. There are approximately 130,000 individuals and 72,000 households beneath the proposed SUA complex.

**Table 3-2. Estimated Population Beneath the Proposed Evers SUA Complex**

| Airspace                      | Population     | Households    | Area (square miles) |
|-------------------------------|----------------|---------------|---------------------|
| <b>Existing</b>               |                |               |                     |
| Evers Existing                | 6,990          | 5,214         | 634                 |
| <b>Proposed</b>               |                |               |                     |
| Evers Low MOA                 | 9,186          | 9,742         | 1,270               |
| Evers Center MOA <sup>a</sup> | 18,802         | 10,168        | 858                 |
| Evers South MOA               | 33,941         | 18,604        | 1,260               |
| Evers North MOA               | 64,180         | 30,550        | 1,178               |
| Evers East MOA                | 3,775          | 2,549         | 261                 |
| <b>Total<sup>b</sup></b>      | <b>129,884</b> | <b>71,613</b> | <b>4,827</b>        |

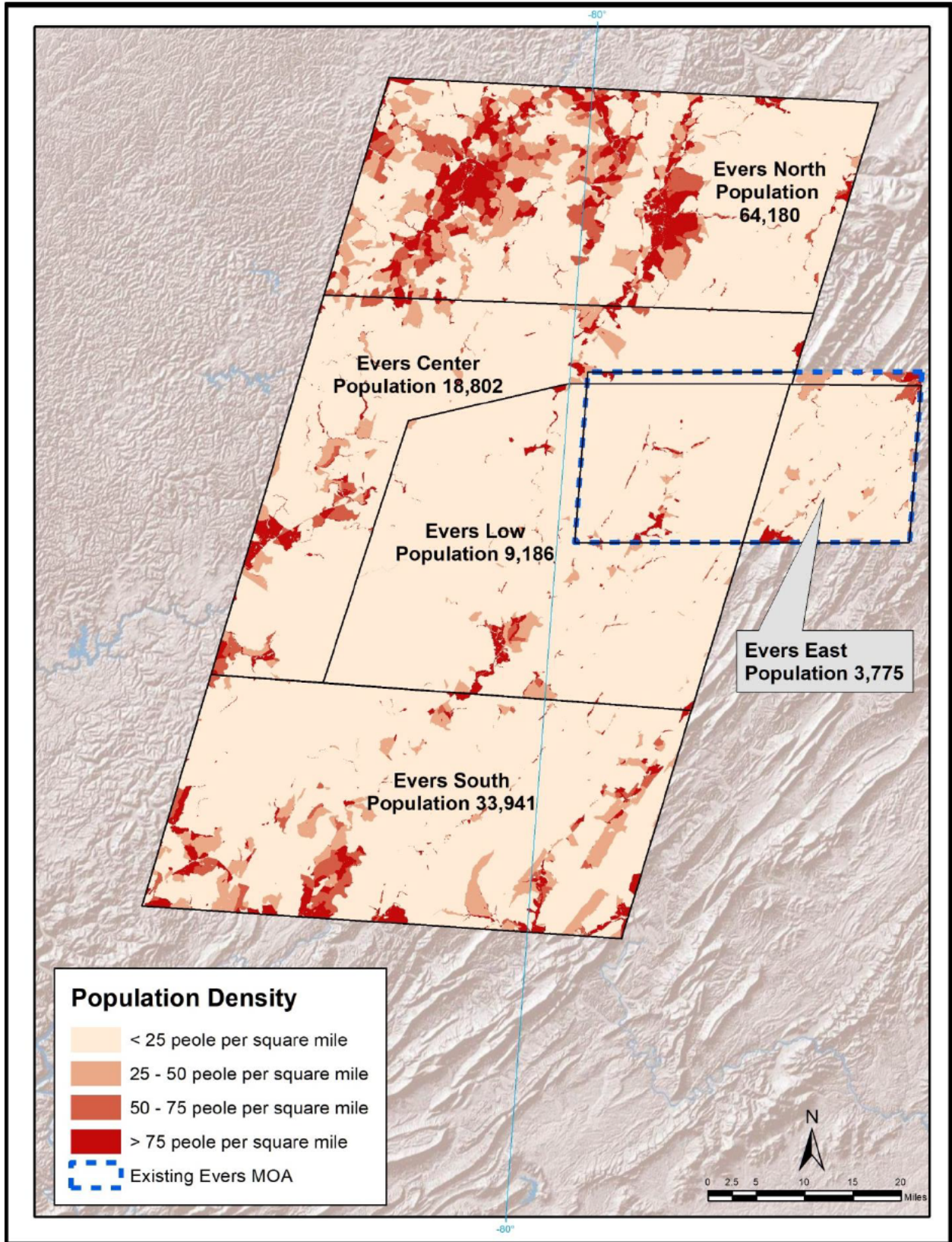
<sup>a</sup> Does not include population or area included under the Evers Low MOA.

<sup>b</sup> Does not include the population or area no longer under any MOA.

Source: U.S. Census 2018.

#### 3.3.2 Background Noise Levels

Background noise levels ( $L_{eq}$  and DNL) were estimated for the areas below the proposed SUA complex using the techniques specified in the *American National Standard Institute - Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present* (ANSI 2013). Table 3-3 outlines the overall sound levels (i.e. DNL) beneath the proposed Evers SUA Complex without any aircraft activities. Most of the land beneath the proposed SUA Complex is rural; however, there are several small towns and villages. These towns would be relatively quiet, and background sound levels without aircraft would not normally exceed 52 dBA  $L_{eq}$  in the daytime, or 44 dBA  $L_{eq}$  at night. Background levels would be less than this in rural areas, and appreciably less in remote areas.



**Figure 3-1. Population Density**

**Table 3-3. Estimated Background Sound Levels**

| Land Use Category           | DNL [dBA] | L <sub>eq</sub> [dBA] |           |
|-----------------------------|-----------|-----------------------|-----------|
|                             |           | Daytime               | Nighttime |
| Normal suburban residential | 52        | 50                    | 44        |
| Quiet suburban residential  | 47        | 45                    | 39        |
| Rural residential           | 42        | 40                    | 34        |
| Rural/Remote                | <42       | <40                   | <34       |

Source: ANSI 2013.

### 3.3.3 Existing Overall Aircraft Noise

Table 3-4 outlines the existing overall sound levels (i.e. DNL/L<sub>dnmr</sub>) beneath the Evers SUA Complex without the Proposed Action. Figure 3-2 outlines the overall sound levels (i.e. L<sub>dnmr</sub>) beneath the existing Evers MOA with aircraft activities and the remainder of the proposed SUA Complex without any aircraft activities. The estimated DNL ranges from less than 42.0 dBA DNL in rural areas beyond the boundaries of the existing MOA to 49.8 dBA DNL in areas beneath the existing Evers MOA. The estimated L<sub>dnmr</sub> ranges from less than 42.0 dBA DNL in rural areas beyond the boundaries of the existing MOA to 54.2 dBA DNL in areas beneath the existing Evers MOA. The overall noise from aircraft operations is distinctly higher than background levels beneath the existing Evers MOA .

**Table 3-4. Overall Sound Levels and Percent Highly Annoyed - Existing Conditions**

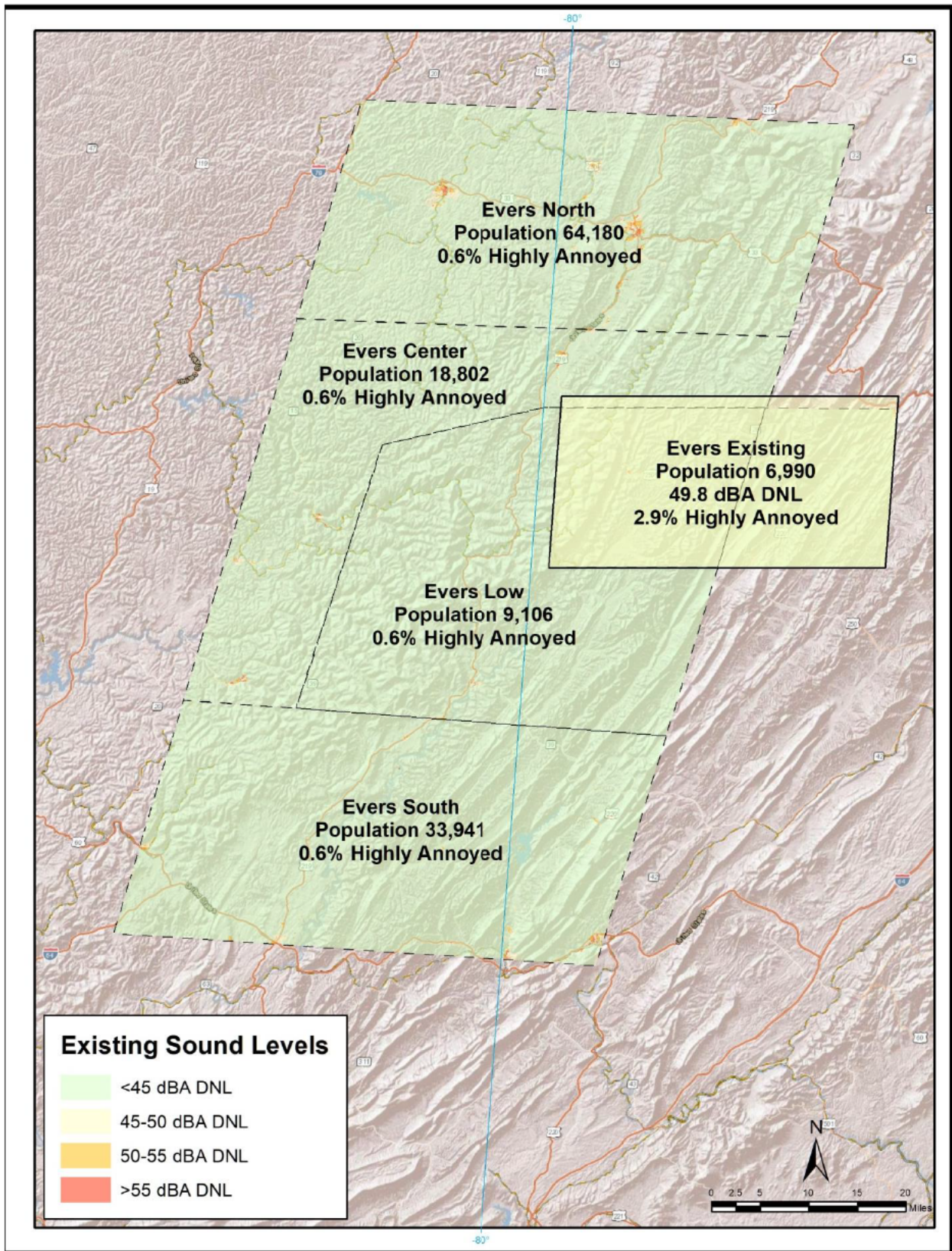
| Airspace  | Population | DNL (dBA) | L <sub>dnmr</sub> (dBA) | %Highly Annoyed |
|-----------|------------|-----------|-------------------------|-----------------|
| Evers MOA | 6,990      | 49.8      | 54.2                    | 2.9%            |

Source: USAF 2016a and U.S. Census 2018.

<sup>a</sup> DNL based on actual air operations without rapid onset penalty.

<sup>b</sup> L<sub>dnmr</sub> based on average busiest month aircraft operations with rapid onset penalty.

Noise from existing aircraft operations does not exceed 65 dBA DNL, and is fully compatible with all land uses. In general, the aircraft operations are spread out throughout the 634 square miles beneath the existing Evers MOA. Although, the overall noise from aircraft is fully compatible with all land uses, an estimated 2.9% of the population are highly annoyed by the existing aircraft noise under the Evers MOA. Generally speaking, 0.6% of individuals are highly annoyed by other sources of noise in rural and remote areas that are void of aircraft operations. These sources are primarily vehicle traffic, but also include industrial sources, construction activities, and lawn equipment.



**Figure 3-2. Overall Sound Levels and Percent Highly Annoyed - Existing**

### 3.3.4 Existing Individual Overflight Noise

Although operational noise levels are too low to result in incompatibility with existing land uses, noise from individual overflights generate distinct acoustical events. Table 3-5 outlines the  $L_{max}$  and SEL for individual aircraft overflights for the primary users of the existing Evers MOA. Mid- to low-altitude overflights are similar to, but substantially louder than high altitude commercial aircraft overflights. Overflights conducted in the mid-level airspaces are clearly audible, sometimes loud, to individuals who are outdoors, and clearly perceptible inside nearby buildings. Effects from mid-level overflights are distributed throughout areas below and adjacent to the existing MOA. Overflights conducted in the low-level airspaces are loud, sometimes very loud, to individuals who are outdoors, and clearly audible, sometimes loud inside nearby buildings. These overflights are brief, intermittent, distributed though the MOA, and normally do not occur repeatedly at any one location. Individual overflights would be neither loud enough or frequent enough to highly annoy appreciable percentage of the population or to generate areas of incompatible land-use underneath the existing Evers MOA.

**Table 3-5. Estimated Sound Levels for Individual Overflights**

| Altitude<br>(ft AGL) | $L_{max}$ (dBA) <sup>a</sup> |                   |                   |                   | SEL (dBA) <sup>b</sup> |                   |                   |                   |
|----------------------|------------------------------|-------------------|-------------------|-------------------|------------------------|-------------------|-------------------|-------------------|
|                      | A-10 <sup>c</sup>            | F-15 <sup>d</sup> | F-16 <sup>e</sup> | F-22 <sup>f</sup> | A-10 <sup>c</sup>      | F-15 <sup>d</sup> | F-16 <sup>e</sup> | F-22 <sup>f</sup> |
| 1,000                | 94.8                         | 96.7              | 100.4             | 112.4             | 98.4                   | 103.5             | 104.9             | 118.7             |
| 5,000                | 75.6                         | 77.7              | 80.3              | 93.0              | 83.4                   | 88.7              | 89.0              | 103.5             |
| 10,000               | 63.9                         | 67.6              | 69.8              | 82.9              | 73.5                   | 80.4              | 80.3              | 95.2              |
| 20,000               | 49.2                         | 55.5              | 57.6              | 70.9              | 60.6                   | 70.1              | 69.8              | 85.0              |

Source: USAF 2016A.

Notes:

<sup>a</sup>  $L_{max}$  is the maximum sound level during an individual overflight.

<sup>b</sup> SEL is the sound level if the entire overflight was compressed into one second and does not represent the actual noise at any given time.

<sup>c</sup> A-10A operating at 97% Engine Core RPM (NC) at 350 knots.

<sup>d</sup> F-15E operating at 85% NC at 300 knots.

<sup>e</sup> F-16C operating at 90% NC at 450 knots.

<sup>f</sup> F-22 operating at 100% Engine Thrust Ratio (ETR) at 300 knots.

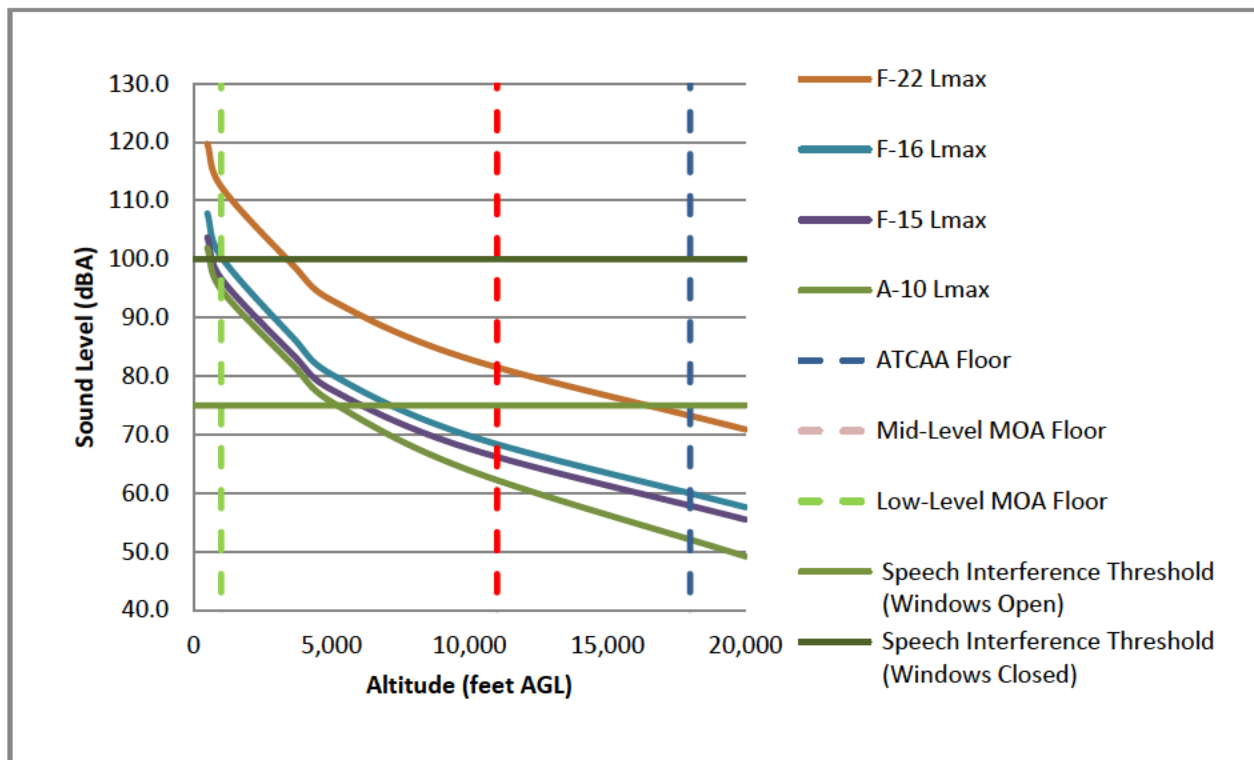
**Speech Interference.** In general, low- to mid-altitude aircraft overflights can interfere with communication on the ground, and in homes, schools or other buildings directly under their flight path. The disruption of routine activities in the home, such as radio or television listening, telephone use, or family conversation, can give rise to frustration and irritation. The quality of speech communication is also important in classrooms, offices, and industrial settings and can cause fatigue and vocal strain in those who attempt to communicate over the noise. The threshold at which aircraft noise may begin to interfere with speech and communication is 75 dBA (DNWG 2009). This level is consistent with, and more conservative than, the thresholds outlined in the American National Standards Institute's *Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools* (ANSI 2010).

Figure 3-3 depicts the  $L_{max}$  for individual aircraft overflights for the primary users of the existing Evers MOA.  $L_{max}$  for at 1,000 ft AGL are 94.8 dBA for an A-10, 96.7 dBA for an F-15, 100.4 dBA for an F-16, and 118.7 for an F-22 (Table 3-5). These sound levels are appreciably louder than the



threshold for speech interference, and single A-10, F-15, F-16 or F-22 aircraft operating in the low-level MOAs would interfere with communication for individuals on the ground under their flight path.  $L_{max}$  for at 10,000 ft AGL are 63.9 dBA for an A-10, 67.6 dBA for an F-15, 69.8 dBA for an F-16, and 82.9 for an F-22 (Table 3-5), and only F-22 overflights would the threshold for speech interference when operating in the midlevel MOAs. These effects are distributed throughout areas below and adjacent to the areas under the existing Evers MOA.

Table 3-6 outlines the estimated critical distance required for an individual aircraft to interfere with speech, and the lateral distance on the ground from flight track where aircraft interfere with speech. An F-22 operating in the mid- or low-altitude portions of the existing Evers MOA interferes with speech for all individuals within approximately 3.0 miles of the flight track directly below the aircraft. An F-16 operating in the low-altitude portion of the existing Evers MOA interferes with speech for all individuals within approximately 0.9 to 1.3 miles of the flight track directly below the aircraft. An F-15 operating in the low-altitude portion of the existing Evers MOA interferes with speech for all individuals within approximately 0.7 to 1.2 miles of the flight track directly below the aircraft. An A-10 operating in the low-altitude portion of the existing Evers MOA interferes with speech for all individuals within approximately 0.7 to 0.9 miles of the flight track directly below the aircraft. It is possible that some locations experience these events more often others; however, louder events at these locations are offset with a one-to-one reduction in overflights at other locations.



Source: USAF 2016a and DNWG 2009.

Notes:  $L_{max}$  is the maximum sound level during the overflight.

Figure 3-3. Estimated  $L_{max}$  for Individual Overflights

**Table 3-6. Lateral Distance from Flight Track for Speech Interference**

| Aircraft | Slant Distance (ft) to Speech Interference Threshold | Overflight Altitude (ft AGL)                                            |              |              |              |
|----------|------------------------------------------------------|-------------------------------------------------------------------------|--------------|--------------|--------------|
|          |                                                      | 500                                                                     | 1,000        | 3,600        | 5,000        |
|          |                                                      | Lateral Distance from Flight Track for Speech Interference [ft (miles)] |              |              |              |
| F-22     | 16,000                                               | 15,992 (3.0)                                                            | 15,969 (3.0) | 15,590 (3.0) | 15,199 (2.9) |
| F-16     | 7,000                                                | 6,982 (1.3)                                                             | 6,928 (1.3)  | 6,003 (1.1)  | 4,899 (0.9)  |
| F-15     | 6,300                                                | 6,280 (1.2)                                                             | 6,220 (1.2)  | 5,170 (1.0)  | 3,833 (0.7)  |
| A-10     | 5,000                                                | 4,975 (0.9)                                                             | 4,899 (0.9)  | 3,470 (0.7)  |              |

Source: USAF 2016a.

**Damage to Hearing.** Noise-related hearing loss due to long-term exposure (many years) to continuous noise in the work place has been studied extensively, but there has been little research on the potential for noise induced hearing loss on members of the community from exposure to aircraft noise. Unlike workplace noise, community exposure to aircraft overflights is not continuous, but consists of individual events where the sound level exceeds the background level for a limited time. Over 40 years, an individual would need to be exposed to average sound level of 75 dBA, 8 hours per day for 40 years to experience hearing loss (USEPA 1974 and CHABA 1977), as such Occupational Safety & Health Administration (OSHA) and the NGB have adopted a threshold of 80 dBA for 8 hours per day as the threshold for hearing protection (USAF 2013). As aircraft overflights are intermittent and not continuous, no individuals are exposed to sound levels exceeding 75 dBA for 8 hours per day beneath the Evers MOA. In addition, OSHA and the NGB have adopted a threshold of 140 dB instantaneous noise level as a threshold for short-term exposure that may induce hearing loss. As individual aircraft overflights within the Evers MOA are not supersonic, and do not generate sonic booms above 140 dB, no individuals beneath the SUA complex are exposed to instantaneous sound levels exceeding 140 dB.

**Damage to Structures.** Noise from low-level aircraft overflights can cause buildings under their flight path to vibrate, which the occupants experience as shaking of the structure and rattling of the windows. However, based on experimental data and models, noise and vibrations from subsonic aircraft overflights do not cause structural damage to buildings. An impact noise (i.e., blast noise or sonic boom) above 140 dB is required to generate sufficient energy to damage structures (USAF 2016b, Siskind 1989, and Bureau of Mines 1980). Individual overflights within the Evers MOA are not supersonic, and do not generate sonic booms above 140 dB; therefore, there is no potential for damage to structures.

### 3.4 SIGNIFICANCE THRESHOLD

Effects to noise would be less than significant unless the Proposed Action would (1) increase noise levels by more than 1.5 dBA DNL in a noise sensitive area exposed to noise above 65 dBA DNL; (2) increase noise levels by greater than 5 dBA DNL over large geographic areas or populations and is determined to be environmentally controversial; or (3) generate individual acoustic events loud enough to damage hearing or structures.

### 3.5 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

The Proposed Action would have the potential for long-term minor adverse effects on the noise environment. Effects would be due to noise from the introduction of low- to mid-altitude military overflights in areas beneath the proposed Evers Low MOA. The Proposed Action would not increase noise levels by more than 1.5 dBA DNL in a noise sensitive area that is exposed to noise above 65 dBA DNL, or generate individual acoustic events loud enough to damage hearing or structures. The Proposed Action would increase noise levels by 5.2 dBA DNL and percent highly annoyed by 0.8% beneath the proposed Evers Low MOA in areas not currently within the existing Evers MOA. There would be appreciable decreases (4.3 to 10.8 dBA DNL) in noise and corresponding decrease in the percent highly annoyed under the existing Evers MOA. Regardless of any decreases in noise in the existing MOA, individuals experiencing a higher noise levels within the proposed low would still be affected by the Proposed Action.

### 3.5.1 Overall Aircraft Noise

Table 3-7, Figures 3-4, and Figure 3-5 summarize the overall noise levels (i.e. DNL) beneath the Evers SUA Complex with the implementation of the Proposed Action and their change when compared to existing conditions. To meet both ANG and FAA criteria, noise modeling was performed to determine both  $L_{dnmr}$  and DNL. The estimated DNL (i.e., average annual noise) would range from 42.9 dBA in areas beneath mid-altitude MOAs to 47.2 dBA in the low-altitude training areas. The estimated  $L_{dnmr}$  (i.e., busiest month noise) would range from 43.8 dBA in areas beneath mid-altitude MOAs to 49.6 dBA in the low-altitude training areas. The overall noise environment would be similar to but slightly greater than background levels in most areas beneath the existing and proposed SUAs.

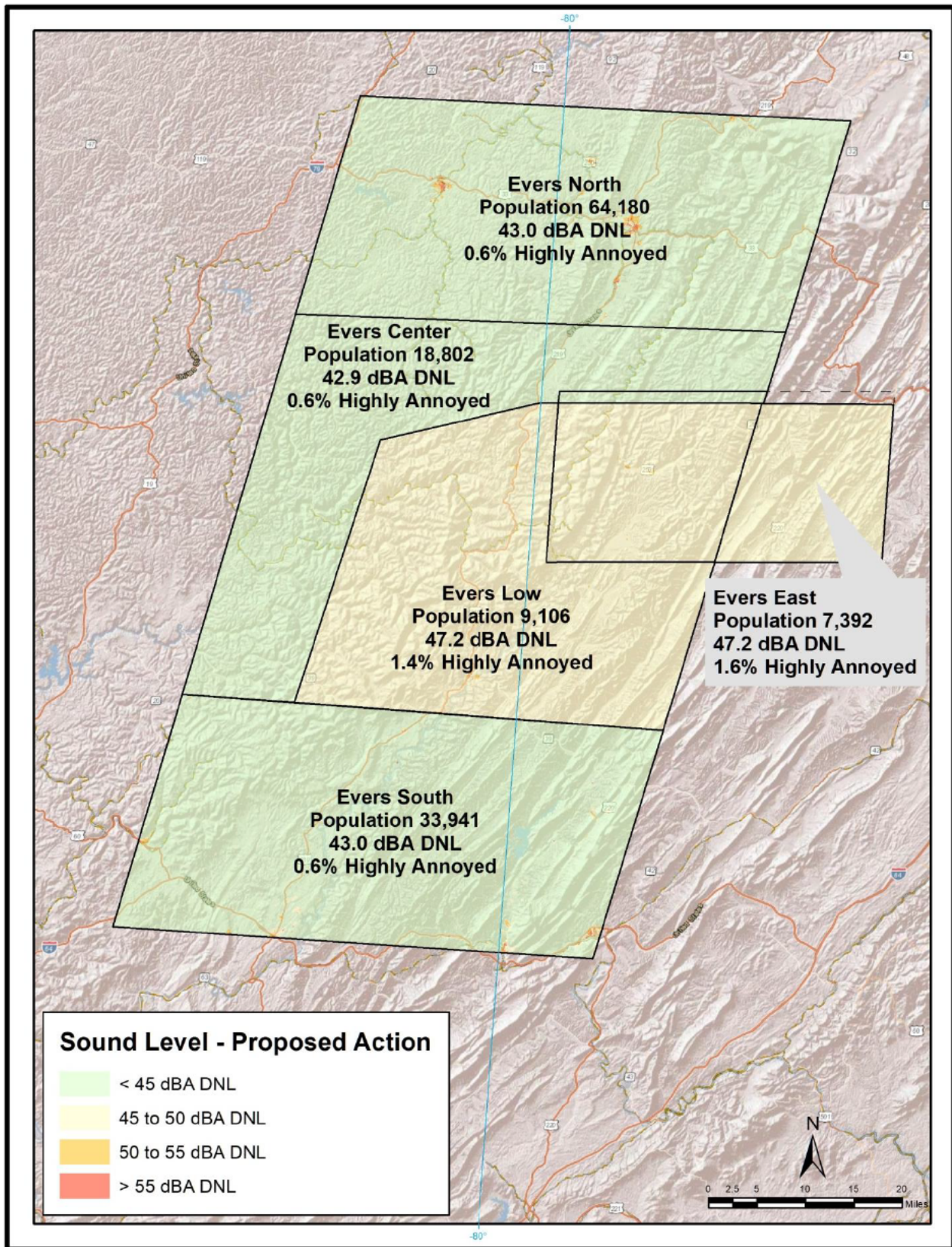
**Table 3-7. Overall Sound Levels and Percent Highly Annoyed - Proposed Action**

|                                           | Existing  |                  |                 | Proposed  |                  |                 | Change from Existing |                  |                 |
|-------------------------------------------|-----------|------------------|-----------------|-----------|------------------|-----------------|----------------------|------------------|-----------------|
|                                           | DNL (dBA) | $L_{dnmr}$ (dBA) | %Highly Annoyed | DNL (dBA) | $L_{dnmr}$ (dBA) | %Highly Annoyed | DNL (dBA)            | $L_{dnmr}$ (dBA) | %Highly Annoyed |
| <b>Airspace</b>                           |           |                  |                 |           |                  |                 |                      |                  |                 |
| Evers Low MOA (under existing MOA)        | 49.8      | 54.2             | 2.9%            | 47.2      | 49.5             | 1.4%            | -2.6                 | -4.6             | -1.5%           |
| Evers Low MOA (not under existing MOA)    | 42.0      | 42.0             | 0.6%            | 47.2      | 49.5             | 1.4%            | 5.2                  | 7.5              | 0.8%            |
| Evers Center MOA (under existing MOA)     | 49.8      | 54.2             | 2.9%            | 42.9      | 43.8             | 0.6%            | -6.9                 | -10.4            | -2.3%           |
| Evers Center MOA (not under existing MOA) | 42.0      | 42.0             | 0.6%            | 42.9      | 43.8             | 0.6%            | 0.9                  | 1.8              | 0.0%            |
| Evers South MOA                           | 42.0      | 42.0             | 0.6%            | 43.0      | 43.9             | 0.6%            | 1.0                  | 1.9              | 0.0%            |
| Evers North MOA                           | 42.0      | 42.0             | 0.6%            | 43.0      | 43.9             | 0.6%            | 1.0                  | 1.9              | 0.0%            |
| Evers East MOA                            | 49.8      | 54.2             | 2.9%            | 47.2      | 49.6             | 1.6%            | -2.6                 | -4.6             | -1.3%           |
| Areas no longer under MOA                 | 49.8      | 54.2             | 2.9%            | 42.0      | 42.0             | 0.6%            | -7.8                 | -12.2            | -2.3%           |
|                                           |           | Total            | 1.1%            | Total     | Total            | 0.7%            | Total                | Total            | -0.4%           |

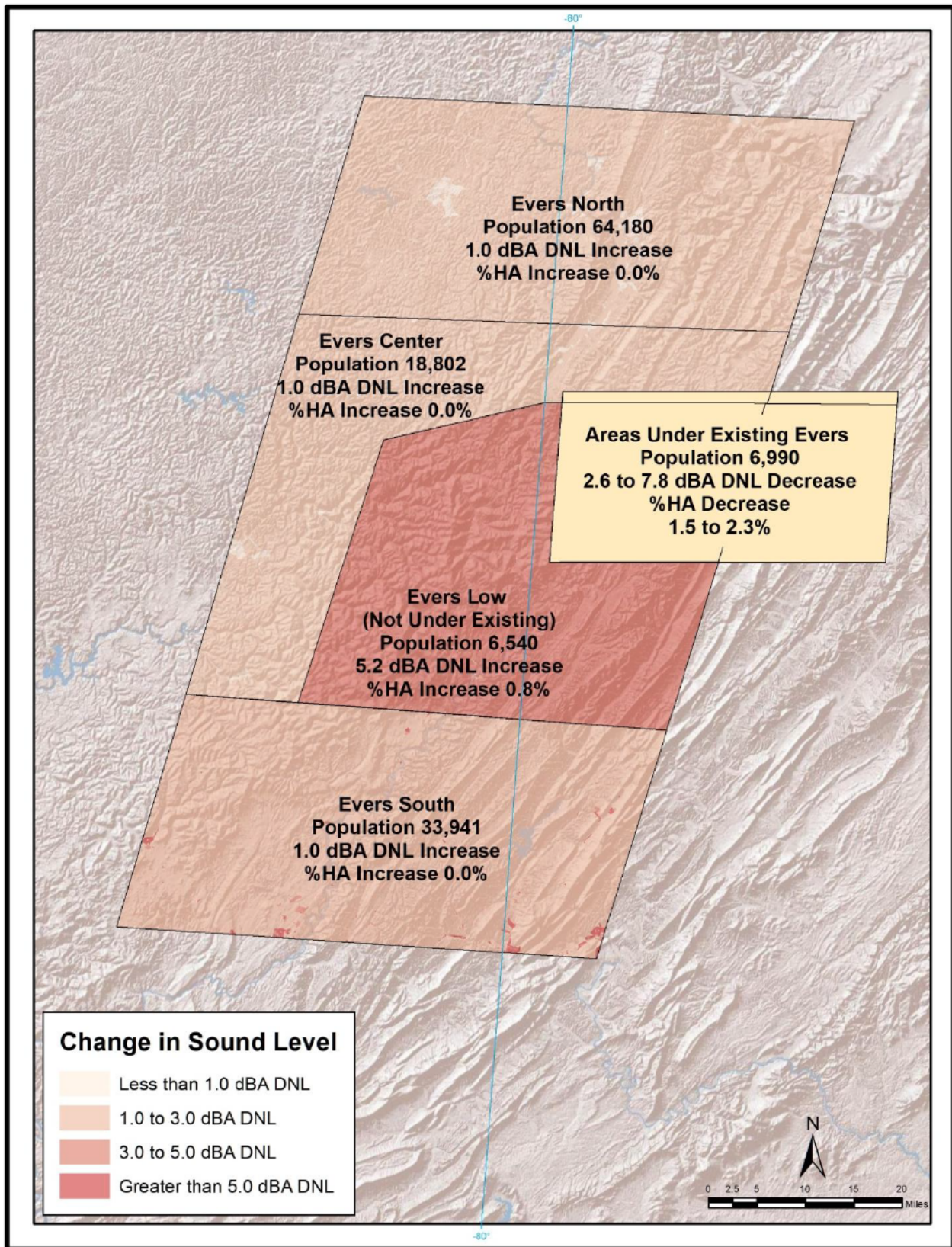
Source: US Census 2018 and USAF 2016a.

<sup>a</sup> DNL based on actual aircraft operations without rapid onset penalty.

<sup>b</sup>  $L_{dnmr}$  based on average busiest month aircraft operations with rapid onset penalty.



**Figure 3-4. Overall Sound Levels and Percent Highly Annoyed - Proposed Action**



**Figure 3-5. Change in Overall Sound Levels - Proposed Action vs. Existing**

**Land Use Compatibility.** Noise from aircraft operations under the Proposed Action would not exceed 65 dBA DNL, and would be fully compatible with all land uses. These effects would be less than significant (USAF 2016b and FAA 2015). This includes being compatible with all wilderness areas, residential areas, churches, schools, recreational areas underneath the proposed airspace. Detailed guidelines for the compatibility of various land uses with noise exposure levels are included in Appendix B. These effects would be less than significant.

**Change in Overall Noise.** The overall noise from aircraft operations would (1) blend naturally with background levels beneath the proposed Evers South, Evers Center, and Evers North MOAs; (2) would be lower than existing levels in areas beneath the existing Evers MOA; and (3) be higher than existing levels in areas beneath the proposed Evers Low MOA in areas not currently within the existing Evers MOA. The Proposed Action would increase noise levels by 5.2 dBA DNL throughout 943 square miles and for 6,540 individuals beneath the proposed Evers Low MOA in areas not currently within the existing Evers MOA. The Proposed Action would decrease noise levels by 4.6 to 12.2 dBA DNL throughout 634 square miles and for 6,990 individuals beneath the existing Evers MOA.

**Effects of Noise on Individuals.** Although, the overall noise from aircraft is fully compatible with all land uses, the %HA under the Proposed Action would range from 0.6% to 1.4% for areas beneath the proposed MOAs. Due to the redistribution of aircraft operations, there would be a slight reduction (0.4% reduction) in the overall %HA of for all areas under the Evers SUA Complex when compared to existing conditions. Generally speaking, 0.6% of individuals are highly annoyed by other sources of noise in rural and remote areas that are void of aircraft operations.

The %HA, when compared to existing conditions would range from a decrease of 1.5 to 2.5 percent beneath the existing Evers MOA to an increase of 0.8% in areas beneath the proposed Evers Low MOA in areas that are not currently within the existing Evers MOA. This minute level of increase is expected, as at levels below 55 dBA, it takes very large changes in overall noise levels to annoy additional individuals. This is consistent with the 1974 EPA's *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with and Adequate Margin of Safety* (i.e., The Levels Document) which outlines that community response to changes in noise below 55 dBA would be marginal at best, as the noise in such areas would not normally solicit complaints and noise would be "essentially the least important of various factors" (USEPA 1974). These effects would be less than significant.

Since the study encompasses a large geographical area, the effects are of medium intensity over a large area, as opposed to high intensity over a smaller area (e.g., noise near an air installation), change-of-exposure tables were developed to identify where noise will change by 1.5, 3, and 5 dBA (FAA 2015 FAA Order 1050.1F defines the thresholds for "significant" noise impacts (Exhibit 4-1) and the thresholds for "reportable" noise impacts. To make certain the ANG is meeting FAA requirements, during the release and transmittal of the Draft EA, the ANG will

"report" the greater than 5 dBA day-night Sound Level (DNL) increase to interested parties. In addition, the ANG will include a brief discussion to outline that, as described above, changes in overall noise levels would only introduce a minute incremental changes in the percent highly annoyed for areas under the proposed Evers Low MOA, as the noise in such areas would not normally solicit complaints and noise would be "essentially the least important of various factors" in these areas. In addition, the ANG will outline that the change in noise under the Proposed Action would decrease noise levels by 2.6 to 7.8 dBA DNL throughout 634 square miles (SM) and for individuals beneath the existing Evers MOA.

The nature and overall levels of noise from individual overflights would be similar to existing conditions. However, under the Proposed Action these effects would extend to all newly proposed SUAs, including the Evers North, Evers Center, Evers Low, Evers South, and Evers East. Areas beneath the Evers Low MOA would intermittently experience aircraft overflights that would range from loud to very loud exceeding 75 dBA  $L_{max}$  at any given point on the ground (Table 3-5 and Figures 3-3). Overflights aircraft within the proposed low-level MOAs would interfere with communication for individuals within approximately one to three miles of the aircraft's flight path. These overflights would be brief, intermittent, distributed though the MOA, and normally would not occur repeatedly at any one location. In general, individual overflights would be neither loud enough nor frequent enough to highly annoy an appreciable amount of individuals underneath the existing or proposed MOAs. Some locations would experience these events more often; however, events would be offset with a one-to-one reduction in overflights at other locations.

**Damage to Hearing or Structures.** As with existing conditions, and for similar reasons, aircraft overflights would not generate individual acoustic events loud enough to damage hearing or structures. These effects would be less than significant.

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## **5.0 LIST OF PREPARERS**

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B.S., Mechanical Engineering

Years of Experience: 30

## **APPENDIX A - AIR OPERATIONAL DATA**

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*

Version 3.0

Release Date 2/7/2013

CASE INFORMATION

Case Name:Evers SUA Complex 2019 - Existing - LDNMR Scenario

Site Name:Evers

SETUP PARAMETERS

Number of MOAs and Ranges = 9 Number of tracks = 0

Lower Left Corner of Grid in feet (X Y pair) = -372500., -372500.

Upper Right Corner of Grid in feet (X Y pair) = 372500., 372500.

Grid spacing = 5000. feet Number of events above an SEL of 75.0 dB

Temperature = 59 F Humidity = 70 Flying days per month = 30

MOA SPECIFICATIONS

MOA name DIESEL CENTER ATCAA

Lat Long

(deg) (deg)

38.19320 -80.63750

38.78720 -80.48041

38.75401 -79.54699

38.13700 -79.72040

38.19320 -80.63750

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL NORTH ATCAA

Lat Long

(deg) (deg)

38.78720 -80.48041

39.12821 -80.39030

39.08871 -79.45249

38.75401 -79.54699

38.78720 -80.48041

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL SOUTH ATCAA

Lat Long

(deg) (deg)

38.13700 -79.72040

37.78029 -79.82050

37.83079 -80.73381

38.19320 -80.63750

38.13700 -79.72040

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name EVERS CENTER MOA

Lat Long

(deg) (deg)

38.19320 -80.63750

38.78720 -80.48041

38.75401 -79.54699

38.13700 -79.72040  
38.19320 -80.63750  
Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EAST MOA

Lat Long  
(deg) (deg)  
38.64750 -79.33029  
38.40000 -79.33029  
38.40000 -79.64570  
38.64750 -79.57169  
38.64750 -79.33029  
Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EXISTING

Lat Long  
(deg) (deg)  
38.66690 -79.96640  
38.66690 -79.33029  
38.40000 -79.33029  
38.40000 -79.96640  
38.66690 -79.96640  
Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS LOW MOA

Lat Long  
(deg) (deg)  
38.64750 -79.57809  
38.13700 -79.72040  
38.18020 -80.42490  
38.58360 -80.30110  
38.64750 -80.00000  
38.64750 -79.57169  
38.64750 -79.57809  
Floor = 1000 feet AGL Ceiling = 8000 feet AGL

MOA name EVERS NORTH MOA

Lat Long  
(deg) (deg)  
38.78720 -80.48041  
39.12821 -80.39030  
39.08871 -79.45249  
38.75401 -79.54699  
38.78720 -80.48041  
Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS SOUTH MOA

Lat Long  
(deg) (deg)  
38.13700 -79.72040  
37.78029 -79.82050  
37.83079 -80.73381  
38.19320 -80.63750  
38.13700 -79.72040  
Floor = 8000 feet AGL Ceiling = 15000 feet AGL

### SPECIFIC POINT SPECIFICATION

Number of Specific points = 6

| Latitude | Longitude | Name                |
|----------|-----------|---------------------|
| 38.55200 | -79.47399 | EVERS EAST          |
| 38.52000 | -79.66900 | EVERS EXISTING      |
| 38.42500 | -80.01200 | EVERS LOW           |
| 38.68800 | -80.38600 | EVERS-DIESEL CENTER |
| 38.92901 | -79.98800 | EVERS-DIESEL NORTH  |
| 37.98100 | -80.23300 | EVERS-DIESEL SOUTH  |

### MISSION DATA

Mission name = E-A-10-E

Aircraft code =FM0090100 Speed = 300 kias Power = 85.0

#### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 50.0                   |
| 8000                    | 15000                   | 50.0                   |

Mission name = E-F-15-E

Aircraft code =FM0430400 Speed = 350 kias Power = 90.0

#### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 75.0                   |
| 8000                    | 15000                   | 25.0                   |

Mission name = E-F-16-E

Aircraft code =FM0440300 Speed = 450 kias Power = 90.0

#### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 50.0                   |
| 8000                    | 15000                   | 50.0                   |

Mission name = E-F-22-E

Aircraft code =FM0850100 Speed = 450 kias Power = 92.0

#### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 15.0                   |
| 8000                    | 15000                   | 85.0                   |

Mission name = E-T-38-E

Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

#### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 15.0                   |
| 8000                    | 15000                   | 85.0                   |

MOA OPERATION DATA

MOA name = EVERS EXISTING

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| E-A-10-E     | 1.000   | 0.000     | 30.00   | 0.00      | 360.    | 0.        | 30.                     |
| E-F-15-E     | 0.961   | 0.000     | 28.83   | 0.00      | 346.    | 0.        | 20.                     |
| E-F-16-E     | 8.333   | 0.000     | 250.00  | 0.00      | 3000.   | 0.        | 34.                     |
| E-F-22-E     | 1.786   | 0.000     | 53.58   | 0.00      | 643.    | 0.        | 20.                     |
| E-T-38-E     | 0.944   | 0.000     | 28.33   | 0.00      | 340.    | 0.        | 34.                     |

\*\*\*\*\*

Warning: Grid points spaced greater than 1000 feet apart may not provide the necessary grid resolution, in some cases, to compute noise contours with high accuracy. For low-altitude track operations, the recommended grid spacing is less than 1000 feet.

\*\*\*\*\*

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

The noise metric is Ldnmr.

MOA RESULTS

| MOA Name            | MOA Area (sq statute miles) | Uniform Sound Level (dB) | Number of Daily Events Above SEL of 75.0 dB |
|---------------------|-----------------------------|--------------------------|---------------------------------------------|
| DIESEL CENTER ATCAA | 2123.1                      |                          | No operations on this MOA!                  |
| DIESEL NORTH ATCAA  | 1187.1                      |                          | No operations on this MOA!                  |
| DIESEL SOUTH ATCAA  | 1258.7                      |                          | No operations on this MOA!                  |
| EVERS CENTER MOA    | 2123.1                      |                          | No operations on this MOA!                  |
| EVERS EAST MOA      | 257.5                       |                          | No operations on this MOA!                  |
| EVERS EXISTING      | 634.4                       | 53.9                     | 0.0                                         |
| EVERS LOW MOA       | 1265.6                      |                          | No operations on this MOA!                  |
| EVERS NORTH MOA     | 1187.1                      |                          | No operations on this MOA!                  |
| EVERS SOUTH MOA     | 1258.7                      |                          | No operations on this MOA!                  |

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

SPECIFIC POINT RESULTS

Specific Point: EVERS EAST  
 Top 20 contributors to this level:

|                |           | Sound Level       |        |       |
|----------------|-----------|-------------------|--------|-------|
| < Airspace     | > Mission | Aircraft          | (dB)   | HA(%) |
| EVERS EXISTING | E-F-16-E  | F-16C             | 51.7   | 2.1   |
| EVERS EXISTING | E-F-22-E  | F-22              | 47.4   | 1.2   |
| EVERS EXISTING | E-F-15-E  | F-15E             | 46.5   | 1.0   |
| EVERS EXISTING | E-A-10-E  | A-10A             | < 35.0 |       |
| EVERS EXISTING | E-T-38-E  | T-38A             | < 35.0 |       |
|                |           | Total Level ..... | 53.9   | 2.9   |

Specific Point: EVERS EXISTING  
 Top 20 contributors to this level:

|                |           | Sound Level       |        |       |
|----------------|-----------|-------------------|--------|-------|
| < Airspace     | > Mission | Aircraft          | (dB)   | HA(%) |
| EVERS EXISTING | E-F-16-E  | F-16C             | 51.7   | 2.1   |
| EVERS EXISTING | E-F-22-E  | F-22              | 47.4   | 1.2   |
| EVERS EXISTING | E-F-15-E  | F-15E             | 46.5   | 1.0   |
| EVERS EXISTING | E-A-10-E  | A-10A             | < 35.0 |       |
| EVERS EXISTING | E-T-38-E  | T-38A             | < 35.0 |       |
|                |           | Total Level ..... | 53.9   | 2.9   |

Specific Point: EVERS LOW  
 Top 20 contributors to this level:

|                |           | Sound Level       |        |       |
|----------------|-----------|-------------------|--------|-------|
| < Airspace     | > Mission | Aircraft          | (dB)   | HA(%) |
| EVERS EXISTING | E-F-16-E  | F-16C             | < 35.0 |       |
| EVERS EXISTING | E-F-22-E  | F-22              | < 35.0 |       |
| EVERS EXISTING | E-F-15-E  | F-15E             | < 35.0 |       |
| EVERS EXISTING | E-A-10-E  | A-10A             | < 35.0 |       |
| EVERS EXISTING | E-T-38-E  | T-38A             | < 35.0 |       |
|                |           | Total Level ..... | < 35.0 |       |

Specific Point: EVERS-DIESEL CENTER  
 Top 20 contributors to this level:

|            |           | Sound Level |      |       |
|------------|-----------|-------------|------|-------|
| < Airspace | > Mission | Aircraft    | (dB) | HA(%) |



|                |          |       |        |
|----------------|----------|-------|--------|
| EVERS EXISTING | E-F-16-E | F-16C | < 35.0 |
| EVERS EXISTING | E-F-22-E | F-22  | < 35.0 |
| EVERS EXISTING | E-F-15-E | F-15E | < 35.0 |
| EVERS EXISTING | E-A-10-E | A-10A | < 35.0 |
| EVERS EXISTING | E-T-38-E | T-38A | < 35.0 |

Total Level ..... < 35.0

Specific Point: EVERS-DIESEL NORTH

Top 20 contributors to this level:

|                |           | Sound Level   |        |
|----------------|-----------|---------------|--------|
| < Airspace     | > Mission | Aircraft (dB) | HA(%)  |
| EVERS EXISTING | E-F-16-E  | F-16C         | < 35.0 |
| EVERS EXISTING | E-F-22-E  | F-22          | < 35.0 |
| EVERS EXISTING | E-F-15-E  | F-15E         | < 35.0 |
| EVERS EXISTING | E-A-10-E  | A-10A         | < 35.0 |
| EVERS EXISTING | E-T-38-E  | T-38A         | < 35.0 |

Total Level ..... < 35.0

Specific Point: EVERS-DIESEL SOUTH

Top 20 contributors to this level:

|                |           | Sound Level   |        |
|----------------|-----------|---------------|--------|
| < Airspace     | > Mission | Aircraft (dB) | HA(%)  |
| EVERS EXISTING | E-F-16-E  | F-16C         | < 35.0 |
| EVERS EXISTING | E-F-22-E  | F-22          | < 35.0 |
| EVERS EXISTING | E-F-15-E  | F-15E         | < 35.0 |
| EVERS EXISTING | E-A-10-E  | A-10A         | < 35.0 |
| EVERS EXISTING | E-T-38-E  | T-38A         | < 35.0 |

Total Level ..... < 35.0

<Run Log>

Date: 11/15/2019  
 Start Time: 16: 7:28  
 Stop Time: 16: 7:41  
 Total Running Time: 0 minutes and 14 seconds.

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*

Version 3.0  
Release Date 2/7/2013

CASE INFORMATION

Case Name:Evers SUA Complex 2019 - Proposed - LDNMR Scenario  
Site Name:Evers

SETUP PARAMETERS

Number of MOAs and Ranges = 9 Number of tracks = 0  
Lower Left Corner of Grid in feet (X Y pair) = -372500., -372500.  
Upper Right Corner of Grid in feet (X Y pair) = 372500., 372500.  
Grid spacing = 5000. feet Number of events above an SEL of 75.0 dB  
Temperature = 59 F Humidity = 70 Flying days per month = 30

MOA SPECIFICATIONS

MOA name DIESEL CENTER ATCAA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.19320 | -80.63750 |
| 38.78720 | -80.48041 |
| 38.75401 | -79.54699 |
| 38.13700 | -79.72040 |
| 38.19320 | -80.63750 |

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL NORTH ATCAA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.78720 | -80.48041 |
| 39.12821 | -80.39030 |
| 39.08871 | -79.45249 |
| 38.75401 | -79.54699 |
| 38.78720 | -80.48041 |

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL SOUTH ATCAA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.13700 | -79.72040 |
| 37.78029 | -79.82050 |
| 37.83079 | -80.73381 |
| 38.19320 | -80.63750 |
| 38.13700 | -79.72040 |

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name EVERS CENTER MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.19320 | -80.63750 |
| 38.78720 | -80.48041 |
| 38.75401 | -79.54699 |
| 38.13700 | -79.72040 |
| 38.19320 | -80.63750 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EAST MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.64750 | -79.33029 |
| 38.40000 | -79.33029 |
| 38.40000 | -79.64570 |
| 38.64750 | -79.57169 |
| 38.64750 | -79.33029 |

Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EXISTING

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.66690 | -79.96640 |
| 38.66690 | -79.33029 |
| 38.40000 | -79.33029 |
| 38.40000 | -79.96640 |
| 38.66690 | -79.96640 |

Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS LOW MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.64750 | -79.57809 |
| 38.13700 | -79.72040 |
| 38.18020 | -80.42490 |
| 38.58360 | -80.30110 |
| 38.64750 | -80.00000 |
| 38.64750 | -79.57169 |
| 38.64750 | -79.57809 |

Floor = 1000 feet AGL Ceiling = 8000 feet AGL

MOA name EVERS NORTH MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.78720 | -80.48041 |
| 39.12821 | -80.39030 |
| 39.08871 | -79.45249 |
| 38.75401 | -79.54699 |
| 38.78720 | -80.48041 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS SOUTH MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.13700 | -79.72040 |
| 37.78029 | -79.82050 |
| 37.83079 | -80.73381 |
| 38.19320 | -80.63750 |
| 38.13700 | -79.72040 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

#### SPECIFIC POINT SPECIFICATION

Number of Specific points = 6

| Latitude | Longitude | Name                |
|----------|-----------|---------------------|
| 38.55200 | -79.47399 | EVERS EAST          |
| 38.52000 | -79.66900 | EVERS EXISTING      |
| 38.42500 | -80.01200 | EVERS LOW           |
| 38.68800 | -80.38600 | EVERS-DIESEL CENTER |
| 38.92901 | -79.98800 | EVERS-DIESEL NORTH  |
| 37.98100 | -80.23300 | EVERS-DIESEL SOUTH  |

#### MISSION DATA

Mission name = P-A-10-DC  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-A-10-DN  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-A-10-DS  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-A-10-EC  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-A-10-EE  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 71.0  
8000 15000 29.0

Mission name = P-A-10-EL  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent

(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-A-10-EN  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-A-10-ES  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-DC  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-17-DN  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-17-DS  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-17-EC  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-EE  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent

| (feet AGL) | (feet AGL) | Utilization |
|------------|------------|-------------|
| 1000       | 8000       | 67.0        |
| 8000       | 15000      | 33.0        |

Mission name = P-C-17-EL  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-EN  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-ES  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-130-DN  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-130-DS  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-130-EC  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-130-EE  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 88.0                   |
| 8000                    | 15000                   | 12.0                   |

Mission name = P-C-130-EL  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-130-EN  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-130-ES  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-15-DC  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-15-DN  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-15-DS  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-15-EC  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-15-EE  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 67.0  
8000 15000 33.0

Mission name = P-F-15-EL  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-15-EN  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-15-ES  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-DC  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-16-DN  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-16-DS



Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-16-EC  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-EE  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 67.0  
8000 15000 33.0

Mission name = P-F-16-EL  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-EN  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-ES  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-22-DC  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-22-DN  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-22-DS  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-22-EC  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 50.0  
3000 8000 50.0

Mission name = P-F-22-EE  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 5.0  
3000 8000 28.0  
8000 15000 67.0

Mission name = P-F-22-EL  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 10.0  
3000 8000 90.0

Mission name = P-F-22-EN  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 10.0  
3000 8000 90.0

Mission name = P-F-22-ES  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 3000                    | 10.0                   |
| 3000                    | 8000                    | 90.0                   |

Mission name = P-T-38-DC  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-T-38-DN  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-T-38-DS  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-T-38-EC  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-T-38-EE  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 33.0  
8000 15000 67.0

Mission name = P-T-38-EL  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-T-38-EN

Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 100.0                  |

Mission name = P-T-38-ES

Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 100.0                  |

MOA OPERATION DATA

MOA name = DIESEL CENTER ATCAA

| Mission<br>Name | Daily      |              | Monthly    |              | Yearly     |              | Time On Range<br>(minutes) |
|-----------------|------------|--------------|------------|--------------|------------|--------------|----------------------------|
|                 | Day<br>OPS | Night<br>OPS | Day<br>OPS | Night<br>OPS | Day<br>OPS | Night<br>OPS |                            |
| P-A-10-DC       | 1.000      | 0.000        | 30.00      | 0.00         | 360.       | 0.           | 4.                         |
| P-C-17-DC       | 0.069      | 0.000        | 2.08       | 0.00         | 25.        | 0.           | 12.                        |
| P-F-15-DC       | 2.400      | 0.000        | 72.00      | 0.00         | 864.       | 0.           | 7.                         |
| P-F-16-DC       | 4.042      | 0.000        | 121.25     | 0.00         | 1455.      | 0.           | 5.                         |
| P-F-22-DC       | 2.381      | 0.000        | 71.42      | 0.00         | 857.       | 0.           | 2.                         |
| P-T-38-DC       | 1.261      | 0.000        | 37.83      | 0.00         | 454.       | 0.           | 3.                         |

MOA name = DIESEL NORTH ATCAA

| Mission<br>Name | Daily      |              | Monthly    |              | Yearly     |              | Time On Range<br>(minutes) |
|-----------------|------------|--------------|------------|--------------|------------|--------------|----------------------------|
|                 | Day<br>OPS | Night<br>OPS | Day<br>OPS | Night<br>OPS | Day<br>OPS | Night<br>OPS |                            |
| P-A-10-DN       | 1.000      | 0.000        | 30.00      | 0.00         | 360.       | 0.           | 3.                         |
| P-C-17-DN       | 0.069      | 0.000        | 2.08       | 0.00         | 25.        | 0.           | 9.                         |
| P-C-130-DN      | 0.400      | 0.000        | 12.00      | 0.00         | 144.       | 0.           | 0.                         |
| P-F-15-DN       | 2.400      | 0.000        | 72.00      | 0.00         | 864.       | 0.           | 5.                         |
| P-F-16-DN       | 4.042      | 0.000        | 121.25     | 0.00         | 1455.      | 0.           | 4.                         |
| P-F-22-DN       | 2.381      | 0.000        | 71.42      | 0.00         | 857.       | 0.           | 2.                         |
| P-T-38-DN       | 1.261      | 0.000        | 37.83      | 0.00         | 454.       | 0.           | 3.                         |

MOA name = DIESEL SOUTH ATCAA

| Mission<br>Name | Daily      |              | Monthly    |              | Yearly     |              | Time On Range<br>(minutes) |
|-----------------|------------|--------------|------------|--------------|------------|--------------|----------------------------|
|                 | Day<br>OPS | Night<br>OPS | Day<br>OPS | Night<br>OPS | Day<br>OPS | Night<br>OPS |                            |
| P-A-10-DS       | 1.000      | 0.000        | 30.00      | 0.00         | 360.       | 0.           | 3.                         |
| P-C-17-DS       | 0.069      | 0.000        | 2.08       | 0.00         | 25.        | 0.           | 9.                         |
| P-C-130-DS      | 0.400      | 0.000        | 12.00      | 0.00         | 144.       | 0.           | 0.                         |
| P-F-15-DS       | 2.400      | 0.000        | 72.00      | 0.00         | 864.       | 0.           | 5.                         |
| P-F-16-DS       | 4.042      | 0.000        | 121.25     | 0.00         | 1455.      | 0.           | 4.                         |
| P-F-22-DS       | 2.381      | 0.000        | 71.42      | 0.00         | 857.       | 0.           | 2.                         |
| P-T-38-DS       | 1.261      | 0.000        | 37.83      | 0.00         | 454.       | 0.           | 3.                         |

MOA name = EVERS CENTER MOA

| Mission Name | Daily |       | Monthly |       | Yearly |       | Time On Range (minutes) |
|--------------|-------|-------|---------|-------|--------|-------|-------------------------|
|              | Day   | Night | Day     | Night | Day    | Night |                         |
|              | OPS   | OPS   | OPS     | OPS   | OPS    | OPS   |                         |
| P-A-10-EC    | 1.000 | 0.000 | 30.00   | 0.00  | 360.   | 0.    | 4.                      |
| P-C-17-EC    | 0.069 | 0.000 | 2.08    | 0.00  | 25.    | 0.    | 6.                      |
| P-C-130-EC   | 0.400 | 0.000 | 12.00   | 0.00  | 144.   | 0.    | 2.                      |
| P-F-15-EC    | 2.400 | 0.000 | 72.00   | 0.00  | 864.   | 0.    | 5.                      |
| P-F-16-EC    | 4.042 | 0.000 | 121.25  | 0.00  | 1455.  | 0.    | 4.                      |
| P-F-22-EC    | 2.381 | 0.000 | 71.42   | 0.00  | 857.   | 0.    | 5.                      |
| P-T-38-EC    | 1.261 | 0.000 | 37.83   | 0.00  | 454.   | 0.    | 8.                      |

MOA name = EVERS EAST MOA

| Mission Name | Daily |       | Monthly |       | Yearly |       | Time On Range (minutes) |
|--------------|-------|-------|---------|-------|--------|-------|-------------------------|
|              | Day   | Night | Day     | Night | Day    | Night |                         |
|              | OPS   | OPS   | OPS     | OPS   | OPS    | OPS   |                         |
| P-A-10-EE    | 1.000 | 0.000 | 30.00   | 0.00  | 360.   | 0.    | 3.                      |
| P-C-17-EE    | 0.069 | 0.000 | 2.08    | 0.00  | 25.    | 0.    | 4.                      |
| P-C-130-EE   | 0.400 | 0.000 | 12.00   | 0.00  | 144.   | 0.    | 5.                      |
| P-F-15-EE    | 2.400 | 0.000 | 72.00   | 0.00  | 864.   | 0.    | 4.                      |
| P-F-16-EE    | 4.042 | 0.000 | 121.25  | 0.00  | 1455.  | 0.    | 3.                      |
| P-F-22-EE    | 2.381 | 0.000 | 71.42   | 0.00  | 857.   | 0.    | 2.                      |
| P-T-38-EE    | 1.261 | 0.000 | 37.83   | 0.00  | 454.   | 0.    | 3.                      |

MOA name = EVERS LOW MOA

| Mission Name | Daily |       | Monthly |       | Yearly |       | Time On Range (minutes) |
|--------------|-------|-------|---------|-------|--------|-------|-------------------------|
|              | Day   | Night | Day     | Night | Day    | Night |                         |
|              | OPS   | OPS   | OPS     | OPS   | OPS    | OPS   |                         |
| P-A-10-EL    | 1.000 | 0.000 | 30.00   | 0.00  | 360.   | 0.    | 9.                      |
| P-C-17-EL    | 0.069 | 0.000 | 2.08    | 0.00  | 25.    | 0.    | 12.                     |
| P-C-130-EL   | 0.400 | 0.000 | 12.00   | 0.00  | 144.   | 0.    | 18.                     |
| P-F-15-EL    | 2.400 | 0.000 | 72.00   | 0.00  | 864.   | 0.    | 11.                     |
| P-F-16-EL    | 4.042 | 0.000 | 121.25  | 0.00  | 1455.  | 0.    | 8.                      |
| P-F-22-EL    | 2.381 | 0.000 | 71.42   | 0.00  | 857.   | 0.    | 2.                      |
| P-T-38-EL    | 1.261 | 0.000 | 37.83   | 0.00  | 454.   | 0.    | 4.                      |

MOA name = EVERS NORTH MOA

| Mission Name | Daily |       | Monthly |       | Yearly |       | Time On Range (minutes) |
|--------------|-------|-------|---------|-------|--------|-------|-------------------------|
|              | Day   | Night | Day     | Night | Day    | Night |                         |
|              | OPS   | OPS   | OPS     | OPS   | OPS    | OPS   |                         |
| P-A-10-EN    | 1.000 | 0.000 | 30.00   | 0.00  | 360.   | 0.    | 2.                      |
| P-C-17-EN    | 0.069 | 0.000 | 2.08    | 0.00  | 25.    | 0.    | 4.                      |
| P-C-130-EN   | 0.400 | 0.000 | 12.00   | 0.00  | 144.   | 0.    | 2.                      |
| P-F-15-EN    | 2.400 | 0.000 | 72.00   | 0.00  | 864.   | 0.    | 3.                      |
| P-F-16-EN    | 4.042 | 0.000 | 121.25  | 0.00  | 1455.  | 0.    | 3.                      |
| P-F-22-EN    | 2.381 | 0.000 | 71.42   | 0.00  | 857.   | 0.    | 3.                      |
| P-T-38-EN    | 1.261 | 0.000 | 37.83   | 0.00  | 454.   | 0.    | 5.                      |

MOA name = EVERS SOUTH MOA

| Mission Name | Daily |       | Monthly |       | Yearly |       | Time On Range (minutes) |
|--------------|-------|-------|---------|-------|--------|-------|-------------------------|
|              | Day   | Night | Day     | Night | Day    | Night |                         |
|              | OPS   | OPS   | OPS     | OPS   | OPS    | OPS   |                         |

|            |       |       |        |      |       |    |    |
|------------|-------|-------|--------|------|-------|----|----|
| P-A-10-ES  | 1.000 | 0.000 | 30.00  | 0.00 | 360.  | 0. | 2. |
| P-C-17-ES  | 0.069 | 0.000 | 2.08   | 0.00 | 25.   | 0. | 4. |
| P-C-130-ES | 0.400 | 0.000 | 12.00  | 0.00 | 144.  | 0. | 2. |
| P-F-15-ES  | 2.400 | 0.000 | 72.00  | 0.00 | 864.  | 0. | 3. |
| P-F-16-ES  | 4.042 | 0.000 | 121.25 | 0.00 | 1455. | 0. | 3. |
| P-F-22-ES  | 2.381 | 0.000 | 71.42  | 0.00 | 857.  | 0. | 3. |
| P-T-38-ES  | 1.261 | 0.000 | 37.83  | 0.00 | 454.  | 0. | 5. |

\*\*\*\*\*

Warning: Grid points spaced greater than 1000 feet apart may not provide the necessary grid resolution, in some cases, to compute noise contours with high accuracy. For low-altitude track operations, the recommended grid spacing is less than 1000 feet.

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\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

The noise metric is Ldnmr.

| MOA Name            | MOA RESULTS                         |                                        |                                             |
|---------------------|-------------------------------------|----------------------------------------|---------------------------------------------|
|                     | Uniform MOA Area (sq statute miles) | Number of Distributed Sound Level (dB) | Number of Daily Events Above SEL of 75.0 dB |
| DIESEL CENTER ATCAA | 2123.1                              | 35.0                                   | 0.0                                         |
| DIESEL NORTH ATCAA  | 1187.1                              | 35.0                                   | 0.0                                         |
| DIESEL SOUTH ATCAA  | 1258.7                              | 35.0                                   | 0.0                                         |
| EVERS CENTER MOA    | 2123.1                              | 38.5                                   | 0.5                                         |
| EVERS EAST MOA      | 257.5                               | 49.6                                   | 0.0                                         |
| EVERS EXISTING      | 634.4                               | No operations on this MOA!             |                                             |
| EVERS LOW MOA       | 1265.6                              | 48.2                                   | 0.0                                         |
| EVERS NORTH MOA     | 1187.1                              | 38.9                                   | 0.5                                         |
| EVERS SOUTH MOA     | 1258.7                              | 38.8                                   | 0.5                                         |

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

SPECIFIC POINT RESULTS

Specific Point: EVERS EAST

Top 20 contributors to this level:

| < Airspace         | > Mission  | Sound Level |        |       |
|--------------------|------------|-------------|--------|-------|
|                    |            | Aircraft    | (dB)   | HA(%) |
| EVERS EAST MOA     | P-F-15-EE  | F-15E       | 47.0   | 1.1   |
| EVERS EAST MOA     | P-F-22-EE  | F-22        | 43.4   | 0.7   |
| EVERS EAST MOA     | P-F-16-EE  | F-16C       | 43.0   | 0.6   |
| EVERS EAST MOA     | P-A-10-EE  | A-10A       | < 35.0 |       |
| EVERS EAST MOA     | P-C-130-EE | C-130A&D    | < 35.0 |       |
| EVERS EAST MOA     | P-T-38-EE  | T-38A       | < 35.0 |       |
| EVERS EAST MOA     | P-C-17-EE  | C-17        | < 35.0 |       |
| EVERS LOW MOA      | P-F-15-EL  | F-15E       | < 35.0 |       |
| EVERS LOW MOA      | P-F-16-EL  | F-16C       | < 35.0 |       |
| EVERS LOW MOA      | P-F-22-EL  | F-22        | < 35.0 |       |
| EVERS NORTH MOA    | P-F-22-EN  | F-22        | < 35.0 |       |
| EVERS SOUTH MOA    | P-F-22-ES  | F-22        | < 35.0 |       |
| EVERS CENTER MOA   | P-F-22-EC  | F-22        | < 35.0 |       |
| EVERS NORTH MOA    | P-F-15-EN  | F-15E       | < 35.0 |       |
| EVERS SOUTH MOA    | P-F-15-ES  | F-15E       | < 35.0 |       |
| EVERS CENTER MOA   | P-F-15-EC  | F-15E       | < 35.0 |       |
| EVERS NORTH MOA    | P-F-16-EN  | F-16C       | < 35.0 |       |
| EVERS SOUTH MOA    | P-F-16-ES  | F-16C       | < 35.0 |       |
| EVERS CENTER MOA   | P-F-16-EC  | F-16C       | < 35.0 |       |
| DIESEL NORTH ATCAA | P-F-15-DN  | F-15E       | < 35.0 |       |
| Total Level .....  |            | 49.6        | 1.6    |       |

Specific Point: EVERS EXISTING  
 Top 20 contributors to this level:

| < Airspace          | > Mission  | Sound Level |        |       |
|---------------------|------------|-------------|--------|-------|
|                     |            | Aircraft    | (dB)   | HA(%) |
| EVERS LOW MOA       | P-F-15-EL  | F-15E       | 45.8   | 0.9   |
| EVERS LOW MOA       | P-F-16-EL  | F-16C       | 41.9   | 0.5   |
| EVERS LOW MOA       | P-F-22-EL  | F-22        | 40.9   | 0.5   |
| EVERS CENTER MOA    | P-F-22-EC  | F-22        | 36.1   | 0.2   |
| EVERS CENTER MOA    | P-F-15-EC  | F-15E       | < 35.0 |       |
| EVERS CENTER MOA    | P-F-16-EC  | F-16C       | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-15-DC  | F-15E       | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-22-DC  | F-22        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-16-DC  | F-16C       | < 35.0 |       |
| EVERS LOW MOA       | P-A-10-EL  | A-10A       | < 35.0 |       |
| EVERS LOW MOA       | P-C-130-EL | C-130A&D    | < 35.0 |       |
| EVERS LOW MOA       | P-T-38-EL  | T-38A       | < 35.0 |       |
| EVERS LOW MOA       | P-C-17-EL  | C-17        | < 35.0 |       |
| EVERS CENTER MOA    | P-A-10-EC  | A-10A       | < 35.0 |       |
| EVERS CENTER MOA    | P-T-38-EC  | T-38A       | < 35.0 |       |
| EVERS CENTER MOA    | P-C-130-EC | C-130A&D    | < 35.0 |       |
| DIESEL CENTER ATCAA | P-A-10-DC  | A-10A       | < 35.0 |       |
| EVERS CENTER MOA    | P-C-17-EC  | C-17        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-C-17-DC  | C-17        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-T-38-DC  | T-38A       | < 35.0 |       |
| Total Level .....   |            | 48.7        | 1.4    |       |

Specific Point: EVERS LOW  
 Top 20 contributors to this level:

| < Airspace          | > Mission  | Sound Level |        |       |
|---------------------|------------|-------------|--------|-------|
|                     |            | Aircraft    | (dB)   | HA(%) |
| EVERS LOW MOA       | P-F-15-EL  | F-15E       | 45.8   | 0.9   |
| EVERS LOW MOA       | P-F-16-EL  | F-16C       | 41.9   | 0.5   |
| EVERS LOW MOA       | P-F-22-EL  | F-22        | 40.9   | 0.5   |
| EVERS CENTER MOA    | P-F-22-EC  | F-22        | 36.2   | 0.2   |
| EVERS CENTER MOA    | P-F-15-EC  | F-15E       | < 35.0 |       |
| EVERS CENTER MOA    | P-F-16-EC  | F-16C       | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-15-DC  | F-15E       | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-22-DC  | F-22        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-16-DC  | F-16C       | < 35.0 |       |
| EVERS LOW MOA       | P-A-10-EL  | A-10A       | < 35.0 |       |
| EVERS LOW MOA       | P-C-130-EL | C-130A&D    | < 35.0 |       |
| EVERS LOW MOA       | P-T-38-EL  | T-38A       | < 35.0 |       |
| EVERS LOW MOA       | P-C-17-EL  | C-17        | < 35.0 |       |
| EVERS CENTER MOA    | P-A-10-EC  | A-10A       | < 35.0 |       |
| EVERS CENTER MOA    | P-T-38-EC  | T-38A       | < 35.0 |       |
| EVERS CENTER MOA    | P-C-130-EC | C-130A&D    | < 35.0 |       |
| DIESEL CENTER ATCAA | P-A-10-DC  | A-10A       | < 35.0 |       |
| EVERS CENTER MOA    | P-C-17-EC  | C-17        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-C-17-DC  | C-17        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-T-38-DC  | T-38A       | < 35.0 |       |
| Total Level .....   |            | 48.7        | 1.4    |       |

Specific Point: EVERS-DIESEL CENTER  
 Top 20 contributors to this level:

| < Airspace          | > Mission  | Sound Level |        |       |
|---------------------|------------|-------------|--------|-------|
|                     |            | Aircraft    | (dB)   | HA(%) |
| EVERS CENTER MOA    | P-F-22-EC  | F-22        | 36.1   | 0.2   |
| EVERS CENTER MOA    | P-F-15-EC  | F-15E       | < 35.0 |       |
| EVERS CENTER MOA    | P-F-16-EC  | F-16C       | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-15-DC  | F-15E       | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-22-DC  | F-22        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-F-16-DC  | F-16C       | < 35.0 |       |
| EVERS CENTER MOA    | P-A-10-EC  | A-10A       | < 35.0 |       |
| EVERS CENTER MOA    | P-T-38-EC  | T-38A       | < 35.0 |       |
| EVERS CENTER MOA    | P-C-130-EC | C-130A&D    | < 35.0 |       |
| DIESEL CENTER ATCAA | P-A-10-DC  | A-10A       | < 35.0 |       |
| EVERS CENTER MOA    | P-C-17-EC  | C-17        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-C-17-DC  | C-17        | < 35.0 |       |
| DIESEL CENTER ATCAA | P-T-38-DC  | T-38A       | < 35.0 |       |
| EVERS EAST MOA      | P-F-15-EE  | F-15E       | < 35.0 |       |
| EVERS LOW MOA       | P-F-15-EL  | F-15E       | < 35.0 |       |
| EVERS EAST MOA      | P-F-22-EE  | F-22        | < 35.0 |       |
| EVERS EAST MOA      | P-F-16-EE  | F-16C       | < 35.0 |       |
| EVERS LOW MOA       | P-F-16-EL  | F-16C       | < 35.0 |       |



|                   |           |      |        |
|-------------------|-----------|------|--------|
| EVERS LOW MOA     | P-F-22-EL | F-22 | < 35.0 |
| EVERS NORTH MOA   | P-F-22-EN | F-22 | < 35.0 |
| Total Level ..... |           | 39.0 | 0.4    |

Specific Point: EVERS-DIESEL NORTH  
Top 20 contributors to this level:

| < Airspace         | > Mission  | Sound Level |        |       |
|--------------------|------------|-------------|--------|-------|
|                    |            | Aircraft    | (dB)   | HA(%) |
| EVERS NORTH MOA    | P-F-22-EN  | F-22        | 36.6   | 0.3   |
| EVERS NORTH MOA    | P-F-15-EN  | F-15E       | < 35.0 |       |
| EVERS NORTH MOA    | P-F-16-EN  | F-16C       | < 35.0 |       |
| DIESEL NORTH ATCAA | P-F-15-DN  | F-15E       | < 35.0 |       |
| DIESEL NORTH ATCAA | P-F-22-DN  | F-22        | < 35.0 |       |
| DIESEL NORTH ATCAA | P-F-16-DN  | F-16C       | < 35.0 |       |
| EVERS NORTH MOA    | P-A-10-EN  | A-10A       | < 35.0 |       |
| EVERS NORTH MOA    | P-T-38-EN  | T-38A       | < 35.0 |       |
| EVERS NORTH MOA    | P-C-130-EN | C-130A&D    | < 35.0 |       |
| DIESEL NORTH ATCAA | P-A-10-DN  | A-10A       | < 35.0 |       |
| EVERS NORTH MOA    | P-C-17-EN  | C-17        | < 35.0 |       |
| DIESEL NORTH ATCAA | P-C-17-DN  | C-17        | < 35.0 |       |
| DIESEL NORTH ATCAA | P-T-38-DN  | T-38A       | < 35.0 |       |
| DIESEL NORTH ATCAA | P-C-130-DN | C-130A&D    | < 35.0 |       |
| EVERS EAST MOA     | P-F-15-EE  | F-15E       | < 35.0 |       |
| EVERS LOW MOA      | P-F-15-EL  | F-15E       | < 35.0 |       |
| EVERS EAST MOA     | P-F-22-EE  | F-22        | < 35.0 |       |
| EVERS EAST MOA     | P-F-16-EE  | F-16C       | < 35.0 |       |
| EVERS LOW MOA      | P-F-16-EL  | F-16C       | < 35.0 |       |
| EVERS LOW MOA      | P-F-22-EL  | F-22        | < 35.0 |       |
| Total Level .....  |            | 39.6        | 0.4    |       |

Specific Point: EVERS-DIESEL SOUTH  
Top 20 contributors to this level:

| < Airspace         | > Mission  | Sound Level |        |       |
|--------------------|------------|-------------|--------|-------|
|                    |            | Aircraft    | (dB)   | HA(%) |
| EVERS SOUTH MOA    | P-F-22-ES  | F-22        | 36.5   | 0.3   |
| EVERS SOUTH MOA    | P-F-15-ES  | F-15E       | < 35.0 |       |
| EVERS SOUTH MOA    | P-F-16-ES  | F-16C       | < 35.0 |       |
| DIESEL SOUTH ATCAA | P-F-15-DS  | F-15E       | < 35.0 |       |
| DIESEL SOUTH ATCAA | P-F-22-DS  | F-22        | < 35.0 |       |
| DIESEL SOUTH ATCAA | P-F-16-DS  | F-16C       | < 35.0 |       |
| EVERS SOUTH MOA    | P-A-10-ES  | A-10A       | < 35.0 |       |
| EVERS SOUTH MOA    | P-T-38-ES  | T-38A       | < 35.0 |       |
| EVERS SOUTH MOA    | P-C-130-ES | C-130A&D    | < 35.0 |       |
| DIESEL SOUTH ATCAA | P-A-10-DS  | A-10A       | < 35.0 |       |
| EVERS SOUTH MOA    | P-C-17-ES  | C-17        | < 35.0 |       |
| DIESEL SOUTH ATCAA | P-C-17-DS  | C-17        | < 35.0 |       |
| DIESEL SOUTH ATCAA | P-T-38-DS  | T-38A       | < 35.0 |       |
| DIESEL SOUTH ATCAA | P-C-130-DS | C-130A&D    | < 35.0 |       |

|                |           |       |        |
|----------------|-----------|-------|--------|
| EVERS EAST MOA | P-F-15-EE | F-15E | < 35.0 |
| EVERS LOW MOA  | P-F-15-EL | F-15E | < 35.0 |
| EVERS EAST MOA | P-F-22-EE | F-22  | < 35.0 |
| EVERS EAST MOA | P-F-16-EE | F-16C | < 35.0 |
| EVERS LOW MOA  | P-F-16-EL | F-16C | < 35.0 |
| EVERS LOW MOA  | P-F-22-EL | F-22  | < 35.0 |

Total Level ..... 39.4 0.4

<Run Log>

Date: 11/15/2019

Start Time: 16: 7:42

Stop Time: 16: 8:23

Total Running Time: 0 minutes and 42 seconds.

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*

Version 3.0

Release Date 2/7/2013

CASE INFORMATION

Case Name:Evers SUA Complex 2019 - Proposed - DNL Scenario

Site Name:Evers

SETUP PARAMETERS

Number of MOAs and Ranges = 9 Number of tracks = 0

Lower Left Corner of Grid in feet (X Y pair) = -372500., -372500.

Upper Right Corner of Grid in feet (X Y pair) = 372500., 372500.

Grid spacing = 5000. feet Number of events above an SEL of 75.0 dB

Temperature = 59 F Humidity = 70 Flying days per month = 30

MOA SPECIFICATIONS

MOA name DIESEL CENTER ATCAA

Lat Long

(deg) (deg)

38.19320 -80.63750

38.78720 -80.48041

38.75401 -79.54699

38.13700 -79.72040

38.19320 -80.63750

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL NORTH ATCAA

Lat Long

(deg) (deg)

38.78720 -80.48041

39.12821 -80.39030

39.08871 -79.45249

38.75401 -79.54699

38.78720 -80.48041

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL SOUTH ATCAA

Lat Long

(deg) (deg)

38.13700 -79.72040

37.78029 -79.82050

37.83079 -80.73381

38.19320 -80.63750

38.13700 -79.72040

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name EVERS CENTER MOA

Lat Long

(deg) (deg)

38.19320 -80.63750

38.78720 -80.48041

38.75401 -79.54699

38.13700 -79.72040

38.19320 -80.63750

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EAST MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.64750 | -79.33029 |
| 38.40000 | -79.33029 |
| 38.40000 | -79.64570 |
| 38.64750 | -79.57169 |
| 38.64750 | -79.33029 |

Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EXISTING

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.66690 | -79.96640 |
| 38.66690 | -79.33029 |
| 38.40000 | -79.33029 |
| 38.40000 | -79.96640 |
| 38.66690 | -79.96640 |

Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS LOW MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.64750 | -79.57809 |
| 38.13700 | -79.72040 |
| 38.18020 | -80.42490 |
| 38.58360 | -80.30110 |
| 38.64750 | -80.00000 |
| 38.64750 | -79.57169 |
| 38.64750 | -79.57809 |

Floor = 1000 feet AGL Ceiling = 8000 feet AGL

MOA name EVERS NORTH MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.78720 | -80.48041 |
| 39.12821 | -80.39030 |
| 39.08871 | -79.45249 |
| 38.75401 | -79.54699 |
| 38.78720 | -80.48041 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS SOUTH MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.13700 | -79.72040 |
| 37.78029 | -79.82050 |
| 37.83079 | -80.73381 |
| 38.19320 | -80.63750 |
| 38.13700 | -79.72040 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

#### SPECIFIC POINT SPECIFICATION

Number of Specific points = 6

| Latitude | Longitude | Name                |
|----------|-----------|---------------------|
| 38.55200 | -79.47399 | EVERS EAST          |
| 38.52000 | -79.66900 | EVERS EXISTING      |
| 38.42500 | -80.01200 | EVERS LOW           |
| 38.68800 | -80.38600 | EVERS-DIESEL CENTER |
| 38.92901 | -79.98800 | EVERS-DIESEL NORTH  |
| 37.98100 | -80.23300 | EVERS-DIESEL SOUTH  |

#### MISSION DATA

Mission name = P-A-10-DC\_2

Aircraft code =FM0090100 Speed = 350 kias Power = 90.0

Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 15000                   | 20000                   | 100.0                  |

Mission name = P-A-10-DN\_2

Aircraft code =FM0090100 Speed = 350 kias Power = 90.0

Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 15000                   | 20000                   | 100.0                  |

Mission name = P-A-10-DS\_2

Aircraft code =FM0090100 Speed = 350 kias Power = 90.0

Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 15000                   | 20000                   | 100.0                  |

Mission name = P-A-10-EC\_2

Aircraft code =FM0090100 Speed = 350 kias Power = 90.0

Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 100.0                  |

Mission name = P-A-10-EE\_2

Aircraft code =FM0090100 Speed = 350 kias Power = 90.0

Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 71.0                   |
| 8000                    | 15000                   | 29.0                   |

Mission name = P-A-10-EL\_2

Aircraft code =FM0090100 Speed = 350 kias Power = 90.0

Altitude Distribution

| Lower Alt | Upper Alt | Percent |
|-----------|-----------|---------|
|-----------|-----------|---------|

(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-A-10-EN\_2  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-A-10-ES\_2  
Aircraft code =FM0090100 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-DC\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-17-DN\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-17-DS\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-17-EC\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-EE\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent

| (feet AGL) | (feet AGL) | Utilization |
|------------|------------|-------------|
| 1000       | 8000       | 67.0        |
| 8000       | 15000      | 33.0        |

Mission name = P-C-17-EL\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-EN\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-17-ES\_2  
Aircraft code =FM0200100 Speed = 350 kias Power = 75.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-C-130-DC\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-130-DC\_2\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-130-DN\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-C-130-DS\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 15000                   | 20000                   | 100.0                  |

Mission name = P-C-130-EC\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 100.0                  |

Mission name = P-C-130-EE\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 88.0                   |
| 8000                    | 15000                   | 12.0                   |

Mission name = P-C-130-EL\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 100.0                  |

Mission name = P-C-130-EN\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 100.0                  |

Mission name = P-C-130-ES\_2  
Aircraft code =FM0290100 Speed = 350 kias Power = 700.0  
Altitude Distribution  

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 100.0                  |

Mission name = P-F-15-DC\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 15000                   | 20000                   | 100.0                  |

Mission name = P-F-15-DN\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0



Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-15-DS\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-15-EC\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-15-EE\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 67.0  
8000 15000 33.0

Mission name = P-F-15-EL\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-15-EN\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-15-ES\_2  
Aircraft code =FM0430400 Speed = 350 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-DC\_2

Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-16-DN\_2  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-16-DS\_2  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-16-EC\_2  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-EE\_2  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 67.0  
8000 15000 33.0

Mission name = P-F-16-EL\_2  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-EN\_2  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-16-ES\_2  
Aircraft code =FM0440300 Speed = 450 kias Power = 90.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-F-22-DC\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-22-DN\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-22-DS\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-F-22-EC\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 50.0  
3000 8000 50.0

Mission name = P-F-22-EE\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 5.0  
3000 8000 28.0  
8000 15000 67.0

Mission name = P-F-22-EL\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0  
Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization

|      |      |      |
|------|------|------|
| 1000 | 3000 | 10.0 |
| 3000 | 8000 | 90.0 |

Mission name = P-F-22-EN\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 10.0  
3000 8000 90.0

Mission name = P-F-22-ES\_2  
Aircraft code =FM0850100 Speed = 450 kias Power = 92.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 3000 10.0  
3000 8000 90.0

Mission name = P-T-38-DC\_2  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-T-38-DN\_2  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-T-38-DS\_2  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
15000 20000 100.0

Mission name = P-T-38-EC\_2  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
Lower Alt Upper Alt Percent  
(feet AGL) (feet AGL) Utilization  
1000 8000 100.0

Mission name = P-T-38-EE\_2  
Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
 Lower Alt Upper Alt Percent  
 (feet AGL) (feet AGL) Utilization  
 1000 8000 33.0  
 8000 15000 67.0

Mission name = P-T-38-EL\_2  
 Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
 Lower Alt Upper Alt Percent  
 (feet AGL) (feet AGL) Utilization  
 1000 8000 100.0

Mission name = P-T-38-EN\_2  
 Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
 Lower Alt Upper Alt Percent  
 (feet AGL) (feet AGL) Utilization  
 1000 8000 100.0

Mission name = P-T-38-ES\_2  
 Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

Altitude Distribution  
 Lower Alt Upper Alt Percent  
 (feet AGL) (feet AGL) Utilization  
 1000 8000 100.0

MOA OPERATION DATA

MOA name = DIESEL CENTER ATCAA

| Mission Name   | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|----------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|                | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-DC_2    | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 4.                      |
| P-C-17-DC_2    | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 12.                     |
| P-C-130-DC_2   | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 1.                      |
| P-C-130-DC_2_2 | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 1.                      |
| P-F-15-DC_2    | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 7.                      |
| P-F-16-DC_2    | 1.683   | 0.000     | 50.50   | 0.00      | 606.    | 0.        | 5.                      |
| P-F-22-DC_2    | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 2.                      |
| P-T-38-DC_2    | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 3.                      |

MOA name = DIESEL NORTH ATCAA

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-DN_2  | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 3.                      |
| P-C-17-DN_2  | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 9.                      |
| P-C-130-DN_2 | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 0.                      |
| P-F-15-DN_2  | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 5.                      |

|             |       |       |       |      |      |    |    |
|-------------|-------|-------|-------|------|------|----|----|
| P-F-16-DN_2 | 1.683 | 0.000 | 50.50 | 0.00 | 606. | 0. | 4. |
| P-F-22-DN_2 | 0.992 | 0.000 | 29.75 | 0.00 | 357. | 0. | 2. |
| P-T-38-DN_2 | 0.525 | 0.000 | 15.75 | 0.00 | 189. | 0. | 3. |

MOA name = DIESEL SOUTH ATCAA

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-DS_2  | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 3.                      |
| P-C-17-DS_2  | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 9.                      |
| P-C-130-DS_2 | 0.400   | 0.000     | 12.00   | 0.00      | 144.    | 0.        | 0.                      |
| P-F-15-DS_2  | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 5.                      |
| P-F-16-DS_2  | 1.683   | 0.000     | 50.50   | 0.00      | 606.    | 0.        | 4.                      |
| P-F-22-DS_2  | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 2.                      |
| P-T-38-DS_2  | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 3.                      |

MOA name = EVERS CENTER MOA

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-EC_2  | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 4.                      |
| P-C-17-EC_2  | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 6.                      |
| P-C-130-EC_2 | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 2.                      |
| P-F-15-EC_2  | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 5.                      |
| P-F-16-EC_2  | 1.683   | 0.000     | 50.50   | 0.00      | 606.    | 0.        | 4.                      |
| P-F-22-EC_2  | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 5.                      |
| P-T-38-EC_2  | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 8.                      |

MOA name = EVERS EAST MOA

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-EE_2  | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 3.                      |
| P-C-17-EE_2  | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 4.                      |
| P-C-130-EE_2 | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 5.                      |
| P-F-15-EE_2  | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 4.                      |
| P-F-16-EE_2  | 1.683   | 0.000     | 50.50   | 0.00      | 606.    | 0.        | 3.                      |
| P-F-22-EE_2  | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 2.                      |
| P-T-38-EE_2  | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 3.                      |

MOA name = EVERS LOW MOA

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-EL_2  | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 9.                      |
| P-C-17-EL_2  | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 12.                     |
| P-C-130-EL_2 | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 18.                     |
| P-F-15-EL_2  | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 11.                     |
| P-F-16-EL_2  | 1.683   | 0.000     | 50.50   | 0.00      | 606.    | 0.        | 8.                      |
| P-F-22-EL_2  | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 2.                      |
| P-T-38-EL_2  | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 4.                      |

MOA name = EVERS NORTH MOA

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-EN_2  | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 2.                      |
| P-C-17-EN_2  | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 4.                      |
| P-C-130-EN_2 | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 2.                      |
| P-F-15-EN_2  | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 3.                      |
| P-F-16-EN_2  | 1.683   | 0.000     | 50.50   | 0.00      | 606.    | 0.        | 3.                      |
| P-F-22-EN_2  | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 3.                      |
| P-T-38-EN_2  | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 5.                      |

MOA name = EVERS SOUTH MOA

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| P-A-10-ES_2  | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 2.                      |
| P-C-17-ES_2  | 0.069   | 0.000     | 2.08    | 0.00      | 25.     | 0.        | 4.                      |
| P-C-130-ES_2 | 0.222   | 0.000     | 6.67    | 0.00      | 80.     | 0.        | 2.                      |
| P-F-15-ES_2  | 1.333   | 0.000     | 40.00   | 0.00      | 480.    | 0.        | 3.                      |
| P-F-16-ES_2  | 1.683   | 0.000     | 50.50   | 0.00      | 606.    | 0.        | 3.                      |
| P-F-22-ES_2  | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 3.                      |
| P-T-38-ES_2  | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 5.                      |

\*\*\*\*\*

Warning: Grid points spaced greater than 1000 feet apart may not provide the necessary grid resolution, in some cases, to compute noise contours with high accuracy. For low-altitude track operations, the recommended grid spacing is less than 1000 feet.

\*\*\*\*\*

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

The noise metric is Ldn.

| MOA Name            | MOA RESULTS                         |                                        |                                             |
|---------------------|-------------------------------------|----------------------------------------|---------------------------------------------|
|                     | Uniform MOA Area (sq statute miles) | Number of Distributed Sound Level (dB) | Number of Daily Events Above SEL of 75.0 dB |
| DIESEL CENTER ATCAA | 2123.1                              | 35.0                                   | 0.0                                         |
| DIESEL NORTH ATCAA  | 1187.1                              | 35.0                                   | 0.0                                         |
| DIESEL SOUTH ATCAA  | 1258.7                              | 35.0                                   | 0.0                                         |
| EVERS CENTER MOA    | 2123.1                              | 35.1                                   | 0.2                                         |
| EVERS EAST MOA      | 257.5                               | 46.5                                   | 0.0                                         |

|                 |        |                            |     |
|-----------------|--------|----------------------------|-----|
| EVERS EXISTING  | 634.4  | No operations on this MOA! |     |
| EVERS LOW MOA   | 1265.6 | 45.1                       | 0.0 |
| EVERS NORTH MOA | 1187.1 | 35.5                       | 0.2 |
| EVERS SOUTH MOA | 1258.7 | 35.4                       | 0.2 |

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

SPECIFIC POINT RESULTS

Specific Point: EVERS EAST  
Top 20 contributors to this level:

| < Airspace         | > Mission    | Aircraft | Sound Level (dB) |
|--------------------|--------------|----------|------------------|
| EVERS EAST MOA     | P-F-15-EE_2  | F-15E    | 44.4             |
| EVERS EAST MOA     | P-F-22-EE_2  | F-22     | 39.6             |
| EVERS EAST MOA     | P-F-16-EE_2  | F-16C    | 39.2             |
| EVERS EAST MOA     | P-A-10-EE_2  | A-10A    | < 35.0           |
| EVERS EAST MOA     | P-C-130-EE_2 | C-130A&D | < 35.0           |
| EVERS EAST MOA     | P-C-17-EE_2  | C-17     | < 35.0           |
| EVERS EAST MOA     | P-T-38-EE_2  | T-38A    | < 35.0           |
| EVERS LOW MOA      | P-F-15-EL_2  | F-15E    | < 35.0           |
| EVERS LOW MOA      | P-F-16-EL_2  | F-16C    | < 35.0           |
| EVERS LOW MOA      | P-F-22-EL_2  | F-22     | < 35.0           |
| EVERS NORTH MOA    | P-F-22-EN_2  | F-22     | < 35.0           |
| EVERS SOUTH MOA    | P-F-22-ES_2  | F-22     | < 35.0           |
| EVERS CENTER MOA   | P-F-22-EC_2  | F-22     | < 35.0           |
| EVERS NORTH MOA    | P-F-15-EN_2  | F-15E    | < 35.0           |
| EVERS SOUTH MOA    | P-F-15-ES_2  | F-15E    | < 35.0           |
| EVERS CENTER MOA   | P-F-15-EC_2  | F-15E    | < 35.0           |
| EVERS NORTH MOA    | P-F-16-EN_2  | F-16C    | < 35.0           |
| EVERS SOUTH MOA    | P-F-16-ES_2  | F-16C    | < 35.0           |
| EVERS CENTER MOA   | P-F-16-EC_2  | F-16C    | < 35.0           |
| DIESEL NORTH ATCAA | P-F-15-DN_2  | F-15E    | < 35.0           |
| Total Level .....  |              |          | 46.5             |

Specific Point: EVERS EXISTING  
Top 20 contributors to this level:

| < Airspace       | > Mission   | Aircraft | Sound Level (dB) |
|------------------|-------------|----------|------------------|
| EVERS LOW MOA    | P-F-15-EL_2 | F-15E    | 43.2             |
| EVERS LOW MOA    | P-F-16-EL_2 | F-16C    | 38.1             |
| EVERS LOW MOA    | P-F-22-EL_2 | F-22     | 37.1             |
| EVERS CENTER MOA | P-F-22-EC_2 | F-22     | < 35.0           |



|                     |                |          |        |
|---------------------|----------------|----------|--------|
| EVERS CENTER MOA    | P-F-15-EC_2    | F-15E    | < 35.0 |
| EVERS CENTER MOA    | P-F-16-EC_2    | F-16C    | < 35.0 |
| DIESEL CENTER ATCAA | P-F-15-DC_2    | F-15E    | < 35.0 |
| DIESEL CENTER ATCAA | P-F-22-DC_2    | F-22     | < 35.0 |
| DIESEL CENTER ATCAA | P-F-16-DC_2    | F-16C    | < 35.0 |
| EVERS LOW MOA       | P-A-10-EL_2    | A-10A    | < 35.0 |
| EVERS LOW MOA       | P-C-130-EL_2   | C-130A&D | < 35.0 |
| EVERS LOW MOA       | P-C-17-EL_2    | C-17     | < 35.0 |
| EVERS LOW MOA       | P-T-38-EL_2    | T-38A    | < 35.0 |
| EVERS CENTER MOA    | P-A-10-EC_2    | A-10A    | < 35.0 |
| EVERS CENTER MOA    | P-T-38-EC_2    | T-38A    | < 35.0 |
| EVERS CENTER MOA    | P-C-130-EC_2   | C-130A&D | < 35.0 |
| EVERS CENTER MOA    | P-C-17-EC_2    | C-17     | < 35.0 |
| DIESEL CENTER ATCAA | P-A-10-DC_2    | A-10A    | < 35.0 |
| DIESEL CENTER ATCAA | P-C-17-DC_2    | C-17     | < 35.0 |
| DIESEL CENTER ATCAA | P-C-130-DC_2_2 | C-130A&D | < 35.0 |

Total Level ..... 45.6

Specific Point: EVERS LOW  
Top 20 contributors to this level:

| < Airspace          | > Mission      | Aircraft | Sound Level (dB) |
|---------------------|----------------|----------|------------------|
| EVERS LOW MOA       | P-F-15-EL_2    | F-15E    | 43.2             |
| EVERS LOW MOA       | P-F-16-EL_2    | F-16C    | 38.1             |
| EVERS LOW MOA       | P-F-22-EL_2    | F-22     | 37.1             |
| EVERS CENTER MOA    | P-F-22-EC_2    | F-22     | < 35.0           |
| EVERS CENTER MOA    | P-F-15-EC_2    | F-15E    | < 35.0           |
| EVERS CENTER MOA    | P-F-16-EC_2    | F-16C    | < 35.0           |
| DIESEL CENTER ATCAA | P-F-15-DC_2    | F-15E    | < 35.0           |
| DIESEL CENTER ATCAA | P-F-22-DC_2    | F-22     | < 35.0           |
| DIESEL CENTER ATCAA | P-F-16-DC_2    | F-16C    | < 35.0           |
| EVERS LOW MOA       | P-A-10-EL_2    | A-10A    | < 35.0           |
| EVERS LOW MOA       | P-C-130-EL_2   | C-130A&D | < 35.0           |
| EVERS LOW MOA       | P-C-17-EL_2    | C-17     | < 35.0           |
| EVERS LOW MOA       | P-T-38-EL_2    | T-38A    | < 35.0           |
| EVERS CENTER MOA    | P-A-10-EC_2    | A-10A    | < 35.0           |
| EVERS CENTER MOA    | P-T-38-EC_2    | T-38A    | < 35.0           |
| EVERS CENTER MOA    | P-C-130-EC_2   | C-130A&D | < 35.0           |
| EVERS CENTER MOA    | P-C-17-EC_2    | C-17     | < 35.0           |
| DIESEL CENTER ATCAA | P-A-10-DC_2    | A-10A    | < 35.0           |
| DIESEL CENTER ATCAA | P-C-17-DC_2    | C-17     | < 35.0           |
| DIESEL CENTER ATCAA | P-C-130-DC_2_2 | C-130A&D | < 35.0           |

Total Level ..... 45.6

Specific Point: EVERS-DIESEL CENTER  
Top 20 contributors to this level:

| < Airspace | > Mission | Aircraft | Sound Level (dB) |
|------------|-----------|----------|------------------|
|------------|-----------|----------|------------------|

|                     |                |          |        |
|---------------------|----------------|----------|--------|
| EVERS CENTER MOA    | P-F-22-EC_2    | F-22     | < 35.0 |
| EVERS CENTER MOA    | P-F-15-EC_2    | F-15E    | < 35.0 |
| EVERS CENTER MOA    | P-F-16-EC_2    | F-16C    | < 35.0 |
| DIESEL CENTER ATCAA | P-F-15-DC_2    | F-15E    | < 35.0 |
| DIESEL CENTER ATCAA | P-F-22-DC_2    | F-22     | < 35.0 |
| DIESEL CENTER ATCAA | P-F-16-DC_2    | F-16C    | < 35.0 |
| EVERS CENTER MOA    | P-A-10-EC_2    | A-10A    | < 35.0 |
| EVERS CENTER MOA    | P-T-38-EC_2    | T-38A    | < 35.0 |
| EVERS CENTER MOA    | P-C-130-EC_2   | C-130A&D | < 35.0 |
| EVERS CENTER MOA    | P-C-17-EC_2    | C-17     | < 35.0 |
| DIESEL CENTER ATCAA | P-A-10-DC_2    | A-10A    | < 35.0 |
| DIESEL CENTER ATCAA | P-C-17-DC_2    | C-17     | < 35.0 |
| DIESEL CENTER ATCAA | P-C-130-DC_2   | C-130A&D | < 35.0 |
| DIESEL CENTER ATCAA | P-C-130-DC_2_2 | C-130A&D | < 35.0 |
| DIESEL CENTER ATCAA | P-T-38-DC_2    | T-38A    | < 35.0 |
| EVERS EAST MOA      | P-F-15-EE_2    | F-15E    | < 35.0 |
| EVERS LOW MOA       | P-F-15-EL_2    | F-15E    | < 35.0 |
| EVERS EAST MOA      | P-F-22-EE_2    | F-22     | < 35.0 |
| EVERS EAST MOA      | P-F-16-EE_2    | F-16C    | < 35.0 |
| EVERS LOW MOA       | P-F-16-EL_2    | F-16C    | < 35.0 |

Total Level ..... 35.6

Specific Point: EVERS-DIESEL NORTH  
Top 20 contributors to this level:

| < Airspace         | > Mission    | Sound Level Aircraft (dB) |
|--------------------|--------------|---------------------------|
| EVERS NORTH MOA    | P-F-22-EN_2  | F-22 < 35.0               |
| EVERS NORTH MOA    | P-F-15-EN_2  | F-15E < 35.0              |
| EVERS NORTH MOA    | P-F-16-EN_2  | F-16C < 35.0              |
| DIESEL NORTH ATCAA | P-F-15-DN_2  | F-15E < 35.0              |
| DIESEL NORTH ATCAA | P-F-22-DN_2  | F-22 < 35.0               |
| DIESEL NORTH ATCAA | P-F-16-DN_2  | F-16C < 35.0              |
| EVERS NORTH MOA    | P-A-10-EN_2  | A-10A < 35.0              |
| EVERS NORTH MOA    | P-T-38-EN_2  | T-38A < 35.0              |
| EVERS NORTH MOA    | P-C-130-EN_2 | C-130A&D < 35.0           |
| EVERS NORTH MOA    | P-C-17-EN_2  | C-17 < 35.0               |
| DIESEL NORTH ATCAA | P-A-10-DN_2  | A-10A < 35.0              |
| DIESEL NORTH ATCAA | P-C-17-DN_2  | C-17 < 35.0               |
| DIESEL NORTH ATCAA | P-C-130-DN_2 | C-130A&D < 35.0           |
| DIESEL NORTH ATCAA | P-T-38-DN_2  | T-38A < 35.0              |
| EVERS EAST MOA     | P-F-15-EE_2  | F-15E < 35.0              |
| EVERS LOW MOA      | P-F-15-EL_2  | F-15E < 35.0              |
| EVERS EAST MOA     | P-F-22-EE_2  | F-22 < 35.0               |
| EVERS EAST MOA     | P-F-16-EE_2  | F-16C < 35.0              |
| EVERS LOW MOA      | P-F-16-EL_2  | F-16C < 35.0              |
| EVERS LOW MOA      | P-F-22-EL_2  | F-22 < 35.0               |

Total Level ..... 36.2

Specific Point: EVERS-DIESEL SOUTH

Top 20 contributors to this level:

| < Airspace         | > Mission    | Sound Level Aircraft (dB) |
|--------------------|--------------|---------------------------|
| EVERS SOUTH MOA    | P-F-22-ES_2  | F-22 < 35.0               |
| EVERS SOUTH MOA    | P-F-15-ES_2  | F-15E < 35.0              |
| EVERS SOUTH MOA    | P-F-16-ES_2  | F-16C < 35.0              |
| DIESEL SOUTH ATCAA | P-F-15-DS_2  | F-15E < 35.0              |
| DIESEL SOUTH ATCAA | P-F-22-DS_2  | F-22 < 35.0               |
| DIESEL SOUTH ATCAA | P-F-16-DS_2  | F-16C < 35.0              |
| EVERS SOUTH MOA    | P-A-10-ES_2  | A-10A < 35.0              |
| EVERS SOUTH MOA    | P-T-38-ES_2  | T-38A < 35.0              |
| EVERS SOUTH MOA    | P-C-130-ES_2 | C-130A&D < 35.0           |
| EVERS SOUTH MOA    | P-C-17-ES_2  | C-17 < 35.0               |
| DIESEL SOUTH ATCAA | P-A-10-DS_2  | A-10A < 35.0              |
| DIESEL SOUTH ATCAA | P-C-17-DS_2  | C-17 < 35.0               |
| DIESEL SOUTH ATCAA | P-C-130-DS_2 | C-130A&D < 35.0           |
| DIESEL SOUTH ATCAA | P-T-38-DS_2  | T-38A < 35.0              |
| EVERS EAST MOA     | P-F-15-EE_2  | F-15E < 35.0              |
| EVERS LOW MOA      | P-F-15-EL_2  | F-15E < 35.0              |
| EVERS EAST MOA     | P-F-22-EE_2  | F-22 < 35.0               |
| EVERS EAST MOA     | P-F-16-EE_2  | F-16C < 35.0              |
| EVERS LOW MOA      | P-F-16-EL_2  | F-16C < 35.0              |
| EVERS LOW MOA      | P-F-22-EL_2  | F-22 < 35.0               |

Total Level ..... 36.1

<Run Log>

Date: 11/15/2019

Start Time: 19:55:17

Stop Time: 19:56: 1

Total Running Time: 0 minutes and 45 seconds.

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*

Version 3.0  
Release Date 2/7/2013

CASE INFORMATION

Case Name:Evers SUA Complex 2019 - Existing - DNL Scenario  
Site Name:Evers

SETUP PARAMETERS

Number of MOAs and Ranges = 9 Number of tracks = 0  
Lower Left Corner of Grid in feet (X Y pair) = -372500., -372500.  
Upper Right Corner of Grid in feet (X Y pair) = 372500., 372500.  
Grid spacing = 5000. feet Number of events above an SEL of 75.0 dB  
Temperature = 59 F Humidity = 70 Flying days per month = 30

MOA SPECIFICATIONS

MOA name DIESEL CENTER ATCAA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.19320 | -80.63750 |
| 38.78720 | -80.48041 |
| 38.75401 | -79.54699 |
| 38.13700 | -79.72040 |
| 38.19320 | -80.63750 |

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL NORTH ATCAA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.78720 | -80.48041 |
| 39.12821 | -80.39030 |
| 39.08871 | -79.45249 |
| 38.75401 | -79.54699 |
| 38.78720 | -80.48041 |

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name DIESEL SOUTH ATCAA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.13700 | -79.72040 |
| 37.78029 | -79.82050 |
| 37.83079 | -80.73381 |
| 38.19320 | -80.63750 |
| 38.13700 | -79.72040 |

Floor = 15000 feet AGL Ceiling = 20000 feet AGL

MOA name EVERS CENTER MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.19320 | -80.63750 |
| 38.78720 | -80.48041 |
| 38.75401 | -79.54699 |
| 38.13700 | -79.72040 |
| 38.19320 | -80.63750 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EAST MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.64750 | -79.33029 |
| 38.40000 | -79.33029 |
| 38.40000 | -79.64570 |
| 38.64750 | -79.57169 |
| 38.64750 | -79.33029 |

Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS EXISTING

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.66690 | -79.96640 |
| 38.66690 | -79.33029 |
| 38.40000 | -79.33029 |
| 38.40000 | -79.96640 |
| 38.66690 | -79.96640 |

Floor = 1000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS LOW MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.64750 | -79.57809 |
| 38.13700 | -79.72040 |
| 38.18020 | -80.42490 |
| 38.58360 | -80.30110 |
| 38.64750 | -80.00000 |
| 38.64750 | -79.57169 |
| 38.64750 | -79.57809 |

Floor = 1000 feet AGL Ceiling = 8000 feet AGL

MOA name EVERS NORTH MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.78720 | -80.48041 |
| 39.12821 | -80.39030 |
| 39.08871 | -79.45249 |
| 38.75401 | -79.54699 |
| 38.78720 | -80.48041 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

MOA name EVERS SOUTH MOA

| Lat      | Long      |
|----------|-----------|
| (deg)    | (deg)     |
| 38.13700 | -79.72040 |
| 37.78029 | -79.82050 |
| 37.83079 | -80.73381 |
| 38.19320 | -80.63750 |
| 38.13700 | -79.72040 |

Floor = 8000 feet AGL Ceiling = 15000 feet AGL

#### SPECIFIC POINT SPECIFICATION

Number of Specific points = 6

| Latitude | Longitude | Name                |
|----------|-----------|---------------------|
| 38.55200 | -79.47399 | EVERS EAST          |
| 38.52000 | -79.66900 | EVERS EXISTING      |
| 38.42500 | -80.01200 | EVERS LOW           |
| 38.68800 | -80.38600 | EVERS-DIESEL CENTER |
| 38.92901 | -79.98800 | EVERS-DIESEL NORTH  |
| 37.98100 | -80.23300 | EVERS-DIESEL SOUTH  |

#### MISSION DATA

Mission name = E-A-10-E\_2

Aircraft code =FM0090100 Speed = 300 kias Power = 85.0

##### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 50.0                   |
| 8000                    | 15000                   | 50.0                   |

Mission name = E-F-15-E\_2

Aircraft code =FM0430400 Speed = 350 kias Power = 90.0

##### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 75.0                   |
| 8000                    | 15000                   | 25.0                   |

Mission name = E-F-16-E\_2

Aircraft code =FM0440300 Speed = 450 kias Power = 90.0

##### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 50.0                   |
| 8000                    | 15000                   | 50.0                   |

Mission name = E-F-22-E\_2

Aircraft code =FM0850100 Speed = 450 kias Power = 92.0

##### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 15.0                   |
| 8000                    | 15000                   | 85.0                   |

Mission name = E-T-38-E\_2

Aircraft code =FM0680100 Speed = 350 kias Power = 85.0

##### Altitude Distribution

| Lower Alt<br>(feet AGL) | Upper Alt<br>(feet AGL) | Percent<br>Utilization |
|-------------------------|-------------------------|------------------------|
| 1000                    | 8000                    | 15.0                   |
| 8000                    | 15000                   | 85.0                   |

MOA OPERATION DATA

MOA name = EVERS EXISTING

| Mission Name | Daily   |           | Monthly |           | Yearly  |           | Time On Range (minutes) |
|--------------|---------|-----------|---------|-----------|---------|-----------|-------------------------|
|              | Day OPS | Night OPS | Day OPS | Night OPS | Day OPS | Night OPS |                         |
| E-A-10-E_2   | 0.228   | 0.000     | 6.83    | 0.00      | 82.     | 0.        | 30.                     |
| E-F-15-E_2   | 0.533   | 0.000     | 16.00   | 0.00      | 192.    | 0.        | 20.                     |
| E-F-16-E_2   | 1.347   | 0.000     | 40.42   | 0.00      | 485.    | 0.        | 34.                     |
| E-F-22-E_2   | 0.992   | 0.000     | 29.75   | 0.00      | 357.    | 0.        | 20.                     |
| E-T-38-E_2   | 0.525   | 0.000     | 15.75   | 0.00      | 189.    | 0.        | 34.                     |

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Warning: Grid points spaced greater than 1000 feet apart may not provide the necessary grid resolution, in some cases, to compute noise contours with high accuracy. For low-altitude track operations, the recommended grid spacing is less than 1000 feet.

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\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

The noise metric is Ldn.

MOA RESULTS

| MOA Name            | Uniform MOA Area (sq statute miles) | Number of Distributed Daily Events Above Sound Level SEL of 75.0 dB (dB) |
|---------------------|-------------------------------------|--------------------------------------------------------------------------|
| DIESEL CENTER ATCAA | 2123.1                              | No operations on this MOA!                                               |
| DIESEL NORTH ATCAA  | 1187.1                              | No operations on this MOA!                                               |
| DIESEL SOUTH ATCAA  | 1258.7                              | No operations on this MOA!                                               |
| EVERS CENTER MOA    | 2123.1                              | No operations on this MOA!                                               |
| EVERS EAST MOA      | 257.5                               | No operations on this MOA!                                               |
| EVERS EXISTING      | 634.4                               | 49.0 0.0                                                                 |
| EVERS LOW MOA       | 1265.6                              | No operations on this MOA!                                               |
| EVERS NORTH MOA     | 1187.1                              | No operations on this MOA!                                               |
| EVERS SOUTH MOA     | 1258.7                              | No operations on this MOA!                                               |

\*\*\*\*\* MOA RANGE NOISEMAP \*\*\*\*\*  
RESULTS

SPECIFIC POINT RESULTS

Specific Point: EVERS EAST  
 Top 20 contributors to this level:

| < Airspace        | > Mission  | Aircraft | Sound Level (dB) |
|-------------------|------------|----------|------------------|
| EVERS EXISTING    | E-F-22-E_2 | F-22     | 44.9             |
| EVERS EXISTING    | E-F-15-E_2 | F-15E    | 44.0             |
| EVERS EXISTING    | E-F-16-E_2 | F-16C    | 43.8             |
| EVERS EXISTING    | E-A-10-E_2 | A-10A    | < 35.0           |
| EVERS EXISTING    | E-T-38-E_2 | T-38A    | < 35.0           |
| Total Level ..... |            |          | 49.0             |

Specific Point: EVERS EXISTING  
 Top 20 contributors to this level:

| < Airspace        | > Mission  | Aircraft | Sound Level (dB) |
|-------------------|------------|----------|------------------|
| EVERS EXISTING    | E-F-22-E_2 | F-22     | 44.9             |
| EVERS EXISTING    | E-F-15-E_2 | F-15E    | 44.0             |
| EVERS EXISTING    | E-F-16-E_2 | F-16C    | 43.8             |
| EVERS EXISTING    | E-A-10-E_2 | A-10A    | < 35.0           |
| EVERS EXISTING    | E-T-38-E_2 | T-38A    | < 35.0           |
| Total Level ..... |            |          | 49.0             |

Specific Point: EVERS LOW  
 Top 20 contributors to this level:

| < Airspace        | > Mission  | Aircraft | Sound Level (dB) |
|-------------------|------------|----------|------------------|
| EVERS EXISTING    | E-F-22-E_2 | F-22     | < 35.0           |
| EVERS EXISTING    | E-F-15-E_2 | F-15E    | < 35.0           |
| EVERS EXISTING    | E-F-16-E_2 | F-16C    | < 35.0           |
| EVERS EXISTING    | E-A-10-E_2 | A-10A    | < 35.0           |
| EVERS EXISTING    | E-T-38-E_2 | T-38A    | < 35.0           |
| Total Level ..... |            |          | < 35.0           |

Specific Point: EVERS-DIESEL CENTER  
 Top 20 contributors to this level:

| < Airspace     | > Mission  | Aircraft | Sound Level (dB) |
|----------------|------------|----------|------------------|
| EVERS EXISTING | E-F-22-E_2 | F-22     | < 35.0           |
| EVERS EXISTING | E-F-15-E_2 | F-15E    | < 35.0           |



|                |            |       |        |
|----------------|------------|-------|--------|
| EVERS EXISTING | E-F-16-E_2 | F-16C | < 35.0 |
| EVERS EXISTING | E-A-10-E_2 | A-10A | < 35.0 |
| EVERS EXISTING | E-T-38-E_2 | T-38A | < 35.0 |

Total Level ..... < 35.0

Specific Point: EVERS-DIESEL NORTH  
 Top 20 contributors to this level:

| < Airspace     | > Mission  | Aircraft | Sound Level (dB) |
|----------------|------------|----------|------------------|
| EVERS EXISTING | E-F-22-E_2 | F-22     | < 35.0           |
| EVERS EXISTING | E-F-15-E_2 | F-15E    | < 35.0           |
| EVERS EXISTING | E-F-16-E_2 | F-16C    | < 35.0           |
| EVERS EXISTING | E-A-10-E_2 | A-10A    | < 35.0           |
| EVERS EXISTING | E-T-38-E_2 | T-38A    | < 35.0           |

Total Level ..... < 35.0

Specific Point: EVERS-DIESEL SOUTH  
 Top 20 contributors to this level:

| < Airspace     | > Mission  | Aircraft | Sound Level (dB) |
|----------------|------------|----------|------------------|
| EVERS EXISTING | E-F-22-E_2 | F-22     | < 35.0           |
| EVERS EXISTING | E-F-15-E_2 | F-15E    | < 35.0           |
| EVERS EXISTING | E-F-16-E_2 | F-16C    | < 35.0           |
| EVERS EXISTING | E-A-10-E_2 | A-10A    | < 35.0           |
| EVERS EXISTING | E-T-38-E_2 | T-38A    | < 35.0           |

Total Level ..... < 35.0

<Run Log>

Date: 11/15/2019  
 Start Time: 16:21:47  
 Stop Time: 16:22: 1  
 Total Running Time: 0 minutes and 15 seconds.

**APPENDIX B - US AIR FORCE LAND USE COMPATIBILITY  
GUIDELINES**

The USAF guidelines for land use compatibility in aircraft noise zones is shown in the table below and are extracted from Appendix A of AFI 32-7063 dated 15 July 2015. These land use compatibility guidelines have been included for reference purposes (Table C-1).

**Table 1. Land Use Compatibility Guidelines**

| SLUCM NO. | LAND USE NAME                                                                                                  | DNL 65-69 | DNL 70-74 | DNL 75-79 | DNL 80-84 | DNL 85+ |
|-----------|----------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|---------|
| 10        | Residential                                                                                                    |           |           |           |           |         |
| 11        | Household units                                                                                                | N1        | N1        | N         | N         | N       |
| 11.11     | Single units: detached                                                                                         | N1        | N1        | N         | N         | N       |
| 11.12     | Single units: semidetached                                                                                     | N1        | N1        | N         | N         | N       |
| 11.13     | Single units: attached row                                                                                     | N1        | N1        | N         | N         | N       |
| 11.21     | Two units: side-by-side                                                                                        | N1        | N1        | N         | N         | N       |
| 11.22     | Two units: one above the other                                                                                 | N1        | N1        | N         | N         | N       |
| 11.31     | Apartments: walk-up                                                                                            | N1        | N1        | N         | N         | N       |
| 11.32     | Apartment: elevator                                                                                            | N1        | N1        | N         | N         | N       |
| 12        | Group quarters                                                                                                 | N1        | N1        | N         | N         | N       |
| 13        | Residential hotels                                                                                             | N1        | N1        | N         | N         | N       |
| 14        | Mobile home parks or courts                                                                                    | N         | N         | N         | N         | N       |
| 15        | Transient lodgings                                                                                             | N1        | N1        | N1        | N         | N       |
| 16        | Other residential                                                                                              | N1        | N1        | N         | N         | N       |
| 20        | Manufacturing                                                                                                  |           |           |           |           |         |
| 21        | Food and kindred products; manufacturing                                                                       | Y         | Y2        | Y3        | Y4        | N       |
| 22        | Textile mill products; manufacturing                                                                           | Y         | Y2        | Y3        | Y4        | N       |
| 23        | Apparel and other finished products; products made from fabrics, leather, and similar materials; manufacturing | Y         | Y2        | Y3        | Y4        | N       |
| 24        | Lumber and wood products (except furniture); manufacturing                                                     | Y         | Y2        | Y3        | Y4        | N       |
| 25        | Furniture and fixtures; manufacturing                                                                          | Y         | Y2        | Y3        | Y4        | N       |
| 26        | Paper and allied products; manufacturing                                                                       | Y         | Y2        | Y3        | Y4        | N       |
| 27        | Printing, publishing, and allied industries                                                                    | Y         | Y2        | Y3        | Y4        | N       |
| 28        | Chemicals and allied                                                                                           | Y         | Y2        | Y3        | Y4        | N       |
| 29        | Petroleum refining and related industries                                                                      | Y         | Y2        | Y3        | Y4        | N       |
| 30        | Manufacturing (continued)                                                                                      |           |           |           |           |         |
| 31        | Rubber and misc. plastic products; manufacturing                                                               | Y         | Y2        | Y3        | Y4        | N       |
| 32        | Stone, clay and glass products; manufacturing                                                                  | Y         | Y2        | Y3        | Y4        | N       |
| 33        | Primary metal products; manufacturing                                                                          | Y         | Y2        | Y3        | Y4        | N       |
| 34        | Fabricated metal products; manufacturing                                                                       | Y         | Y2        | Y3        | Y4        | N       |
| 35        | Professional scientific, and controlling instruments; photographic and optical goods; watches and clocks       | Y         | 25        | 30        | N         | N       |
| 39        | Miscellaneous manufacturing                                                                                    | Y         | Y2        | Y3        | Y4        | N       |
| 40        | Transportation, communication and utilities                                                                    |           |           |           |           |         |
| 41        | Railroad, rapid rail transit, and street railway transportation                                                | Y         | Y2        | Y3        | Y4        | N       |
| 42        | Motor vehicle transportation                                                                                   | Y         | Y2        | Y 3       | Y4        | N       |
| 43        | Aircraft transportation                                                                                        | Y         | Y2        | Y3        | Y4        | N       |
| 44        | Marine craft transportation                                                                                    | Y         | Y2        | Y3        | Y4        | N       |
| 45        | Highway and street right-of-way                                                                                | Y         | Y         | Y         | Y         | N       |
| 46        | Automobile parking                                                                                             | Y         | Y         | Y         | Y         | N       |
| 47        | Communication                                                                                                  | Y         | 255       | 305       | N         | N       |

|           |                                                                                                                   |    |     |     |        |        |
|-----------|-------------------------------------------------------------------------------------------------------------------|----|-----|-----|--------|--------|
| 48        | Utilities                                                                                                         | Y  | Y2  | Y3  | Y4     | N      |
| 49        | Other transportation, communication and utilities                                                                 | Y  | 255 | 305 | N      | N      |
| 50        | Trade                                                                                                             |    |     |     |        |        |
| 51        | Wholesale trade                                                                                                   | Y  | Y2  | Y3  | Y4     | N      |
| 52        | Retail trade – building materials, hardware and farm equipment                                                    | Y  | 25  | 30  | Y4     | N      |
| 53        | Retail trade – including shopping centers, discount clubs, home improvement stores, electronics superstores, etc. | Y  | 25  | 30  | N      | N      |
| 54        | Retail trade – food                                                                                               | Y  | 25  | 30  | N      | N      |
| 55        | Retail trade – automotive, marine craft, aircraft and accessories                                                 | Y  | 25  | 30  | N      | N      |
| 56        | Retail trade – apparel and accessories                                                                            | Y  | 25  | 30  | N      | N      |
| 57        | Retail trade – furniture, home,                                                                                   | Y  | 25  | 30  | N      | N      |
| 58        | Retail trade – eating and drinking establishments                                                                 | Y  | 25  | 30  | N      | N      |
| 59        | Other retail trade                                                                                                | Y  | 25  | 30  | N      | N      |
| 60        | Services                                                                                                          |    |     |     |        |        |
| 61        | Finance, insurance and real estate services                                                                       | Y  | 25  | 30  | N      | N      |
| 62        | Personal services                                                                                                 | Y  | 25  | 30  | N      | N      |
| 62.4      | Cemeteries                                                                                                        | Y  | Y2  | Y3  | Y4,11  | Y6,11  |
| 63        | Business services                                                                                                 | Y  | 25  | 30  | N      | N      |
| 63.7      | Warehousing and storage                                                                                           | Y  | Y2  | Y3  | Y4     | N      |
| 64        | Repair services                                                                                                   | Y  | Y2  | Y3  | Y4     | N      |
| 65        | Professional services                                                                                             | Y  | 25  | 30  | N      | N      |
| 65.1      | Hospitals, other medical facilities                                                                               | 25 | 30  | N   | N      | N      |
| 65.16     | Nursing homes                                                                                                     | N1 | N1  | N   | N      | N      |
| 66        | Contract construction services                                                                                    | Y  | 25  | 30  | N      | N      |
| 67        | Government services                                                                                               | Y1 | 25  | 30  | N      | N      |
| 68        | Educational services                                                                                              | 25 | 30  | N   | N      | N      |
| 68.1      | Child care services, child development centers, and nurseries                                                     | 25 | 30  | N   | N      | N      |
| 69        | Miscellaneous Services                                                                                            | Y  | 25  | 30  | N      | N      |
| 69.1      | Religious activities (including places of worship)                                                                | Y  | 25  | 30  | N      | N      |
| 70        | Cultural, entertainment and recreational                                                                          |    |     |     |        |        |
| 71        | Cultural activities                                                                                               | 25 | 30  | N   | N      | N      |
| 71.2      | Nature exhibits                                                                                                   | Y1 | N   | N   | N      | N      |
| 72        | Public assembly                                                                                                   | Y  | N   | N   | N      | N      |
| 72.1      | Auditoriums, concert halls                                                                                        | 25 | 30  | N   | N      | N      |
| 72.11     | Outdoor music shells, amphitheaters                                                                               | N  | N   | N   | N      | N      |
| 72.2      | Outdoor sports arenas, spectator sports                                                                           | Y  | Y   | N   | N      | N      |
| 73        | Amusements                                                                                                        | Y  | Y   | N   | N      | N      |
| 74        | Recreational activities                                                                                           | Y  | 25  | 30  | N      | N      |
| 75        | Resorts and group camps                                                                                           | Y  | 25  | N   | N      | N      |
| 76        | Parks                                                                                                             | Y  | 25  | N   | N      | N      |
| 79        | Other cultural, entertainment and recreation                                                                      | Y  | 25  | N   | N      | N      |
| 80        | Resource production and extraction                                                                                |    |     |     |        |        |
| 81        | Agriculture (except live- stock)                                                                                  | Y8 | Y9  | Y10 | Y10,11 | Y10,11 |
| 81.5-81.7 | Agriculture-Livestock farming including grazing and feedlots                                                      | Y8 | Y9  | N   | N      | N      |
| 82        | Agriculture related activities                                                                                    | Y8 | Y9  | Y10 | Y10,11 | Y10,11 |
| 83        | Forestry activities                                                                                               | Y8 | Y9  | Y10 | Y10,11 | Y10,11 |
| 84        | Fishing activities                                                                                                | Y  | Y   | Y   | Y      | Y      |

|    |                                         |   |   |   |   |   |
|----|-----------------------------------------|---|---|---|---|---|
| 85 | Mining activities                       | Y | Y | Y | Y | Y |
| 89 | Other resource production or extraction | Y | Y | Y | Y | Y |

**KEY:**

SLUCM – Standard Land Use Coding Manual, U.S. Department of Transportation

Y (Yes) – Land use and related structures compatible without restrictions.

N (No) – Land use and related structures are not compatible and should be prohibited.

Y<sub>x</sub> – Yes with restrictions. The land use and related structures generally are compatible. However, see note(s) indicated by the superscript.

N<sub>x</sub> – No with exceptions. The land use and related structures are generally incompatible. However, see note(s) indicated by the superscript.

25, 30, or 35 – The numbers refer to noise level reduction (NLR) levels. NLR (outdoor to indoor) is achieved through the incorporation of noise attenuation into the design and construction of a structure. Land use and related structures are generally compatible; however, measures to achieve NLR of 25, 30, or 35 must be incorporated into design and construction of structures. However, measures to achieve an overall noise reduction do not necessarily solve noise difficulties outside the structure and additional evaluation is warranted. Also, see notes indicated by superscripts where they appear with one of these numbers.

DNL – Day-Night Average Sound Level.

CNEL – Community Noise Equivalent Level (normally within a very small decibel difference of DNL)

L<sub>dn</sub> – Mathematical symbol for DNL.

**NOTES:**

1. General

a. Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in DNL 65-69 and strongly discouraged in DNL 70-74. The absence of viable alternative development options should be determined and an evaluation should be conducted locally prior to local approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones. Existing residential development is considered as pre-existing, non-conforming land uses.

b. Where the community determines that these uses must be allowed, measures to achieve outdoor to indoor NLR of at least 25 decibels (dB) in DNL 65-69 and 30 dB in DNL 70-74 should be incorporated into building codes and be considered in individual approvals; for transient housing, an NLR of at least 35 dB should be incorporated in DNL 75-79.

c. Normal permanent construction can be expected to provide an NLR of 20 dB, thus the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation, upgraded sound transmission class ratings in windows and doors, and closed windows year round. Additional consideration should be given to modifying NLR levels based on peak noise levels or vibrations.

d. NLR criteria will not eliminate outdoor noise problems. However, building location, site planning, design, and use of berms and barriers can help mitigate outdoor noise exposure particularly from ground level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that only protect interior spaces.

2. Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

3. Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

4. Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

5. If project or proposed development is noise sensitive, use indicated NLR; if not, land use is compatible without NLR.

6. Buildings are not permitted.

7. Land use is compatible provided special sound reinforcement systems are installed.

8. Residential buildings require an NLR of 25

9. Residential buildings require an NLR of 30.

10. Residential buildings are not permitted.

11. Land use that involves outdoor activities is not recommended, but if the community allows such activities, hearing protection devices should be worn when noise sources are present. Long-term exposure (multiple hours per day over many years) to high noise levels can cause hearing loss in some unprotected individuals.