

2025 Airport Noise Zone Update



MARTIN
STATE AIRPORT

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Final

2025 Airport Noise Zone Update

Martin State Airport

July 2026

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Maryland Aviation Administration**

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Executive Summary

Introduction

Martin State Airport (MTN), located in Middle River, Maryland, is owned by the State of Maryland and operated by the Maryland Department of Transportation Maryland Aviation Administration (MAA). Maryland law (the Maryland Environmental Noise Act of 1974) requires the protection of citizens from the impact of transportation-related noise. MAA is required to develop and certify an Airport Noise Zone (ANZ), assess the noise environment, and assist in preventing incompatible development around the airport.

Maryland law also requires the MAA to regularly update the ANZ for MTN, in order to ensure it remains an accurate representation of noise conditions at the airport. Updating the ANZ is necessary because factors such as the number of aircraft, operations, aircraft types, and flight paths may change over time, potentially altering overall noise exposure. Updating the ANZ involves studying airport noise and developing noise contours for both existing and future conditions at MTN, which are necessary for local land use planning.

This ANZ update also includes a review of the MTN Noise Abatement Plan (NAP). If an incompatible land use area falls within the ANZ, MTN is required to implement an NAP. While no incompatible land uses currently exist within MTN's noise zone, the airport has adopted an NAP in the past and will continue to review and update the plan as needed. The NAP prescribes measures to monitor and reduce or eliminate incompatible land use to the extent feasible, while maintaining efficient airport operations.

This ANZ update provides the MAA and MTN stakeholders including Baltimore County and surrounding communities with improved understanding of current and future noise conditions at the airport. The ANZ provides a means for the MAA to identify, control, and prevent incompatible land development around the airport.

Public Engagement

The ANZ update process includes multiple public consultation efforts to ensure that MTN stakeholder input and review is reflected in the resulting ANZ contour and NAP documentation. This public involvement component included two major initiatives: (1) voluntarily forming and convening a Stakeholder Advisory Committee (SAC) and (2) conducting a public workshop and hearing.

The SAC convened representatives of stakeholder groups affected by airport activities to ensure that these groups were informed of the 2025 MTN ANZ update process and methodology. Members were invited to participate throughout the process by reviewing study inputs, assumptions, analyses, and documentation, and by providing input and guidance related to the NAP. They were also encouraged to share relevant information with the groups or individuals they represent. The SAC was composed of stakeholders representing all significant interests at MTN:

- Local government planning staff
- Community organizations
- MTN tenants and users
- Aviation trade associations

The SAC convened three times during the ANZ update process and served in an advisory role to the MAA solely for the duration of the MTN ANZ update process.

As required by Maryland law, a public workshop and hearing were held concerning the 2025 MTN ANZ on March 18, 2026. The public workshop and hearing afforded all interested persons with an opportunity to comment on the proposed update to the MTN ANZ and NAP.

Airport Noise Zone

The ANZ is an area specified by noise level contours in terms of the Day-Night Average Sound Levels, abbreviated DNL or L_{dn} . The study process considered existing conditions in 2025 (also referred to as the base year) and forecast conditions in 2030 and 2035.

This 2025 MTN ANZ document includes the DNL noise contours for the following three conditions:

1. Base year 2025 conditions utilizing the current runway layout
2. Forecast conditions for year 2030, five years post certification, reflecting the updated runway layout as outlined in the MTN Airport Layout Plan (ALP)¹
3. Forecast conditions for year 2035, ten years post certification, reflecting the updated runway layout as outlined in the MTN ALP

The ANZ, as shown in **Figure ES-1**, is a composite of the three contours described above. The 2025 ANZ represents the largest extent of the annual DNL contours for each of the three study years (2025, 2030 and 2035) and is defined to provide the largest area of the existing or future noise exposure contours for planning purposes. The noise contours are presented in 5-decibel increments, from 65 dB to 75 dB.

The 65 dB DNL contour for the 2025 ANZ is 286 acres in size and remains almost entirely on airport property (approximately 98 percent). This represents a 30 percent decrease from the 411 acres contained within the previous 2020 ANZ. This decrease is attributed in part to reduced military operations as well as refined and updated military procedures. The 2025 ANZ does not include any noise-sensitive land uses (such as residential or educational). The 2025 ANZ noise contour extends beyond airport property over compatible land uses in four areas:

- An area on the northeast side of the airport off of Runway 15 due to military maintenance run-ups of A-10C aircraft on the Maryland Air National Guard (MDANG) ramp area.
- An area on the southwest side of the airport off of Runway 15 due to helicopter activity at the Baltimore City Police helipad.
- An area on the northeast side of the airport off of Runway 33 due to military pre-flight run-ups of A-10C aircraft.
- An area to the southwest side of the airport off of Runway 33 due to fixed wing arrival operations but dominated by helicopter activity at the Maryland State Police helipad.

¹ Maryland Aviation Administration. (2022). *Notice of Availability of Final Environmental Assessment (EA) and Finding of No Significant Impact / Record of Decision (FONSI/ROD) for Phase I Improvements at Martin State Airport*. <https://marylandaviation.com/environmental/environmental-planning/>

The base year contour largely defines the extent of the 2025 ANZ contour due to the A-10C operational levels. However, since the MDANG has divested the A-10C aircraft in 2025, no A-10C operations are expected under future conditions.

Noise Abatement Plan

The MAA has a long history of noise abatement at MTN. The NAP is designed to minimize the noise of aircraft operations within the constraints of the Federal Air Traffic Control System and ensure aircraft safety. The NAP was developed with the cooperation of MDANG, airport users, the aviation industry, and local governments.²

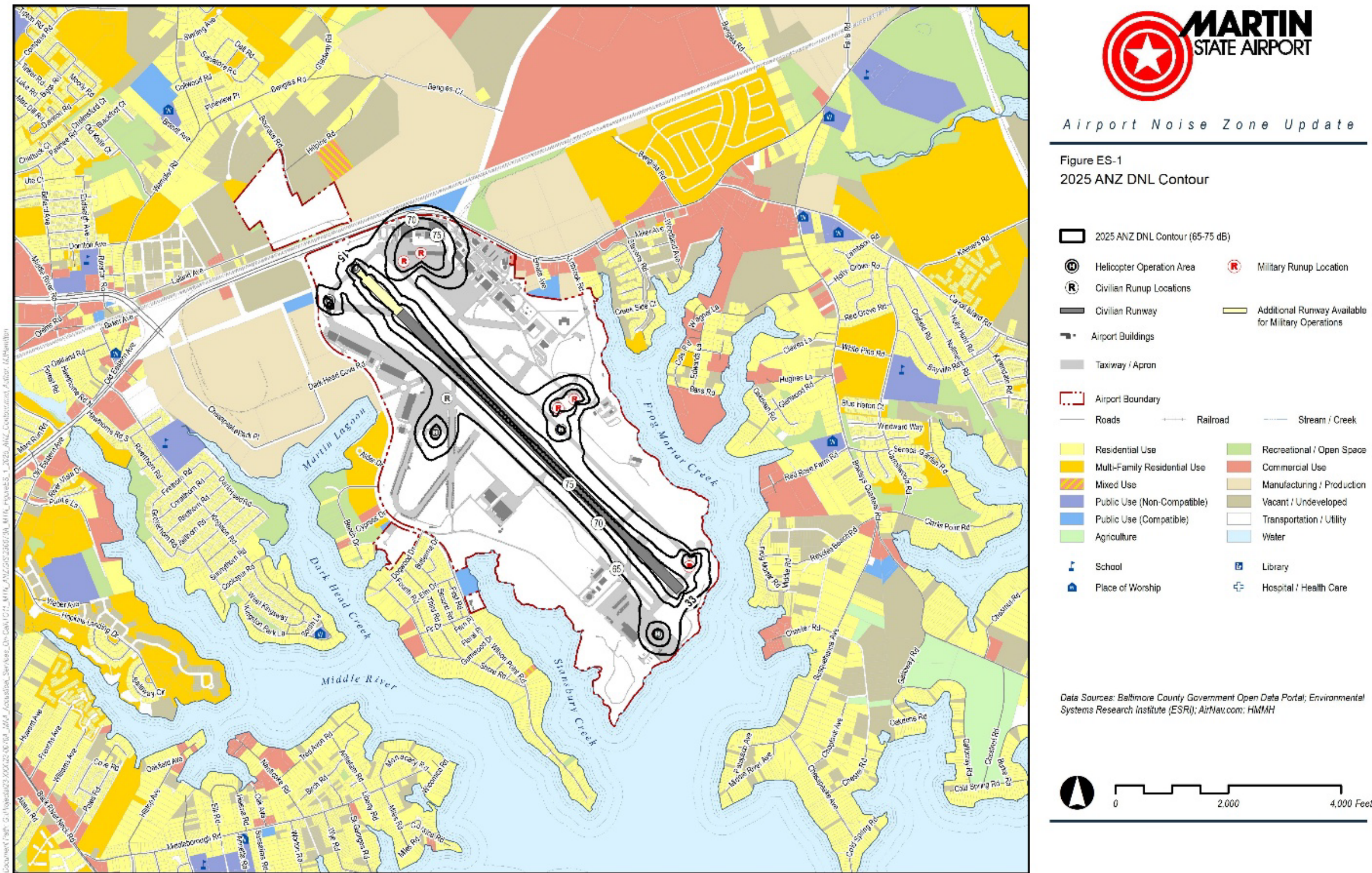
The NAP is formulated to minimize noise disturbance to neighboring communities while maintaining safe and efficient MTN Airport operations. The NAP is comprised of two parts: (1) the efforts the MAA is taking to mitigate noise in the areas surrounding MTN, and (2) aircraft operating procedures.

The MAA Division of MTN Airport Operations is responsible for the overall administration of the MTN NAP. Per COMAR Section 11.03.02.10C(3)(b), the MDANG, the Maryland State Police, and local law enforcement agencies are exempt from the provisions of this regulation when operational necessity dictates noncompliance, or in the event of a State or national emergency. As part of this study, the NAP was reviewed to determine the continued applicability of existing measures. A new measure discouraging intersection departures from Runway 15 was added.

² The MTN NAP is established pursuant to the Maryland Environmental Noise Act of 1974 (Transportation Article, §§ 5-805, 5-806, and 5-819, Annotated Code of Maryland) and COMAR Section 11.03.02.10. <http://mdrules.elaws.us/comar/11.03.02.10>

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Figure ES-1. 2025 ANZ DNL Contour



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Acronyms

AAD	Average Annual Day
AEDT	Aviation Environmental Design Tool
AGL	Above Ground Level
ALP	Airport Layout Plan
ANOMS	Airport Noise and Operations Monitoring System
ANZ	Airport Noise Zone
ATADS	Air Traffic Activity Data System
ATC	Air Traffic Control
BAZA	Board of Airport Zoning Appeals
COMAR	Code of Maryland Regulations
dB	Decibel
dBA	A-Weighted Decibel
DNL/L _{dn}	Day-Night Average Sound Level
FAA	Federal Aviation Administration
GIS	Geographic Information System
HMMH	Harris Miller Miller & Hanson Inc.
IFR	Instrument Flight Rules
LOA	Letter of Agreement
MAA	Maryland Department of Transportation Maryland Aviation Administration
MDANG	Maryland Air National Guard
MTN	Martin State Airport
MSL	Mean Sea Level
NAD 83	North American Datum 1983
NAP	Noise Abatement Plan
nmi	Nautical Miles
SAC	Stakeholder Advisory Committee
SEL	Sound Exposure Level
TAF	Terminal Area Forecast
USGS	United States Geological Survey
VFR	Visual Flight Rules

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1. Introduction and Background

Maryland law requires the protection of citizens from the impact of transportation-related noise. To meet this requirement, the Maryland Department of Transportation Maryland Aviation Administration (MAA) must adopt an Airport Noise Zone (ANZ) that both minimizes the impact of aircraft noise on residents near Martin State Airport (MTN) and prevents incompatible land development around the airport.

The noise analysis conducted for the ANZ study provides the MAA, MTN stakeholders, and surrounding communities with a better understanding of current and future noise conditions at the airport. The ANZ serves as a tool for the MAA to identify, control, and prevent incompatible land development around the airport. It also guides the Noise Abatement Plan (NAP), which prescribes measures to monitor and reduce or eliminate impacted land use areas to the extent feasible, while maintaining efficient airport operations.

The State of Maryland uses the Day-Night Average Sound Level, abbreviated DNL or L_{dn} , as the measure of cumulative noise exposure required to develop an ANZ.³ The ANZ, as defined by Maryland regulation, represents a composite of the 65, 70, and 75 DNL noise level contours for three study years: the base year, five-year, and ten-year forecast contours. The 2025 ANZ, as presented in this document, represents the largest extent of the annual DNL contours for all three years included in this study (2025, 2030, and 2035).

The resulting ANZ designates the greatest extent of the existing and/or future noise exposure contours overprinted on county tax maps, to be utilized for land-use planning purposes. Maryland law requires the MAA to regularly update the ANZ for MTN, in order to ensure it remains an accurate representation of noise conditions at the airport. The ANZ was last updated in 2020 and certified in 2021. Once certified, the ANZ represents composite noise contours at specified levels of exposure intended to control incompatible land development around MTN. Maryland law dictates that an applicant be denied approval if a proposed development is found to be incompatible with the ANZ. An applicant may petition the Board of Airport Zoning Appeals (BAZA) for a variance from the regulations. BAZA may issue conditions such as the addition of sound insulation components to buildings within the certified ANZ.

The MAA retained Harris Miller Miller & Hanson Inc. (HMMH) to support the Office of Environmental Compliance and Sustainability in preparing the 2025 MTN ANZ document. In coordination and collaboration with the MAA, HMMH designed and conducted the public participation program, developed the noise contours, compiled the composite ANZ contour, conducted a land-use inventory, reviewed and updated the NAP, and prepared ANZ documentation.

Section 2 of this report describes the methodology used in modeling the noise contours. Section 3 describes the inputs to the noise model in detail for the base year and forecast years. Section 4 presents DNL contours for the base year and forecast years, and finally the composite 2025 MTN ANZ contour and land use inventory. Section 5 presents the MTN NAP. Section 6 presents the public consultation efforts that the

³ For the purposes of this document, Day-Night Average Sound Level is referred to as DNL. DNL describes 24-hour exposure, noise from 10 p.m. to 7 a.m. is considered nighttime, and is factored up by 10 dB, this “penalty” is equal to counting each nighttime event 10 times.

MAA took for this ANZ update to ensure that stakeholder input is reflected in the ANZ contour and NAP documentation.

The appendices of this document provide supplemental information. Appendix A includes an overview of aircraft noise terminology. Appendix B includes the ANZ overlaid on Baltimore County tax maps. Appendix C includes the MTN Stakeholder Advisory Committee (SAC) roster and materials from the April 2, 2025, June 26, 2025 and September 25, 2025 SAC Meetings, including the invitations, sign-in sheets, meeting minutes, and presentations. Appendix D includes materials presented to the Maryland Aviation Commission for approval prior to updating the Code of Maryland Regulations. Appendix E includes information related to the public workshop and hearing, including the invitations, documentation of public notices, attendance information, presentation materials, and hearing transcript. Appendix F includes documentation of public comments following the public hearing.

2. Noise Modeling Methodology

The State of Maryland uses DNL as the measure of cumulative noise exposure required to develop an ANZ. The DNL metric describes the total noise exposure produced by aircraft operations during a 24-hour period. The aircraft operations used to calculate DNL are those of an average day during a particular year. To account for the increased human sensitivity to nighttime noise, a 10-decibel (dB) penalty is applied to all aircraft operations between 10:00 p.m. and 7:00 a.m. when calculating DNL. In other words, DNL accounts for noise exposure in a 24-hour period, with the exception that it treats each aircraft operation occurring in the nighttime (between 10 p.m. and 7 a.m.) as equivalent to 10 operations during the daytime. Appendix A includes an overview of aircraft noise terminology.

The noise environment around an airport is described by contours of equal noise exposure, representing the noise that occurs during an average 24-hour day. The MTN ANZ is depicted by a series of lines (noise contours) surrounding the airport. These lines connect points of equal noise exposure and represent DNL 65 dB, 70 dB, and 75 dB noise contours. The ANZ contours represent the boundaries for determining incompatible activities or land uses with airport operations. The State uses the noise contours adopted in the ANZ to limit new development that would be incompatible with the cumulative noise exposure level acceptable for an area. The cumulative noise exposure limits are shown in **Table 2-1** below.

Table 2-1. State of Maryland Limits for Cumulative Noise Exposure

Land Use	Area of Compatibility (Noise Levels)
Residences, schools, hospitals, libraries, churches, auditoriums, rest homes, nursing homes, concert halls	Up to 65 dB DNL
Transient lodging, hotels, motels, sports arenas, outdoor spectator sports, playgrounds, neighborhood parks, noise sensitive manufacturing and communications	Up to 70 dB DNL
Golf courses, riding stables, water recreation, cemeteries, office buildings, retail and wholesale establishments, movie theaters, restaurants, industry, manufacturing, utilities, livestock farming, animal breeding	Up to 75 dB DNL
Agriculture (except livestock), mining, fishing, aviation related uses	All

Source: COMAR. 11.03.03.03, Limits for Cumulative Noise Exposure, <http://mdrules.elaws.us/comar/11.03.03.03>

Maryland regulations require noise modeling as a prediction method to create ANZ noise contours.⁴ As described above, noise modeling software creates computer-generated DNL estimates depicted as equal-exposure noise contours (much like topographic maps that indicate contours of equal elevation). DNL contours reflect average annual daily operating conditions, also referred to as an Average Annual Day (AAD) of operations, taking into account the type of aircraft, average number of flights each day, time of day, how often each runway is used throughout the year, and where, over the surrounding communities, the aircraft normally fly.

⁴ COMAR 11.03.03.02, *Methods for Calculation and Measurement of Levels of Cumulative Noise Exposure*, <http://mdrules.elaws.us/comar/11.03.03.02>

This 2025 MTN ANZ document presents DNL noise contours for the following three conditions:

1. Base year conditions with the current runway layout
2. Five-year forecast 2030 conditions, with the updated runway layout as identified in the MTN Airport Layout Plan (ALP)⁵
3. Ten-year forecast 2035 conditions, with the updated runway layout as identified in the MTN ALP

⁵ Maryland Aviation Administration. (2022). *Notice of Availability of Final Environmental Assessment (EA) and Finding of No Significant Impact / Record of Decision (FONSI/ROD) for Phase I Improvements at Martin State Airport*.
<https://marylandaviation.com/environmental/environmental-planning/>

3. Noise Model Inputs

The 2025, 2030, and 2035 DNL contours were developed using the Federal Aviation Administration's (FAA) Aviation Environmental Design Tool (AEDT) version 3g and HMMH's AEDT Preprocessor software for AEDT™ in a manner consistent with Section 11.03.03 of COMAR.

AEDT requires noise model input data in three categories:

1. Airport physical inputs
 - Runway layout (including displaced landing or takeoff thresholds)
 - Flight track geometry and use
 - Terrain data
 - Meteorological conditions
2. Aircraft noise and performance data
 - Aircraft performance profiles
 - Noise level vs. distance curves
3. Aircraft operational inputs
 - Number of aircraft operations
 - Aircraft fleet mix
 - Day-night split of operations
 - Runway utilization
 - Flight track geometry and utilization

The AEDT inputs used in developing the base year and future year noise contours are presented in subsections 3.1 through 3.7.

3.1 Physical Description of the Airport Layout

There is one runway at MTN, Runway 15/33. **Figure 3-1** presents the existing MTN runway layout and notations for the airport property line, helicopter operational areas, as well as civilian and military aircraft run-up locations. Currently, civil aircraft are permitted to use 6,997 feet of the runway for arrival and departure operations; military aircraft are permitted to use 8,100 feet or the full extent of the runway, for all departures and for Runway 33 arrivals; Runway 15 military arrivals have a displaced landing threshold of 1,113 feet.

MTN has five helicopter operational areas at the airport, which serve corporate, law enforcement, and flight training organizations:

- The Baltimore City Police operate at Taxiway A adjacent to Runway 15.
- The Baltimore County Police and the majority of corporate helicopters operate from a helipad west of the midpoint of Runway 15.

- The Maryland State Police operate in an area south of the end of Runway 33.
- Transient military helicopters operate at the end of Runway 15 near the Maryland Air National Guard (MDANG) ramp.
- Flight training helicopters operate on the northeast side of the airport on the taxiway north of the midpoint of Runway 33.

MTN has five maintenance run-up locations and two military pre-flight locations at the airport, which serve MTN-based military and civilian aircraft maintenance operations:

- The MDANG conducts pre-flight checks for A-10C aircraft at:
 - Adjacent to the end of Runway 15.
 - Adjacent to the end of Runway 33.
- The MDANG conducts maintenance run-ups for A-10C aircraft at:
 - The MDANG ramp near the end of Runway 15.
 - A trim pad and test cell located northeast of Runway 15/33.
- MTN based civilian operators conduct maintenance run-ups at:
 - The apron adjacent to the abandoned runway near the end of Runway 15.
 - The main apron area south of Runway 15/33.

Table 3-1 presents the latitude and longitude inputs and configurations for each runway, helicopter operational area, and run-up location used for modeling in AEDT.

Figure 3-1. Base Year (2025) Airport Layout

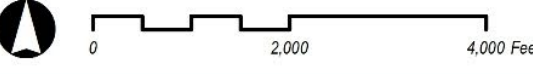


Airport Noise Zone Update

Figure 3-1
Base Year (2025) Airport Layout

- Helicopter Operation Area
- Civilian Runup Locations
- Civilian Runway
- Airport Boundary
- Roads
- Railroad
- Stream / Creek
- Military Runup Location
- Additional Runway Available for Military Operations

Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HMMH



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Table 3-1. Base Year (2025) MTN Runway and Helipad Data

Runway	Latitude (deg)	Longitude (deg)	Length (feet)	Modeled Elevation (feet)	Displaced Landing Threshold (feet)	Approach Slope (degrees)	Threshold Crossing Height (feet)
Fixed-Wing Runways							
15	39.332474	-76.422483	6,997	21.3	0	4.01	37
33	39.318849	-76.405047	6,997	9.2	0	2.91	48
15 (Military)	39.334642	-76.425272	8,100	23.5	1,113	3.1	55
33 (Military)	39.318849	-76.405047	8,100	9.2	0	2.91	48
Helicopter Operations Areas							
Baltimore City Police (HBPd)	39.332839	-76.426898	N/A	21.5	N/A	N/A	N/A
Baltimore County Police (HCPD)	39.326586	-76.420273	N/A	21.5	N/A	N/A	N/A
Maryland State Police (HSPD)	39.316714	-76.406410	N/A	21.5	N/A	N/A	N/A
Practice Pad (HPC)	39.326683	-76.412404	N/A	21.5	N/A	N/A	N/A
Military Helipad (HML)	39.334642	-76.425272	N/A	23.5	N/A	N/A	N/A
Run-up Locations							
Ramp	39.335324	-76.421102	N/A	21.5	N/A	N/A	N/A
Trim pad	39.327734	-76.412556	N/A	21.5	N/A	N/A	N/A
Test cell	39.328166	-76.411542	N/A	21.5	N/A	N/A	N/A
Maintenance Run-up 1	39.328256	-76.419532	N/A	21.5	N/A	N/A	N/A
Maintenance Run-up 2	39.332839	-76.426898	N/A	21.5	N/A	N/A	N/A
Pre-flight (Runway 15)	39.334944	-76.422169	N/A	21.5	N/A	N/A	N/A
Pre-flight (Runway 33)	39.320333	-76.404389	N/A	9.2	N/A	N/A	N/A

Notes:

Latitude and Longitude coordinates reference to North American Datum 1983 (NAD 83)

Elevations referenced to Mean Sea Level (MSL)

Sources:

Runway coordinates: FAA, MAA, 2025

Helicopter Operations Areas: MTN staff and HMMH

Run-up Areas: MTN staff, MDANG, HMMH, and MTN Operators

The five-year and ten-year forecast airport layout configurations include proposed improvements to the airfield as identified in the MTN ALP. The MTN ALP identifies Phase I improvements that include changes needed to meet FAA standards and to accommodate anticipated general aviation demand. In the MTN ALP, the Runway 15 end for civilian aircraft would be relocated approximately 291 feet from the existing runway end with a displaced threshold of 225 feet. The Runway 33 end would be relocated approximately 380 feet from the existing runway end with a displaced threshold of 390 feet. Military aircraft would be able to utilize the full 8,100 feet of runway, which is the same as used for the base year configuration. **Table 3-2** presents the latitude and longitude inputs and configurations for each runway for the five-year and ten-year forecast configurations. Helicopter operational areas and run-up locations are the same as for the base year as detailed above.

Figure 3-2 depicts the MTN runway layout that was used to develop the five-year and ten-year forecast contours. It includes notations for the airport property line, helicopter operational areas, as well as civilian and military aircraft run-up locations.

Table 3-2. Five-Year (2030) and Ten-Year (2035) Forecast Condition Runway, Helipad, and Run-up Inputs

Runway	Latitude (deg)	Longitude (deg)	Length (feet)	Modeled Elevation (feet)	Displaced Landing Threshold (feet)	Approach Slope (degrees)	Threshold Crossing Height (feet)
Fixed-Wing Runways							
15	39.334050	-76.424500	7,430	22.8	225	4.01	37
33	39.319583	-76.405986	7,430	9.2	390	2.91	48
15 (Military)	39.334642	-76.425272	8,100	23.5	516	3.1	55
33 (Military)	39.318849	-76.405047	8,100	9.2	770	2.91	48

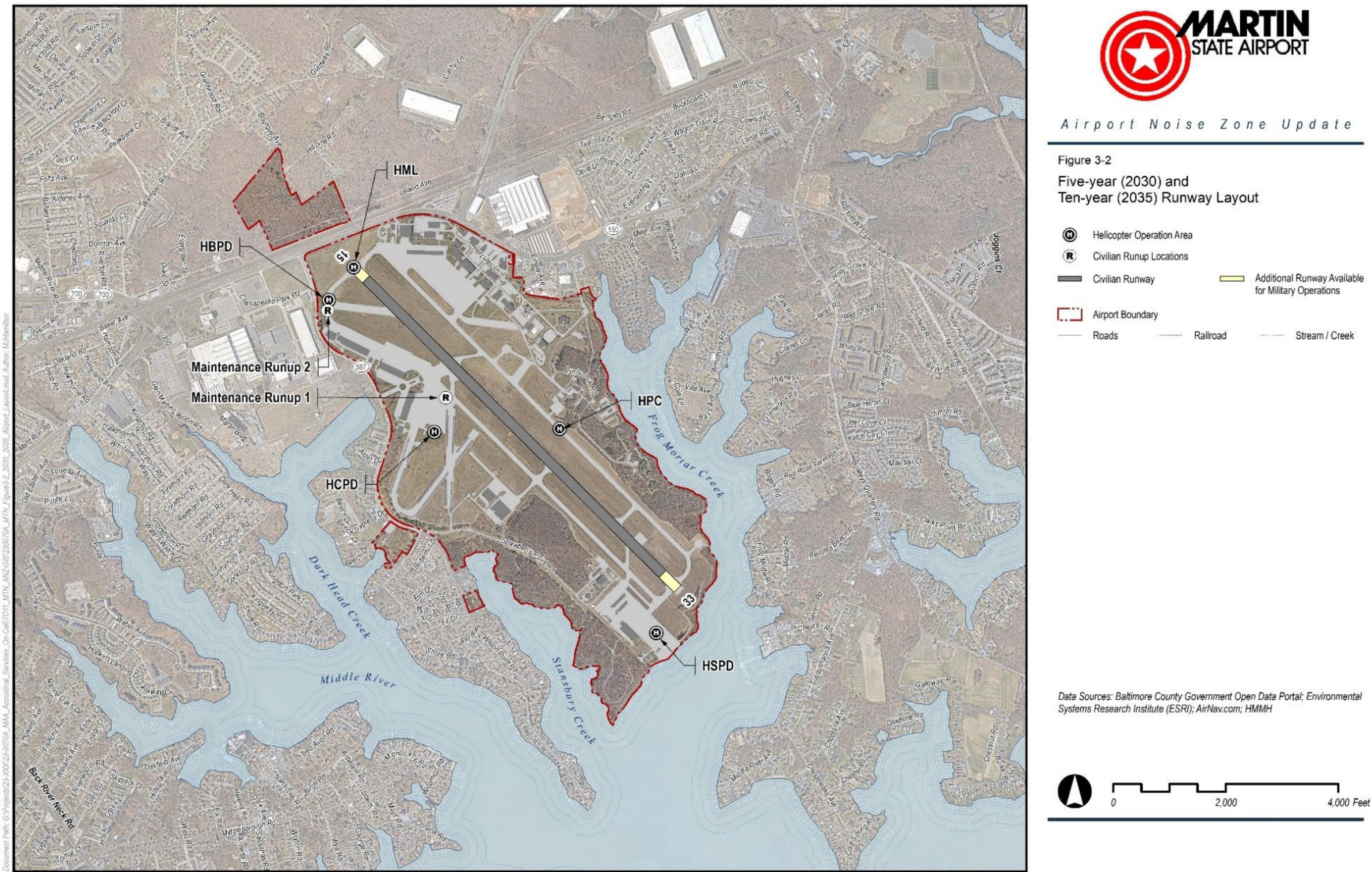
Notes:

Latitude and Longitude coordinates reference to North American Datum 1983 (NAD 83).

Elevations referenced to Mean Sea Level (MSL).

Source: MAA, 2025

Figure 3-2. Five-Year (2030) and Ten-Year (2035) Forecast Condition Airport Layout



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3.2 Aircraft Operations and Run-ups

To create the noise contours, AEDT requires details related to AAD operations as well as aircraft maintenance run-ups be included as inputs. AAD operations and run-up estimates were developed for the base year and future years.

Operations for 2025 were determined using 12 months of 2024 flight data and the 2024 edition of the FAA's Terminal Area Forecast (TAF), issued in January 2025. The FAA TAF reports operations in terms of the federal fiscal year, which runs from October 1 to September 30, whereas the calendar year runs from January 1 to December 31. HMMH analyzed historical monthly data from the FAA Air Traffic Activity Data System (ATADS) for calendar year 2024, and this analysis indicated that adjusting the TAF federal fiscal year to a 2025 calendar year estimate would result in an overall decrease of about 1.4 percent of the total operations. Therefore, the TAF issued in 2025 was used without adjustment.

The detailed breakdown of operations by aircraft type for fixed-wing and helicopter civil aircraft at MTN was determined using the 12 months of 2024 flight data obtained from the MAA Airport Noise and Operations Management System (ANOMS). The flight data provided the primary aircraft fleet mix distributions for civilian aircraft, along with distributions over daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.). Calendar year 2024 FAA Traffic Flow Management System Counts were downloaded and used to check the aircraft types within the flight data and to provide the fleet mix for military aircraft. The data collected for 2024 were scaled to the 2025 operational totals shown in **Table 3-3**.

For the 2030 forecast, total overall operations increased by 4 percent over the base year. Air carrier passenger operations remain the same from the base year. Air taxi operations increased by 16 percent and general aviation operations increased by 6 percent. Military operations are reduced from the base year due to the A-10C aircraft being divested in 2025.

In 2035, total overall operations increased by 7 percent from the base year. Military operations are reduced from the base year due to the A-10C aircraft being divested in 2025. Air carrier passenger operations will remain the same from the base year. Air taxi operations increased 31 percent and general aviation operations increased 8 percent compared to the base year.

Table 3-3. Anticipated 2025, 2030 and 2035 Forecast Operations Levels

Case	Air Carrier (Itinerant)	Air Taxi (Itinerant)	General Aviation (Itinerant)	Military (Itinerant)	General Aviation (Local)	Military (Local)	Total
2025	5	2,772	40,005	1,283	44,934	490	89,489
2030	5	3,202	42,505	459	46,617	0	92,788
2035	5	3,632	43,242	459	48,362	0	95,700

Source: FAA TAF issued January 2025; MAA ANOMS; HMMH 2025

The modeled AAD operations are reported in **Table 3-4** through **Table 3-6**, for the base year, 2030 five-year, and 2035 ten-year forecasts, respectively. The fleet mix distributions are reported by aircraft category and their associated arrivals and departures separated by both day and night activity.

Table 3-4. Base Year (2025) Modeled Average Daily Aircraft Operations

Aircraft Category	Engine	AEDT Type	Day Arrivals	Night Arrivals	Day Departures	Night Departures	Day Circuits ¹	Night Circuits ¹	Total
Air Carrier	Jet	EMB175	<0.01	0.00	<0.01	0.00	0.00	0.00	0.01
Air Carrier Total	-	-	<0.01	0.00	<0.01	0.00	0.00	0.00	0.01
Air Taxi	Jet	CNA55B	0.59	0.04	0.57	0.06	0.00	0.00	1.25
Air Taxi	Jet	CNA560XL	0.54	<0.01	0.55	0.00	0.00	0.00	1.10
Air Taxi	Jet	CNA680	0.66	0.00	0.66	0.00	0.00	0.00	1.32
Air Taxi	Jet	LEAR35	0.60	0.00	0.60	0.00	0.00	0.00	1.20
Air Taxi	Turbo Prop	CNA208	0.40	<0.01	0.39	0.02	0.00	0.00	0.82
Air Taxi	Piston Prop	GASEPV	0.18	0.00	0.18	0.00	0.00	0.00	0.37
Air Taxi	Helicopter	SA330J	0.69	0.08	0.69	0.09	0.00	0.00	1.55
Air Taxi Total	-	-	3.67	0.13	3.63	0.17	0.00	0.00	7.59
General Aviation	Jet	CL601	0.87	0.08	0.85	0.11	0.00	0.00	1.91
General Aviation	Jet	CNA525C	0.78	0.00	0.77	0.01	0.00	0.00	1.56
General Aviation	Jet	CNA55B	3.28	0.16	3.27	0.17	0.00	0.00	6.88
General Aviation	Jet	CNA560XL	0.29	<0.01	0.30	0.00	0.00	0.00	0.59
General Aviation	Jet	CNA680	0.68	0.03	0.67	0.05	0.00	0.00	1.43
General Aviation	Turbo Prop	CNA208	0.58	<0.01	0.56	0.03	0.00	0.00	1.17
General Aviation	Turbo Prop	DHC6	1.14	0.03	1.16	0.00	0.00	0.00	2.32
General Aviation	Piston Prop	BEC58P	0.69	0.00	0.69	0.00	0.23	0.00	1.91
General Aviation	Piston Prop	CNA172	20.29	0.19	20.37	0.11	74.75	0.42	116.14
General Aviation	Piston Prop	CNA182	1.13	0.09	1.21	0.01	0.38	0.00	4.51
General Aviation	Piston Prop	COMSEP	3.27	0.04	3.29	0.01	0.75	0.00	11.12
General Aviation	Piston Prop	GASEPF	7.00	0.09	6.79	0.31	6.29	0.44	42.53
General Aviation	Piston Prop	GASEPV	1.50	0.02	1.50	0.02	0.15	0.03	4.09
General Aviation	Piston Prop	PA30	0.35	0.00	0.35	0.00	0.11	0.00	1.36
General Aviation	Helicopter	EC130	1.42	0.50	1.55	0.37	0.00	0.00	3.84
General Aviation	Helicopter	R22	0.00	0.00	0.00	0.00	1.99	0.00	3.63
General Aviation	Helicopter	SA330J	1.28	0.28	1.36	0.20	0.80	0.07	5.50
General Aviation	Helicopter	SA350D	6.72	2.01	7.53	1.20	2.09	0.32	22.22
General Aviation Total	-	-	51.27	3.53	52.21	2.59	120.61	2.5	232.71
Military	Jet	A10A ²	1.71	0.00	1.71	0.00	0.18	0.00	3.60
Military	Jet	C17	0.19	0.00	0.19	0.00	0.00	0.00	0.38
Military	Turbo Prop	DHC6	0.13	0.00	0.13	0.00	0.00	0.00	0.26
Military	Helicopter	S70	0.31	0.00	0.31	0.00	0.00	0.00	0.62
Military Total	-	-	2.34	0.00	2.34	0.00	0.18	0.00	4.86
Grand Total	-	-	57.28	3.66	58.18	2.77	120.78	2.50	245.18

Notes:

Totals may not match exactly due to rounding.

¹ Circuits are counted as two operations.

² A10A is the aircraft designated in AEDT, used as a surrogate for the A-10C.

Table 3-5. Five-Year (2030) Forecast Modeled Average Daily Aircraft Operations

Aircraft Category	Engine	AEDT Type	Day Arrivals	Night Arrivals	Day Departures	Night Departures	Day Circuits¹	Night Circuits¹	Total
Air Carrier	Jet	EMB175	<0.01	0.00	<0.01	0.00	0.00	0.00	0.01
Air Carrier Total	-	-	<0.01	0.00	<0.01	0.00	0.00	0.00	0.01
Air Taxi	Jet	CNA55B	1.05	0.07	1.01	0.12	0.00	0.00	2.24
Air Taxi	Jet	CNA560XL	0.97	0.01	0.98	0.00	0.00	0.00	1.97
Air Taxi	Jet	CNA680	1.18	0.00	1.18	0.00	0.00	0.00	2.36
Air Taxi	Jet	LEAR35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Air Taxi	Turbo Prop	CNA208	0.72	0.02	0.69	0.05	0.00	0.00	1.47
Air Taxi	Piston Prop	GASEPV	0.18	0.00	0.18	0.00	0.00	0.00	0.37
Air Taxi	Helicopter	SA330J	0.69	0.09	0.68	0.1	0.00	0.00	1.55
Air Taxi Total	-	-	4.78	0.19	4.71	0.26	0.00	0.00	9.95
General Aviation	Jet	CL601	0.97	0.10	0.93	0.13	0.00	0.00	2.13
General Aviation	Jet	CNA525C	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Aviation	Jet	CNA55B	3.64	0.20	3.63	0.20	0.00	0.00	7.67
General Aviation	Jet	CNA560XL	0.32	<0.01	0.33	0.00	0.00	0.00	0.66
General Aviation	Jet	CNA680	0.41	0.02	0.40	0.03	0.00	0.00	0.86
General Aviation	Turbo Prop	CNA208	0.64	0.01	0.62	0.03	0.00	0.00	1.31
General Aviation	Turbo Prop	DHC6	1.13	0.03	1.16	0.00	0.00	0.00	2.32
General Aviation	Piston Prop	BEC58P	0.69	0.00	0.69	0.00	0.54	0.00	1.91
General Aviation	Piston Prop	CNA172	24.42	0.25	24.52	0.15	81.99	0.58	131.91
General Aviation	Piston Prop	CNA182	1.44	0.12	1.55	0.01	2.27	0.03	5.43
General Aviation	Piston Prop	COMSEP	5.25	0.06	5.29	0.01	9.72	0.00	20.32
General Aviation	Piston Prop	GASEPF	6.21	0.09	5.99	0.31	23.56	1.27	37.43
General Aviation	Piston Prop	GASEPV	0.55	0.02	0.56	<0.01	0.91	0.15	2.19
General Aviation	Piston Prop	PA30	0.46	0.00	0.46	0.00	0.72	0.00	1.64
General Aviation	Helicopter	EC130	1.37	0.55	1.51	0.41	0.00	0.00	3.84
General Aviation	Helicopter	R22	0.00	0.00	0.00	0.00	3.63	0.00	3.63
General Aviation	Helicopter	SA330J	1.25	0.31	1.34	0.22	1.99	0.38	5.50
General Aviation	Helicopter	SA350D	6.51	2.22	7.41	1.32	4.20	0.55	22.22
General Aviation Total	-	-	55.25	3.98	56.39	2.84	129.54	2.96	250.97
Military	Jet	C17	0.19	0.00	0.19	0.00	0.00	0.00	0.38
Military	Turbo Prop	DHC6	0.13	0.00	0.13	0.00	0.00	0.00	0.26
Military	Helicopter	S70	0.31	0.00	0.31	0.00	0.00	0.00	0.62
Military Total	-	-	0.63	0.00	0.63	0.00	0.00	0.00	1.26
Grand Total	-	-	60.67	4.18	61.74	3.10	129.54	2.96	262.19

Notes:

Totals may not match exactly due to rounding.

¹ Circuits are counted as two operations.

Table 3-6. Ten-Year (2035) Forecast Modeled Average Daily Aircraft Operations

Aircraft Category	Engine	AEDT Type	Day Arrivals	Night Arrivals	Day Departures	Night Departures	Day Circuits ¹	Night Circuits ¹	Total
Air Carrier	Jet	EMB175	<0.01	0.00	<0.01	0.00	0.00	0.00	0.01
Air Carrier Total	-	-	<0.01	0.00	<0.01	0.00	0.00	0.00	0.01
Air Taxi	Jet	CNA55B	1.05	0.07	1.01	0.12	0.00	0.00	2.24
Air Taxi	Jet	CNA560XL	0.97	0.01	0.98	0.00	0.00	0.00	1.97
Air Taxi	Jet	CNA680	1.18	0.00	1.18	0.00	0.00	0.00	2.36
Air Taxi	Jet	LEAR35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Air Taxi	Turbo Prop	CNA208	0.72	0.02	0.69	0.05	0.00	0.00	1.47
Air Taxi	Piston Prop	GASEPV	0.18	0.00	0.18	0.00	0.00	0.00	0.37
Air Taxi	Helicopter	SA330J	0.69	0.09	0.68	0.1	0.00	0.00	1.55
Air Taxi Total	-	-	4.78	0.19	4.71	0.26	0.00	0.00	9.95
General Aviation	Jet	CL601	0.97	0.10	0.93	0.13	0.00	0.00	2.13
General Aviation	Jet	CNA525C	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Aviation	Jet	CNA55B	3.64	0.20	3.63	0.20	0.00	0.00	7.67
General Aviation	Jet	CNA560XL	0.32	<0.01	0.33	0.00	0.00	0.00	0.66
General Aviation	Jet	CNA680	0.41	0.02	0.40	0.03	0.00	0.00	0.86
General Aviation	Turbo Prop	CNA208	0.64	0.01	0.62	0.03	0.00	0.00	1.31
General Aviation	Turbo Prop	DHC6	1.13	0.03	1.16	0.00	0.00	0.00	2.32
General Aviation	Piston Prop	BEC58P	0.69	0.00	0.69	0.00	0.54	0.00	1.91
General Aviation	Piston Prop	CNA172	24.42	0.25	24.52	0.15	81.99	0.58	131.91
General Aviation	Piston Prop	CNA182	1.44	0.12	1.55	0.01	2.27	0.03	5.43
General Aviation	Piston Prop	COMSEP	5.25	0.06	5.29	0.01	9.72	0.00	20.32
General Aviation	Piston Prop	GASEPF	6.21	0.09	5.99	0.31	23.56	1.27	37.43
General Aviation	Piston Prop	GASEPV	0.55	0.02	0.56	<0.01	0.91	0.15	2.19
General Aviation	Piston Prop	PA30	0.46	0.00	0.46	0.00	0.72	0.00	1.64
General Aviation	Helicopter	EC130	1.37	0.55	1.51	0.41	0.00	0.00	3.84
General Aviation	Helicopter	R22	0.00	0.00	0.00	0.00	3.63	0.00	3.63
General Aviation	Helicopter	SA330J	1.25	0.31	1.34	0.22	1.99	0.38	5.50
General Aviation	Helicopter	SA350D	6.51	2.22	7.41	1.32	4.20	0.55	22.22
General Aviation Total	-	-	55.25	3.98	56.39	2.84	129.54	2.96	250.97
Military	Jet	C17	0.19	0.00	0.19	0.00	0.00	0.00	0.38
Military	Turbo Prop	DHC6	0.13	0.00	0.13	0.00	0.00	0.00	0.26
Military	Helicopter	S70	0.31	0.00	0.31	0.00	0.00	0.00	0.62
Military Total	-	-	0.63	0.00	0.63	0.00	0.00	0.00	1.26
Grand Total	-	-	60.67	4.18	61.74	3.10	129.54	2.96	262.19

Notes:

Totals may not match exactly due to rounding.

¹ Circuits are counted as two operations.

In addition to aircraft flight operations, aircraft maintenance and pre-flight run-ups occur at MTN. To calculate DNL, AEDT requires details related to aircraft maintenance run-ups to be included as inputs. Required run-up information includes the location, direction, aircraft type, power settings, and frequency of maintenance run-ups. As shown in **Table 3-7**, the detailed breakdown of maintenance run-ups for civilian operators at MTN was determined based on input from MTN operators. Military run-up estimates are based on data recently validated by the MDANG. Modeled MTN civilian and military run-up activity is projected for 2025 and future forecast years. However, A-10C run-ups are excluded from the 2030 and 2035 models due to the aircraft’s divestment in 2025.

Table 3-7. Base Five-Year (2030) and Ten-Year (2035) Modeled Average Daily Aircraft Run-ups

AEDT Aircraft Type	Site Name	Latitude (degrees)	Longitude (degrees)	Magnetic Heading (degrees)	Number of Run-ups	Duration per Run-up (sec.)	Approximate Power Setting (% of Takeoff Thrust/RPM)
A10A ^{1,2}	Ramp	39.335324	-76.421102	360°	2.90	150	85%
A10A ^{1,2}	Trim pad	39.327734	-76.412556	330°	0.05	300	94%
A10A ^{1,2}	Test cell	39.328166	-76.411542	330°	0.02	900	100%
A10A ^{1,2}	Pre-flight (Runway 15)	39.334944	-76.422169	315°	0.75	30	64%
A10A ^{1,2}	Pre-flight (Runway 33)	39.320333	-76.404389	190°	0.96	30	64%
CNA172	Maintenance Run-up 1	39.328256	-76.419532	015°	0.14	60	80%
CNA172	Maintenance Run-up 2	39.328256	-76.426898	205°	0.14	60	80%

Notes:

64% is the idle power within the military modeling noise data.

¹ A10A is the aircraft designated in AEDT, used as a surrogate for the A-10C.

² A10A will be excluded in the modeled future years due to their divestment in 2025.

Sources: MDANG and MTN Operators

3.3 Aircraft Noise and Performance Characteristics

AEDT includes a database of specific noise and performance data for most aircraft types operating at MTN. Aircraft not included in the database are assigned an FAA-approved representative aircraft type. Noise data are included in the form of Sound Exposure Level (SEL) at a range of distances (from 200 feet to 25,000 feet) from a particular aircraft with engines at a specific thrust level. SEL is a measure of the total “noisiness” of an event, that takes duration of the event into account. Performance data includes thrust, speed, and altitude data for takeoff and landing operations often referred to as aircraft profiles. The AEDT database contains standard noise and performance data for over 300 different aircraft types, which includes both civilian and military aircraft. AEDT automatically accesses the noise and performance data for takeoff, landing, and touch-and-go or circuit operations by aircraft included in the database. For the MTN ANZ update, the standard aircraft noise and performance data contained within the AEDT database were utilized.

Within the AEDT database, aircraft takeoff or departure profiles are usually defined by a range of trip distances identified as “stage lengths.” A longer trip distance or higher stage length is associated with a

heavier aircraft due to the increase in fuel requirements for the flight. For example, a departure aircraft with a trip distance less than 500 nautical miles (nmi) would be assigned a stage length value of one, where a departure aircraft with a trip distance of 3,000 nmi would be assigned a stage length value of five. For civilian aircraft, stage length determinations were obtained from aircraft departure data obtained from the MAA ANOMS. Military aircraft were assigned a stage length value of one, as there was insufficient data to determine trip distances for military operations. Those operations were not included in data obtained from the MAA NOMS. **Table 3-8** provides the stage length classifications by their associated trip distances.

Table 3-8. Stage Lengths by Trip Distance

Stage Length	Trip Distance (nmi)
1	0-500
2	501-1,000
3	1,001-1,500
4	1,501-2,500
5	2,501-3,500
6	3,501-4,500
7	4,501-5,500
8	5,501-6,500
9	6,501+

Table 3-9 presents the anticipated modeled stage length use percentages for departures for the base year as well as the five-year (2030) and ten-year (2035) scenarios.

Table 3-9. Modeled Departure Stage Length Usage by Aircraft Type

AEDT Type	Stage Length 1 (Day)	Stage Length 2 (Day)	Stage Length 3 (Day)	Stage Length 4 (Day)	Stage Length 5 (Day)	Stage Length 1 (Night)	Stage Length 2 (Night)	Stage Length 3 (Night)	Stage Length 4 (Night)	Stage Length 5 (Night)
A10C	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BEC58P	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CL601	66.7%	27.1%	6.2%	0.0%	0.0%	83.2%	16.8%	0.0%	0.0%	0.0%
CNA172	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
CNA182	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
CNA208	84.0%	16.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
CNA525C	66.7%	19.8%	0.0%	0.0%	13.5%	100.0%	0.0%	0.0%	0.0%	0.0%
CNA55B	74.3%	25.4%	0.3%	0.0%	0.0%	80.8%	19.2%	0.0%	0.0%	0.0%
CNA560XL	69.1%	30.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CNA680	57.3%	24.3%	10.9%	7.5%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
COMSEP	98.4%	1.6%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
DHC6	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EMB175	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GASEPF	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
GASEPV	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
LEAR35	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PA30	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: HMMH 2025

3.4 Runway Utilization

Runway usage at MTN is categorized by operation types; arrival, departure, or circuit; and by time of day, day or night. The primary factor affecting runway use at airports is weather, specifically wind direction and wind speed. **Table 3-10** and **Table 3-11** present the runway utilization rates used to model the DNL contours for base year operations. These rates reflect ongoing military operations tracked by the MDANG and civilian operations monitored through the MAA ANOMS system.

Table 3-10. Fixed-Wing Overall Runway Utilization Percentages for All Years

Aircraft Category	Operation Mode	Runway 15	Runway 33
Air Carrier and Air Taxi	Arrivals	44.3%	55.7%
Air Carrier and Air Taxi	Departures	42.3%	57.7%
General Aviation	Arrivals	45.8%	54.2%
General Aviation	Departures	43.7%	56.3%
General Aviation	Circuits	48.4%	51.6%
Military	Arrivals	45.7%	54.3%
Military	Departures	43.6%	56.4%
Military	Circuits	48.4%	51.6%

Table 3-11. Helipad Utilization Percentages for All Years

Aircraft Category	Operation Mode	Helipad HBPD	Helipad HCPD	Helipad HSPD	Helipad HPC	Helipad HML
Air Taxi and General Aviation	Arrivals	22.8%	59.3%	17.9%	0.0%	0.0%
Air Taxi and General Aviation	Departures	22.8%	59.3%	17.9%	0.0%	0.0%
Air Taxi and General Aviation	Circuits	0.0%	0.0%	0.0%	100.0%	0.0%
Military	All	0.0%	0.0%	0.0%	0.0%	100.0%

3.5 Flight Track Geometry and Use

Flight tracks were developed using multiple methods based on the data available for various aircraft types and the entity operating the aircraft. This section summarizes the methodology for developing flight track geometry and use.

The methodology includes the use of proprietary AEDT Preprocessor software for AEDT. This software converts flight tracks to AEDT tracks and has been used for a variety of FAA-funded and reviewed projects including Noise Exposure Map projects at a number of airports. **Figure 3-4** and **Figure 3-5** depict the flight tracks and operations to be used to develop the 2025 ANZ contours by providing density plots of all anticipated modeled fixed-wing arrival and departure flight tracks.

AEDT Preprocessor software for AEDT is a preprocessor developed by HMMH that models each and every operation as an AEDT flight track. These tracks are then input into the model to produce results using the DNL noise metric. AEDT Preprocessor software for AEDT uses individual flight tracks taken directly from radar systems rather than relying on consolidated, representative flight track data. This provides the

advantage of modeling each aircraft operation on the specific runway it used and at the actual time of day of the arrival or departure. AEDT Preprocessor software for AEDT then sets up an AEDT study using the AEDT standard data. These operations are then modeled in AEDT to produce an AAD DNL contour. The AEDT Preprocessor software for AEDT approach essentially eliminates the approximation associated with the use of a limited set of prototypical modeling tracks by applying the AEDT's modeling capabilities on a flight-by-flight basis. This level of detail is especially important at MTN due to the nature of the airport as a busy general aviation facility, where operations are highly variable in terms of aircraft type, flight path use, and time of day. The use of actual flight tracks ensures that this operational variability is accurately captured in the noise modeling.

Flight track density plots provided in **Figure 3-3** and **Figure 3-4** illustrate where the majority of aircraft typically fly when arriving or departing MTN. Flight track density plots permit presentation of comparative information for longer time frames using thousands of actual aircraft flight tracks. Rather than presenting every individual track, the plots use color gradations to depict the frequency of aircraft operations over an extended time period. The figures summarize the flight track geometry, dispersion, and the frequency of aircraft operations by using a uniform color gradient scheme based on the relative density of the traffic. The “warmer” red colors indicate areas where the most aircraft operations occurred, and the “cooler” blue colors indicate the areas where the fewest aircraft operations occurred given the sets of flight track data described above.

For all helicopter and fixed-wing circuit operations at MTN, model tracks were developed using a standard method which entailed analyzing all calendar year 2024 flight data from the MAA ANOMS for MTN and splitting the flight tracks into similar and manageable groups. This was done due to inconsistency in the track data close to the airport at low altitudes. Model tracks were first created by separating flight tracks by phase of flight (e.g., arrival or departure) and then by runway end. Following this, the flights were separated by destination direction, such as northeast, south, or west. Finally, flight tracks were analyzed and split into groups according to their degree of similar geometry. Model tracks were developed for each geometrically similar group. For example, Baltimore City Police helipad departures with a west destination were split into three geometrically similar groups, and backbone tracks were developed.

For military operations at MTN, model tracks are being estimated using information validated by the MDANG, based on data referenced in prior ANZ updates and confirmed as part of the current review. **Figure 3-3** through **Figure 3-11** show the developed model tracks layered over the airport base map for fixed-wing low approach, all helicopter, and all military operations, respectively. Additionally, **Figure 3-9** also presents the model tracks developed to represent military A-10C overhead break arrival operations.

Table 3-12 and **Table 3-13** present the utilization rates for each of the developed model tracks. The relative ratio of flight track usage was preserved according to those ratios in the entire flight track dataset for fixed-wing circuit and helicopter operations. For military operations, track utilization is derived from data validated in coordination with the MDANG as part of the current ANZ update.

Figure 3-3. Modeled Fixed-Wing Arrival Flight Track Density

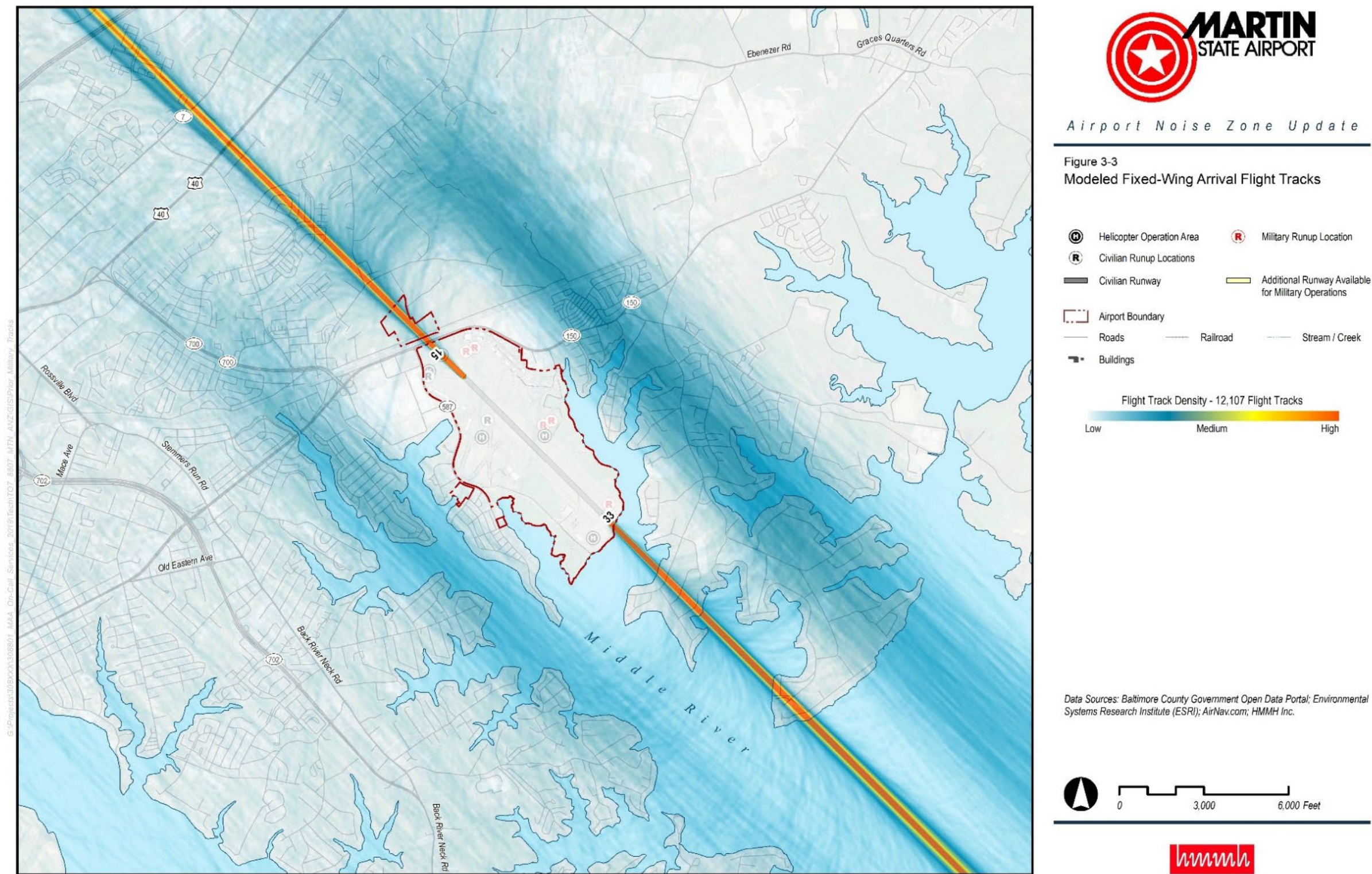


Figure 3-4. Modeled Fixed-Wing Departure Flight Track Density

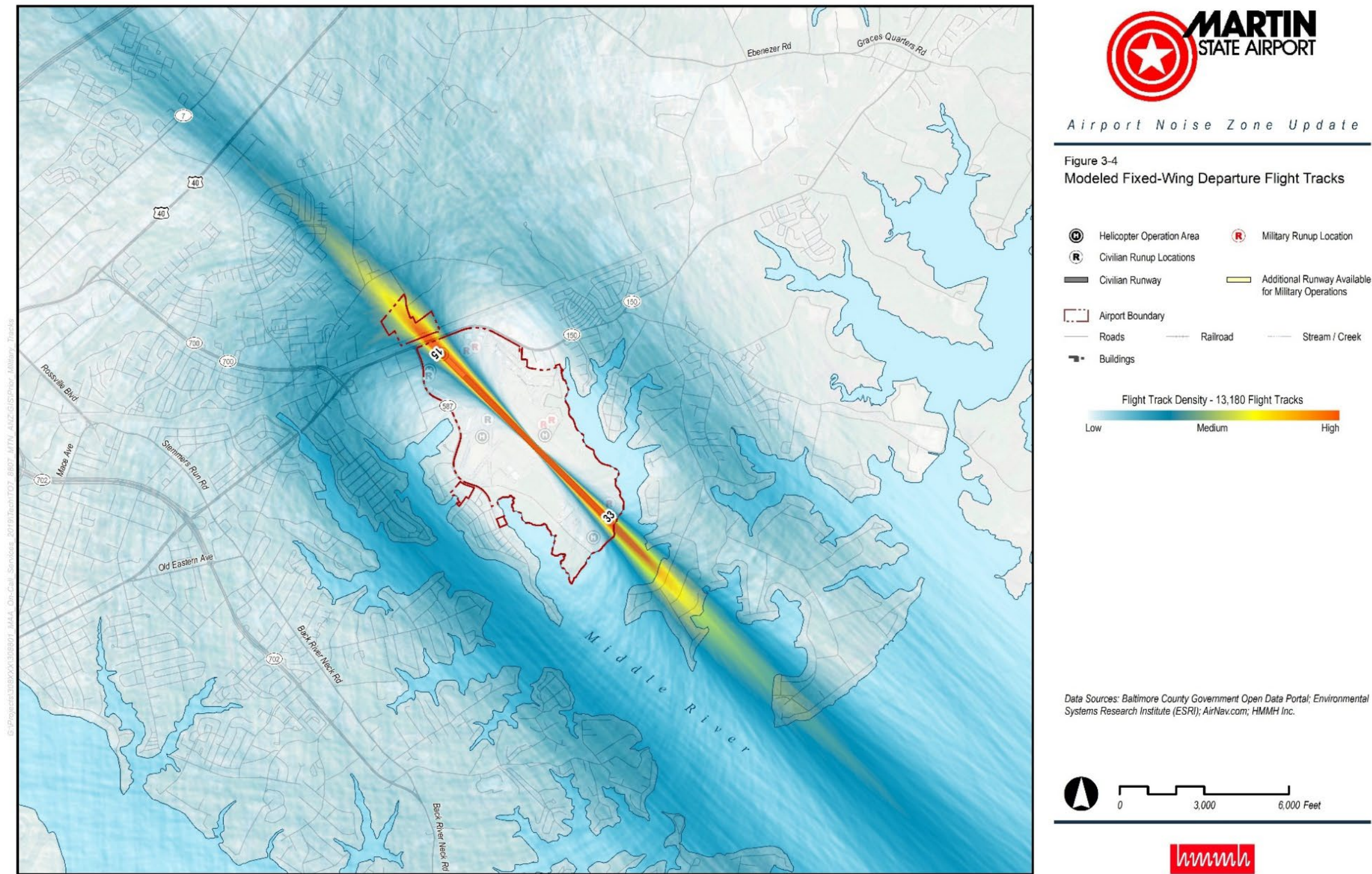


Figure 3-5. Fixed-Wing Circuit/Touch-and-Go Model Flight Tracks

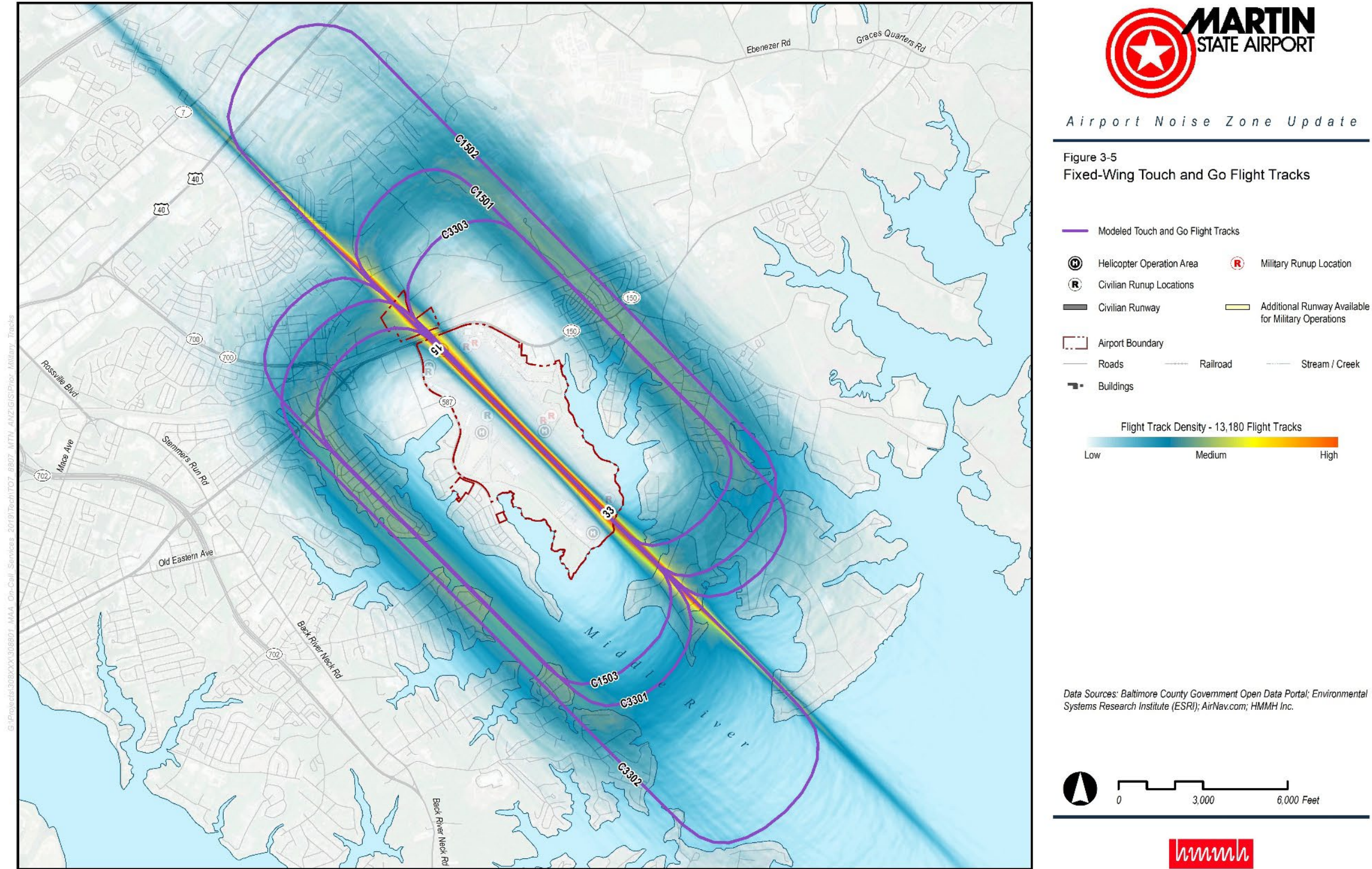


Figure 3-6. Helicopter Arrival Model Flight Tracks

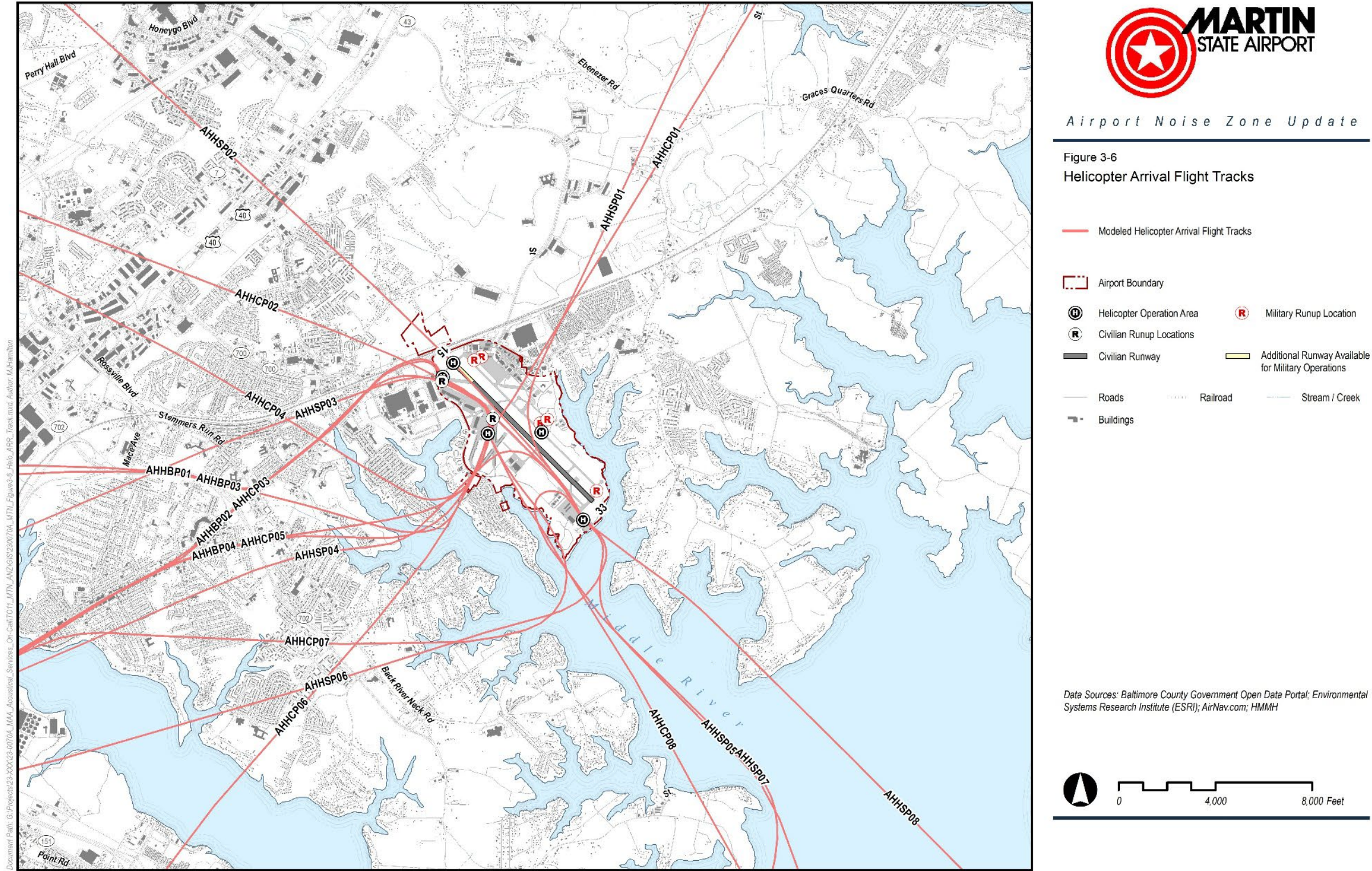


Figure 3-7. Helicopter Departure Model Flight Tracks

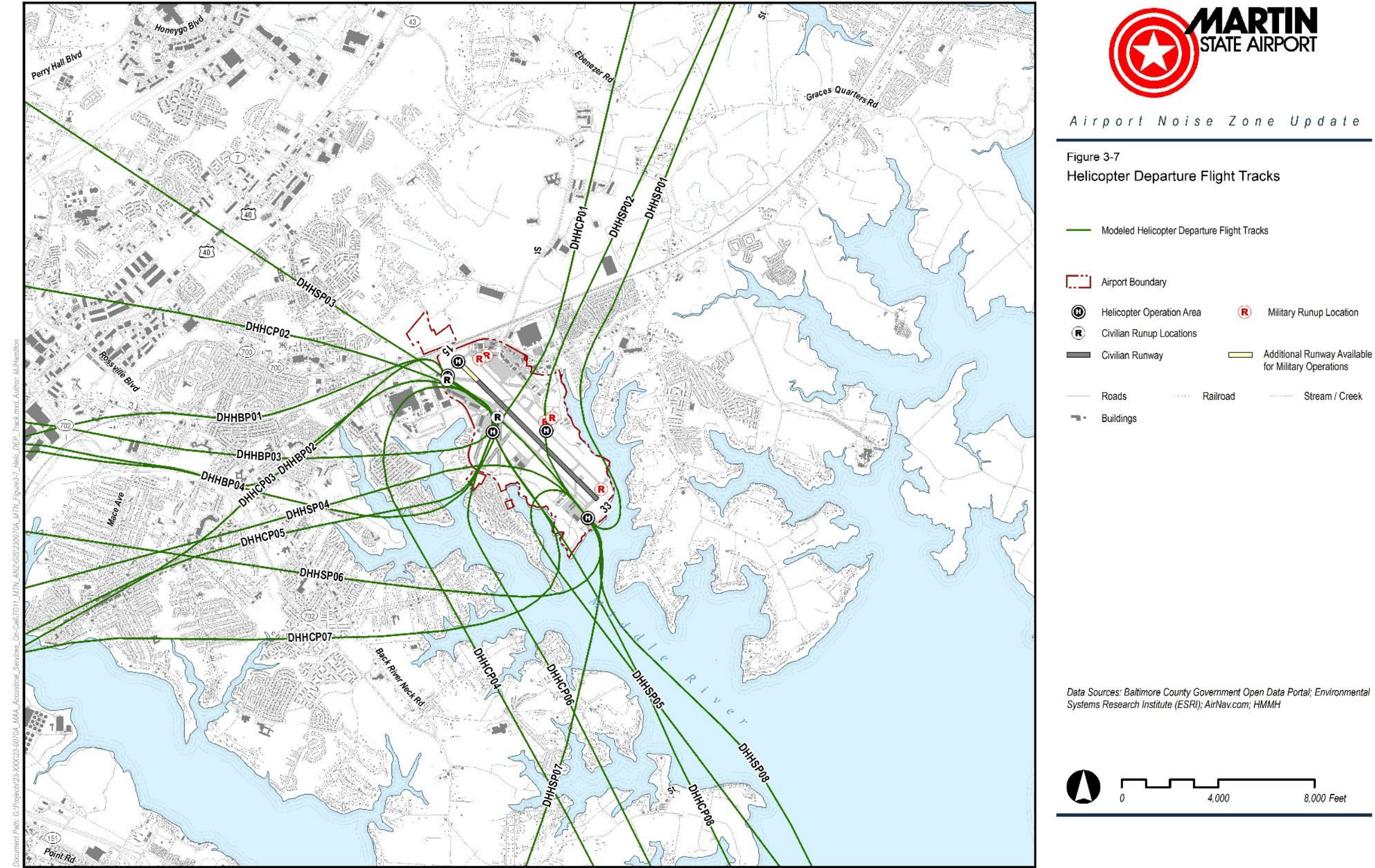


Figure 3-8. Helicopter Circuit/Touch-and-Go Model Flight Tracks

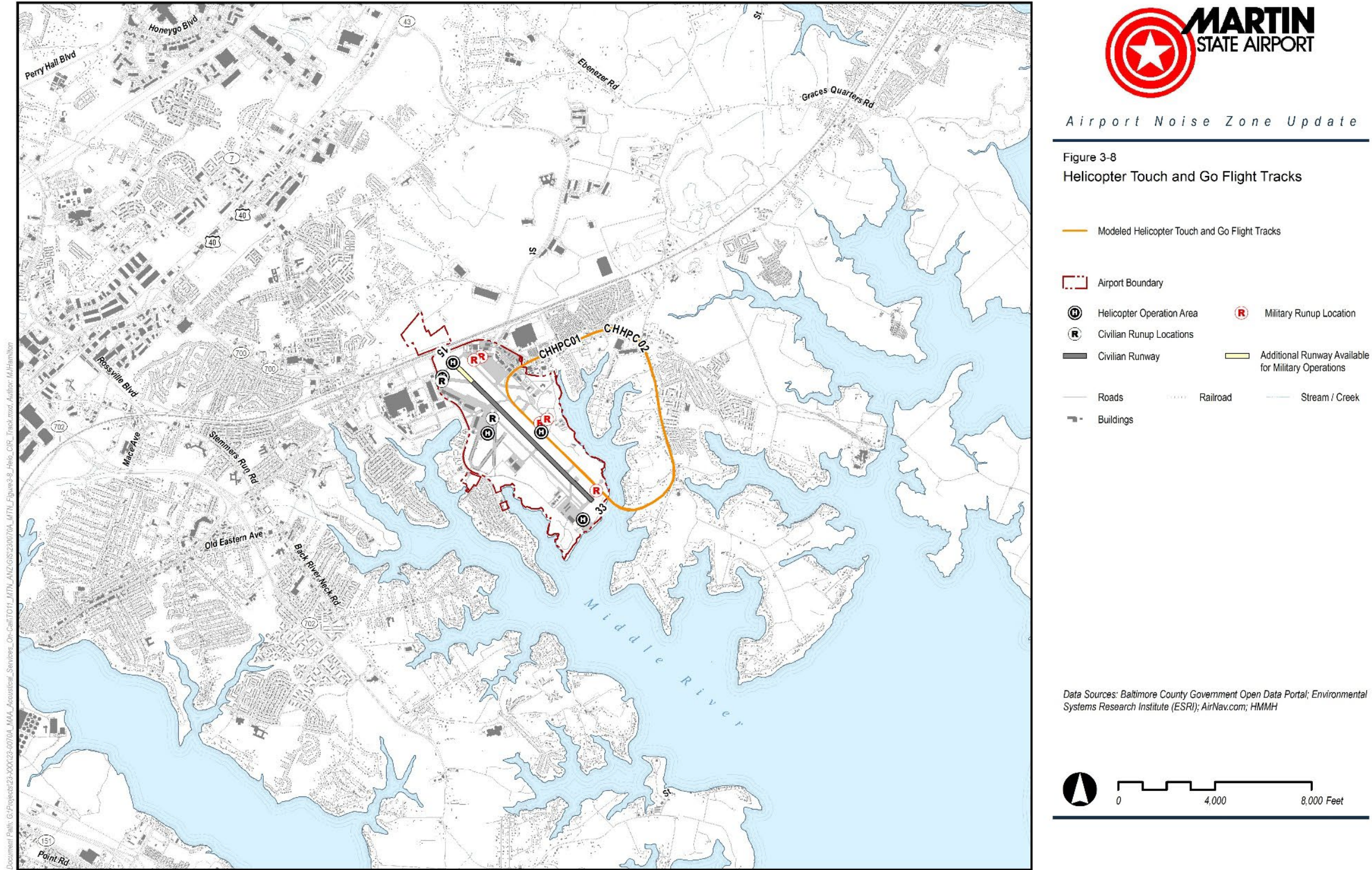


Figure 3-9. Military Arrival Model Flight Tracks

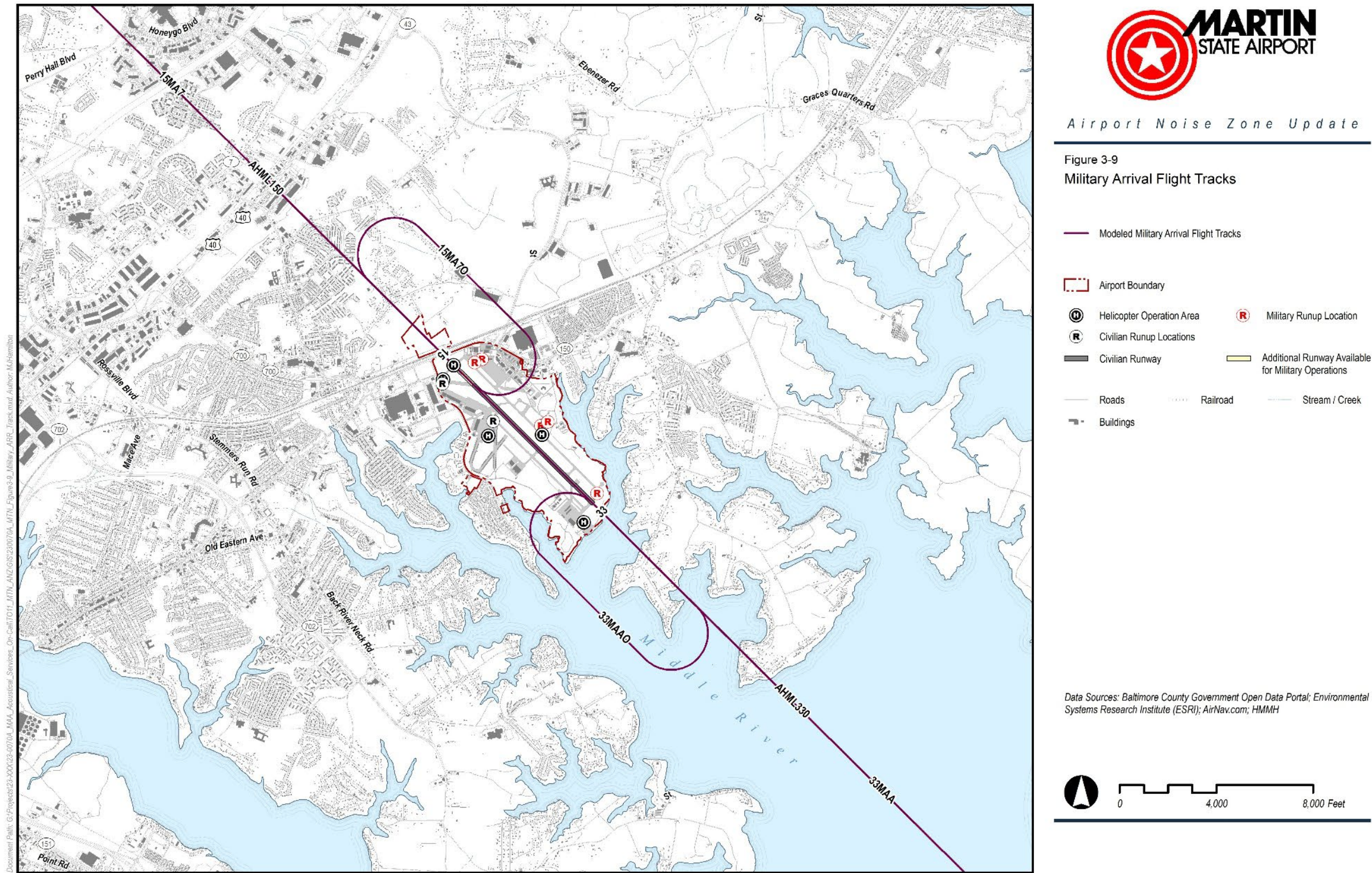


Figure 3-10. Military Departure Model Flight Tracks

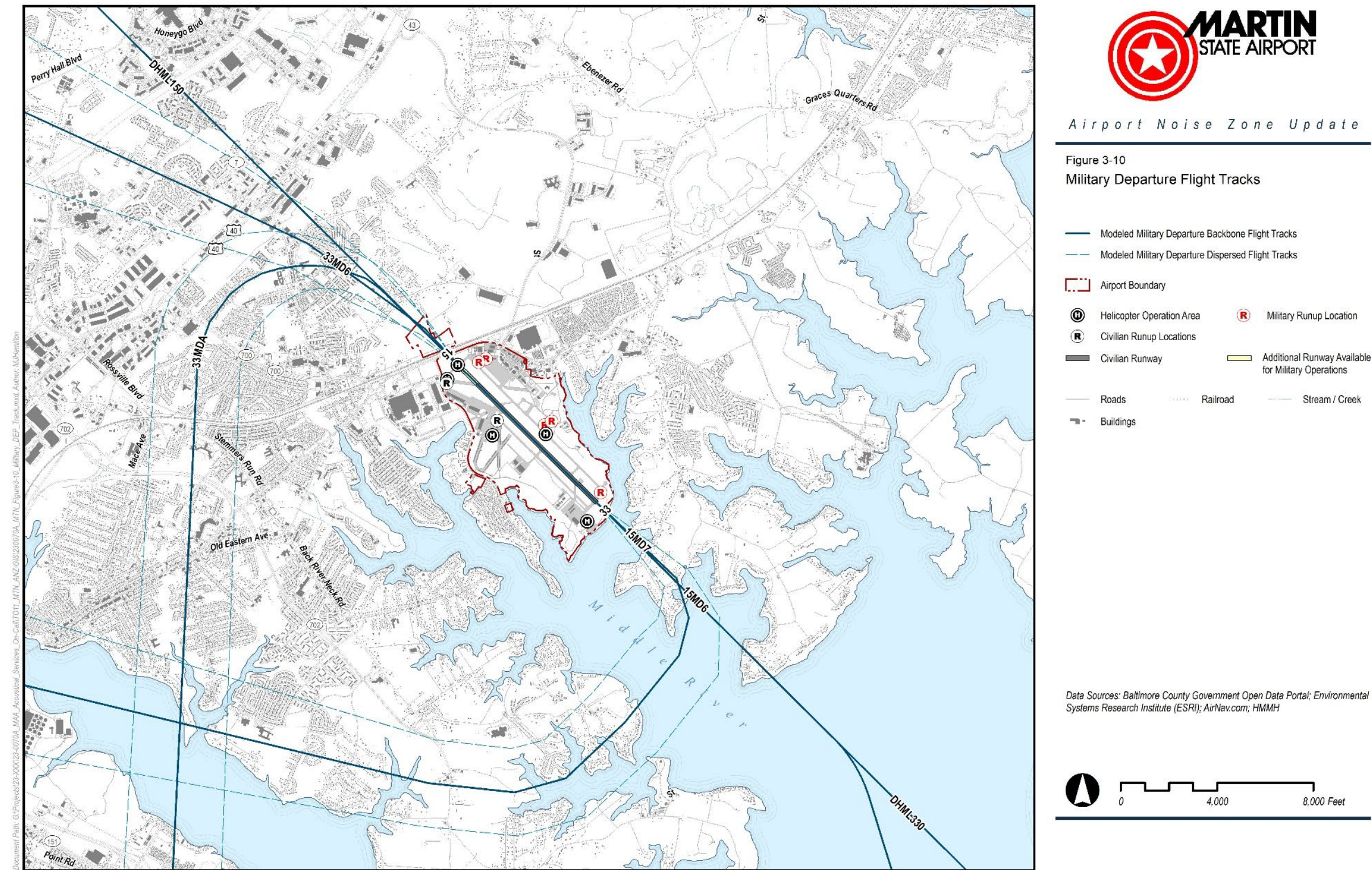
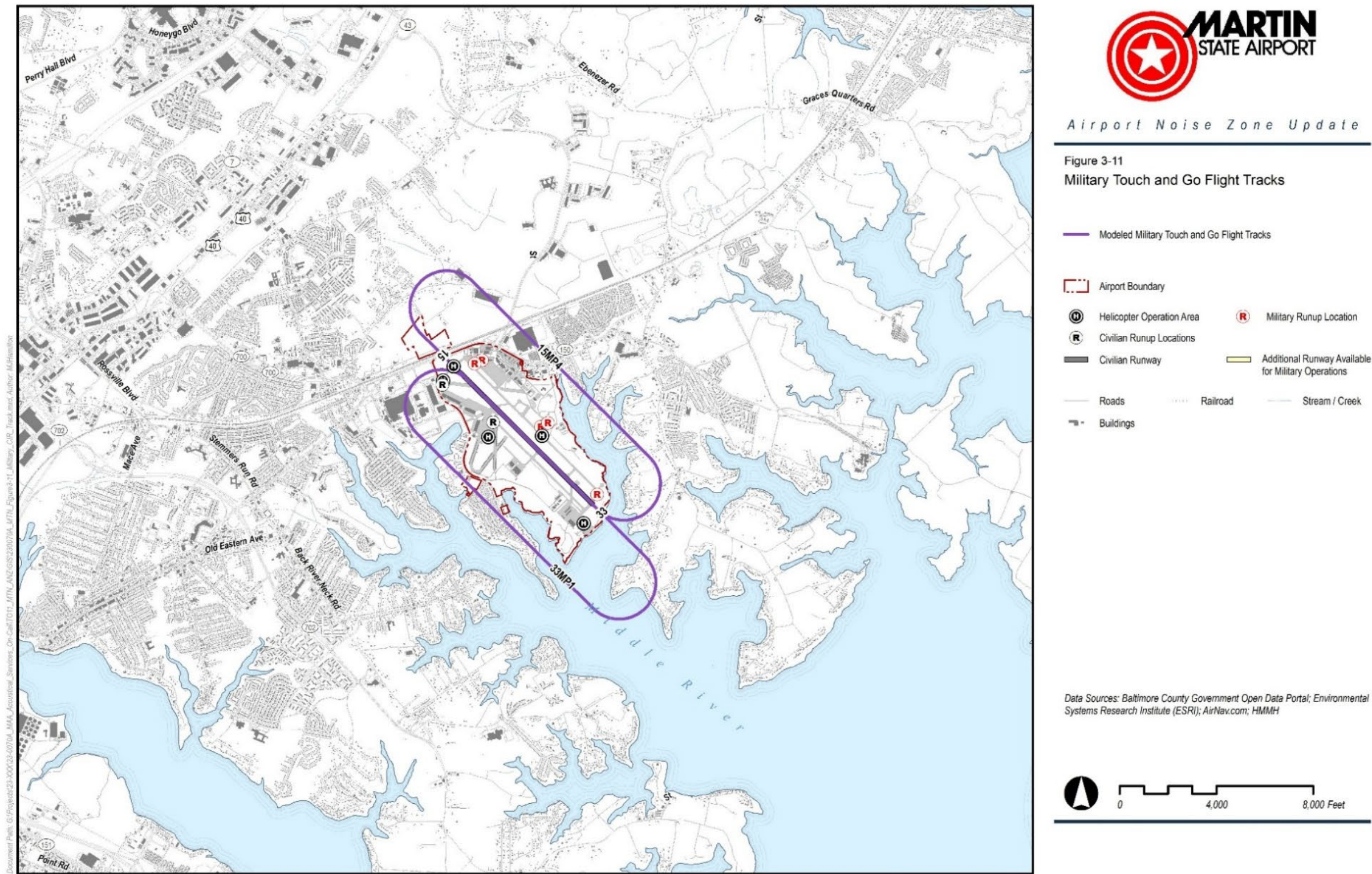


Figure 3-11. Military Low Approach Model Flight Track



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Table 3-12. Fixed-Wing Model Track Utilization Percentages for All Years

Aircraft Category	Runway	Track ID Arrivals	Percent Arrivals	Track ID Departures	Percent Departures	Track ID Circuits	Percent Circuits
General Aviation	15	-	-	-	-	C1501	80.1%
General Aviation	15	-	-	-	-	C1502	12.8%
General Aviation	15	-	-	-	-	C1503	7.1%
General Aviation	15	-	-	-	-	Total	100.0%
General Aviation	33	-	-	-	-	C3301	76.0%
General Aviation	33	-	-	-	-	C3302	16.8%
General Aviation	33	-	-	-	-	C3303	7.2%
General Aviation	33	-	-	-	-	Total	100.0%
Military	15	15MA7	100.0%	15MD6	90.9%	15MP4	100.0%
Military	15	-	-	15MD7	9.1%	-	-
Military	15	Total	100.0%	Total	100.0%	Total	100.0%
Military	33	33MAA	100.0%	33MD6	65.0%	33MP1	100.0%
Military	33	-	-	33MDA	35.0%	-	-
Military	33	Total	100.0%	Total	100.0%	Total	100.0%

Table 3-13. Base Year (2025) and Five-Year Forecast (2030) Helicopter Model Track Utilization Percentages

Aircraft Category	Helipad	Track ID Arrivals	Percent Arrivals	Track ID Departures	Percent Departures	Track ID Circuits	Percent Circuits
Air Taxi and General Aviation	HBP	AHHBP01	43.7%	DHHBP01	17.8%	-	-
Air Taxi and General Aviation	HBP	AHHBP02	30.8%	DHHBP02	37.6%	-	-
Air Taxi and General Aviation	HBP	AHHBP03	15.3%	DHHBP03	13.3%	-	-
Air Taxi and General Aviation	HBP	AHHBP04	10.2%	DHHBP04	31.3%	-	-
Air Taxi and General Aviation	HBP	Total	100.0%	Total	100.0%	-	-
Air Taxi and General Aviation	HCP	AHHCP01	3.3%	DHHCP01	6.4%	-	-
Air Taxi and General Aviation	HCP	AHHCP02	10.9%	DHHCP02	25.0%	-	-
Air Taxi and General Aviation	HCP	AHHCP03	33.4%	DHHCP03	17.4%	-	-
Air Taxi and General Aviation	HCP	AHHCP04	7.0%	DHHCP04	3.4%	-	-
Air Taxi and General Aviation	HCP	AHHCP05	33.0%	DHHCP05	31.8%	-	-
Air Taxi and General Aviation	HCP	AHHCP06	5.6%	DHHCP06	7.0%	-	-
Air Taxi and General Aviation	HCP	AHHCP07	3.5%	DHHCP07	2.9%	-	-
Air Taxi and General Aviation	HCP	AHHCP08	3.5%	DHHCP08	6.1%	-	-
Air Taxi and General Aviation	HCP	Total	100.0%	Total	100.0%	-	-
Air Taxi and General Aviation	HSP	AHHSP01	6.4%	DHHSP01	9.9%	-	-
Air Taxi and General Aviation	HSP	AHHSP02	5.2%	DHHSP02	11.9%	-	-
Air Taxi and General Aviation	HSP	AHHSP03	7.1%	DHHSP03	6.7%	-	-
Air Taxi and General Aviation	HSP	AHHSP04	16.1%	DHHSP04	7.2%	-	-
Air Taxi and General Aviation	HSP	AHHSP05	7.3%	DHHSP05	12.6%	-	-
Air Taxi and General Aviation	HSP	AHHSP06	28.5%	DHHSP06	14.6%	-	-
Air Taxi and General Aviation	HSP	AHHSP07	19.8%	DHHSP07	10.2%	-	-
Air Taxi and General Aviation	HSP	AHHSP08	9.7%	DHHSP08	26.9%	-	-
Air Taxi and General Aviation	HSP	Total	100.0%	Total	100.0%	-	-
Air Taxi and General Aviation	HPC	-	-	-	-	CHHPC01	51.8%
Air Taxi and General Aviation	HPC	-	-	-	-	CHHPC02	48.2%
Air Taxi and General Aviation	HPC	-	-	-	-	Total	100.0%
Military	HML	AHML330	50.0%	DHML150	50.0%	-	-
Military	HML	AHML150	50.0%	DHML330	50.0%	-	-
Military	HML	Total	100.0%	Total	100.0%	-	-

3.6 Meteorological Conditions

AEDT has several settings that affect aircraft performance profiles and sound propagation based on meteorological data. Meteorological settings include average annual temperature, barometric pressure, and relative humidity at the airport. AEDT utilizes the following values for annual average weather conditions at MTN which are based on a 10-year average from 2014-2023:

- Temperature: 55.47° F
- Pressure: 1017.21 millibars
- Relative Humidity 75.08%
- Dew Point: 47.7° F
- Wind Speed: 4.4 knots

The AEDT annual average weather condition values detailed above were used in AEDT for generating the base year and 2030 and 2035 forecast noise contours for the MTN ANZ update.

3.7 Terrain Data

Terrain data describes the elevation of the ground surrounding the airport and on airport property. AEDT uses terrain data to set the ground level under the flight paths. The terrain data does not affect the aircraft's performance or noise levels, but it does affect the vertical distance between the aircraft and a noise "receiver" on the ground. This in turn affects noise propagation assumptions about how noise propagates over ground. The terrain data were obtained from the United States Geological Survey (USGS) National Map Data Download Application on May 8, 2025. Elevation Dataset with one-third arc second (approximately 33 feet) resolution was selected. Terrain data was utilized in conjunction with the terrain feature of AEDT to generate the base, five-year, and ten-year noise contours for the MTN ANZ update.

4. Study Results

4.1 2025 Base Year Contours

Figure 4-1 presents the MTN 65, 70, and 75 dB DNL contours for the base year.

The 65 dB DNL contour remains mostly on airport property with four exceptions:

- An area on the northeast side of the airport off of Runway 15 due to military maintenance run-ups of A-10C aircraft on the MDANG ramp area.
- An area on the southwest side of the airport off of Runway 15 due to helicopter activity at the Baltimore City Police helipad.
- An area on the northeast side of the airport off of Runway 33 due to military pre-flight run-ups of A-10C aircraft.
- An area to the southwest side of the airport off of Runway 33 due to fixed-wing arrival operations but dominated by helicopter activity at the Maryland State Police helipad.

The base year contour exposes approximately 283 acres, 278 (98 percent) of which are on airport property, as presented in Table 4-1.

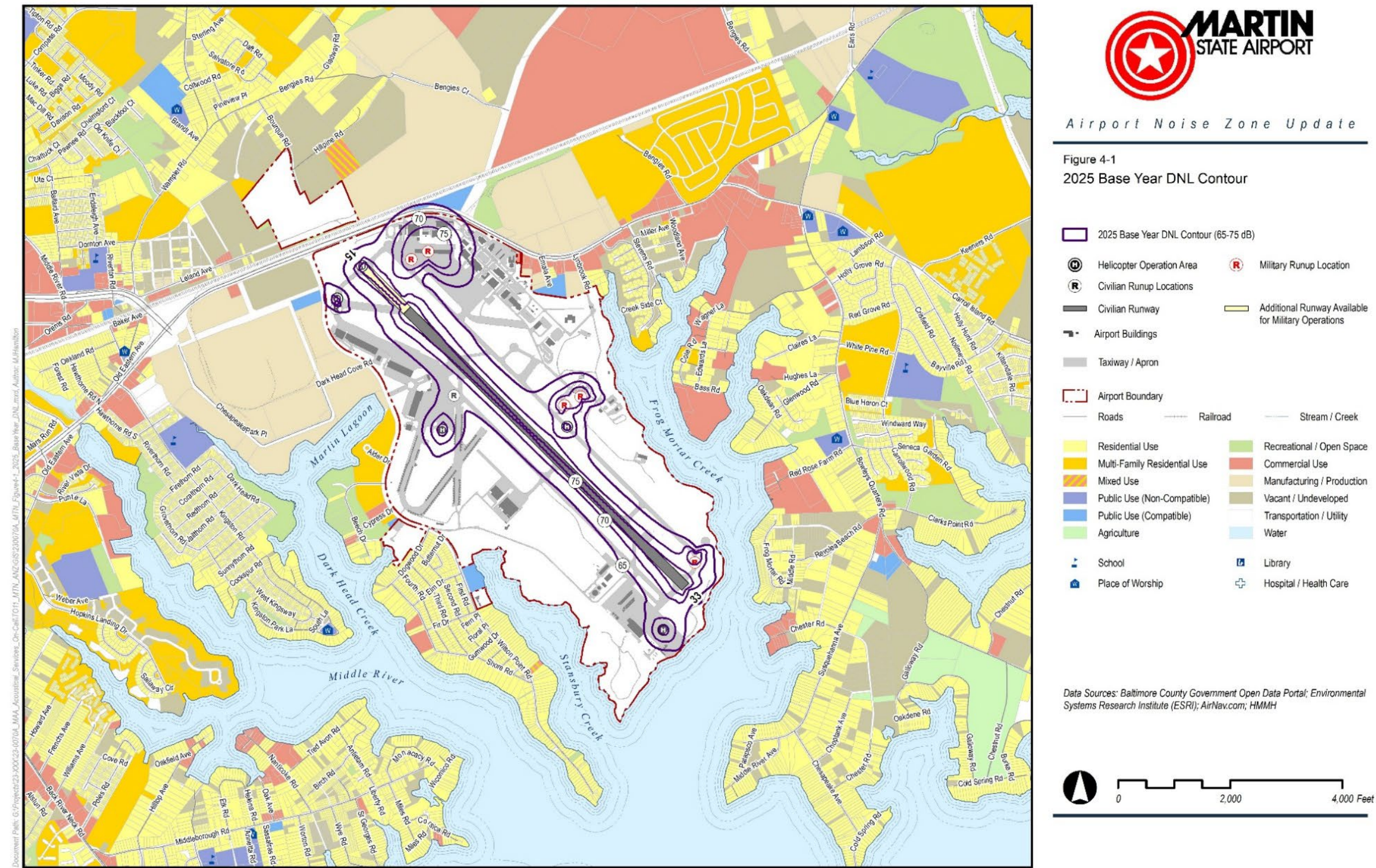
Table 4-1. Households, Population, and Acreage within the 2025 Base Year Contour

DNL Contour Interval	Estimated Residential Population	Estimated Residential Housing Units	Area (acres)	On Airport (acres)	On Airport (%)	Off Airport (acres)	Off Airport (%)
65-70 dB	0	0	159	154	97%	5	3%
70-75 dB	0	0	80	80	100%	0	0%
>75 dB	0	0	44	44	100%	0	0%
Total	0	0	283	278	98%	5	2%

Sources: HMMH 2025; 2020 US Census

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Figure 4-1. 2025 Base Year DNL Contours



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4.2 2030 Five-Year Forecast Contours

Figure 4-2 displays the 2030 five-year 65, 70, and 75 dB DNL contours for MTN. The land use data used to create the base map was derived from various sources, including local governments such as Baltimore County, aerial photography, airport layout and property boundaries, and information on undeveloped land acquired by the MAA.

The 2030 five-year forecast contours are noticeably smaller than those for the base year. The primary reason for this reduction is the MDANG's divestment of A-10C aircraft in 2025. As a result, the 2030 65 dB DNL contour is largely contained within airport property, with the exception of a northwest area off Runway 15, which is related to Baltimore City Police helicopter operations.

Overall, the 2030 five-year forecast contours are approximately 39 percent smaller in area compared to the base year, reflecting the anticipated changes in fleet mix during the 2030 forecast period. These contours cover approximately 172 acres, with 99 percent of that area located on airport property, as presented in **Table 4-2**.

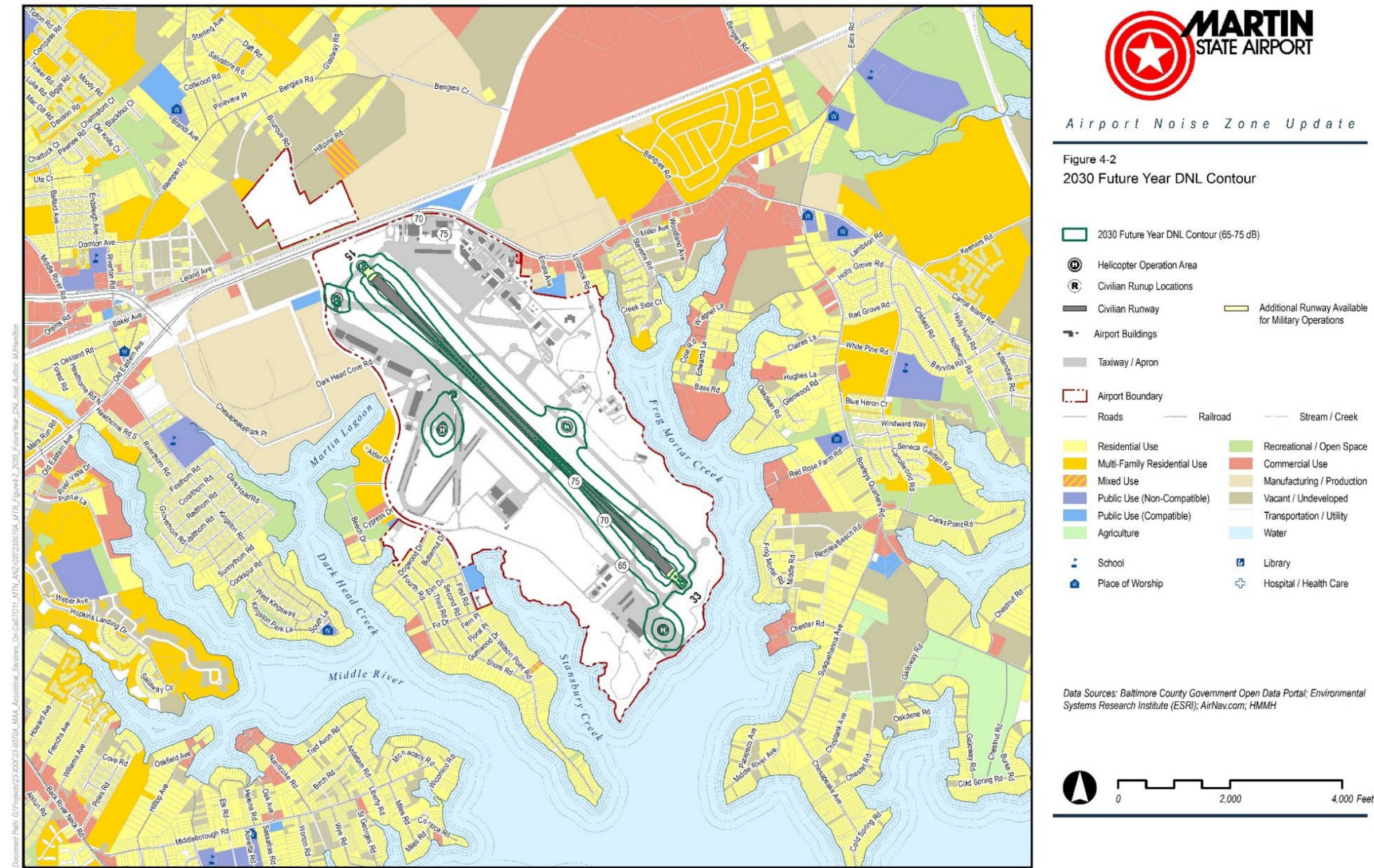
Table 4-2. Households, Population, and Acreage within 2030 Five-Year Forecast DNL Contours

DNL Contour Interval	Estimated Residential Population	Estimated Residential Housing Units	Area (acres)	On Airport (acres)	On Airport (%)	Off Airport (acres)	Off Airport (%)
65-70 dB	0	0	113	113	99%	>1	>1%
70-75 dB	0	0	41	41	100%	0	0%
>75 dB	0	0	18	18	100%	0	0%
Total	0	0	172	172	99%	>1	>1%

Sources: HMMH 2025; 2020 US Census

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Figure 4-2. 2030 Five-Year Forecast DNL Contours



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4.3 2035 Ten-Year Forecast Contours

Figure 4-3 displays the 2035 ten-year 65, 70, and 75 dB DNL contours for MTN. The land use data used to create the base map was derived from various sources, including local governments such as Baltimore County, aerial photography, airport layout and property boundaries, and information on undeveloped land acquired by the MAA.

The 2035 ten-year forecast contours are noticeably smaller than those for the base year. The primary reason for this reduction is the MDANG's divestment of A-10C aircraft in 2025. As a result, the 2035 65 dB DNL contour is largely contained within airport property, with the exception of a northwest area off Runway 15, which is related to Baltimore City Police helicopter operations.

Overall, the 2035 ten-year forecast contours are approximately 38 percent smaller in area compared to the base year, reflecting the anticipated changes in fleet mix during the 2035 forecast period. These contours cover approximately 174 acres, with 99 percent of that area located on airport property, as presented in **Table 4-3**.

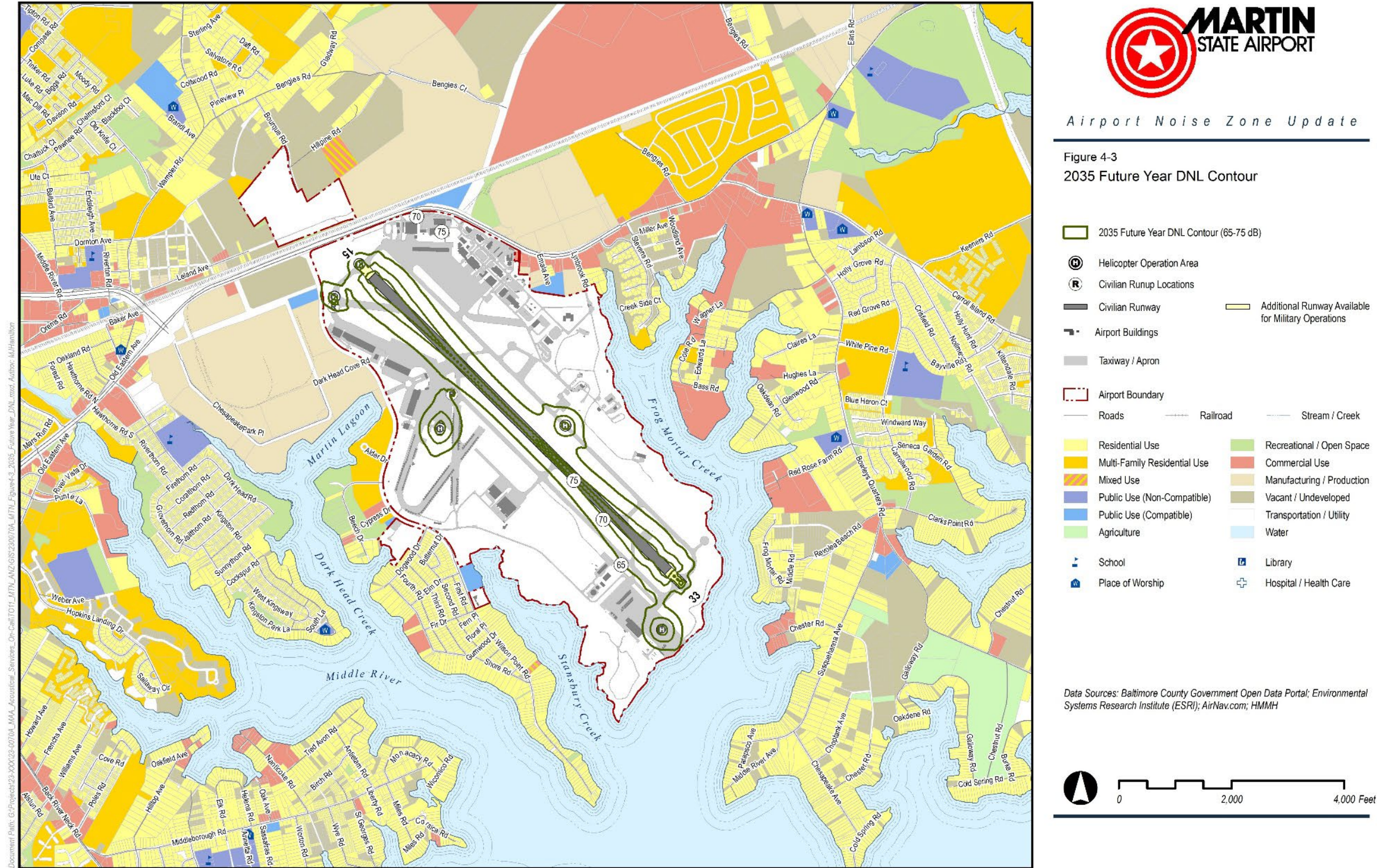
Table 4-3. Households, Population, and Acreage within 2035 Ten-Year Forecast DNL Contours

DNL Contour Interval	Estimated Residential Population	Estimated Residential Housing Units	Area (acres)	On Airport (acres)	On Airport (%)	Off Airport (acres)	Off Airport (%)
65-70 dB	0	0	116	116	99%	>1	>1%
70-75 dB	0	0	41	41	100%	0	0%
>75 dB	0	0	17	17	100%	0	0%
Total	0	0	174	174	99%	>1	>1%

Sources: HMMH 2025; 2020 US Census

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Figure 4-3. 2035 Ten-Year Forecast DNL Contours



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4.4 2025 ANZ Contours and Land Use Inventory

The 2025 MTN ANZ represents a composite of the 65, 70, and 75 dB DNL noise contours for three study years: the base year (2025) and two forecast years (2030 and 2035). The ANZ represents the outermost extent of the annual DNL contours for each of the three study years. As described in Section 1, the ANZ defines the largest area of the existing or future noise exposure contours for planning purposes.

The 2025 ANZ update process included an inventory of the latest land use within the ANZ DNL contour boundary as well as in the vicinity of MTN. An inventory of the land use within the contour boundary and in the vicinity of MTN was conducted in July 2025 and included in the development of the 2025 ANZ DNL contour.

Figure 4-4 presents the 65, 70, and 75 dB DNL contours for the 2025 ANZ in relation to land use surrounding MTN. The shape of the 2025 ANZ composite contours is primarily driven by the 2025 Base Year contours, which include MDANG A-10C operations. The 2030 and 2035 Forecast Year contours reflect forecasted fleet mix changes between 2025 and 2035, including the divestment of A-10C aircraft in 2025. The 2025 ANZ exposes approximately 286 acres to noise levels greater than 65 dB DNL, as presented in **Table 4-4**.

Table 4-4. Households, Population, and Acreage within the 2025 Full Build ANZ

DNL Contour Interval	Estimated Residential Population	Estimated Residential Housing Units	Area (acres)	On Airport (acres)	On Airport (%)	Off Airport (acres)	Off Airport (%)
65-70 dB	0	0	157	152	97%	5	3%
70-75 dB	0	0	82	82	100%	0	0%
>75 dB	0	0	47	47	100%	0	0%
Total	0	0	286	281	98%	5	2%

Sources: HMMH 2025; 2020 US Census

Figure 4-5 presents the 2025 ANZ contours compared to the 2020 ANZ. The 2020 ANZ included a base year of 2020 and forecast years of 2025 and 2030. **Table 4-5** presents a comparison of acreage, estimated population, and estimated housing unit counts for the 2025 ANZ and the previous 2020 ANZ.

Table 4-5. Households, Population, and Acreage within the 2025 Full Build ANZ Compared to the 2020 ANZ

ANZ	Estimated Residential Population	Estimated Residential Housing Units	Area (acres)	On Airport (acres)	On Airport (%)	Off Airport (acres)	Off Airport (%)
2025 ANZ	0	0	286	281	98%	5	2%
2020 ANZ	0	0	411	392	95%	19	5%

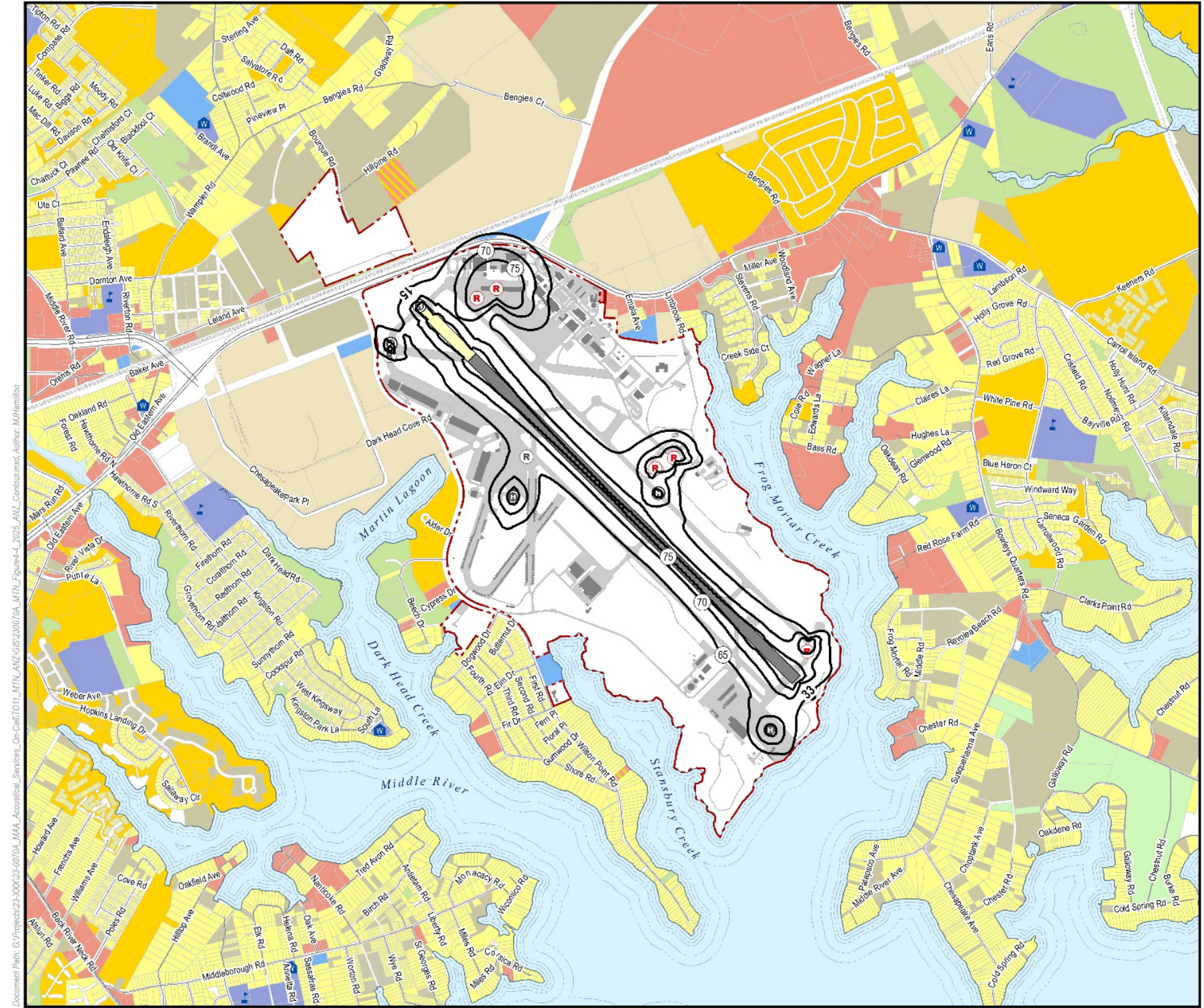
Sources: HMMH 2025; 2020 US Census

As shown in **Figure 4-5**, the 2025 ANZ covers a smaller area than the 2020 ANZ—286 acres compared to 411 acres—representing a 30 percent reduction in land exposed to noise levels above 65 dB DNL. This change reflects differences in the noise exposure patterns displayed in **Figures 4-4** and **4-5**. The reduction in ANZ size is primarily driven by change in military operations between the two analyses, including:

- Fewer A-10C operations conducted by the MDANG in the 2025 Base Year scenario.
- Updated A-10C arrival procedures implemented for 2025, which resulted in lower noise exposure.
- Reduced A-10C activity in future years of the 2025 ANZ compared to the busier 2030 Future Year scenario that influenced the 2020 ANZ.
- Increases in non-military operations in both analyses that were not large enough to offset the noise reduction from decreased A-10C activity.

Together these factors resulted in a more compact 2025 ANZ contour compared to the broader 2020 ANZ.

Figure 4-4. MTN 2025 ANZ Contours



Airport Noise Zone Update

Figure 4-4
2025 ANZ DNL Contour

- 2025 ANZ DNL Contour (65-75 dB)
- Helicopter Operation Area
- Civilian Runup Locations
- Civilian Runway
- Airport Buildings
- Taxiway / Apron
- Airport Boundary
- Roads
- Railroad
- Stream / Creek
- Residential Use
- Multi-Family Residential Use
- Mixed Use
- Public Use (Non-Compatible)
- Public Use (Compatible)
- Agriculture
- Recreational / Open Space
- Commercial Use
- Manufacturing / Production
- Vacant / Undeveloped
- Transportation / Utility
- Water
- School
- Place of Worship
- Library
- Hospital / Health Care
- Military Runup Location
- Additional Runway Available for Military Operations

Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HMMH

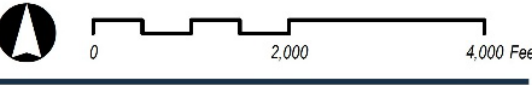
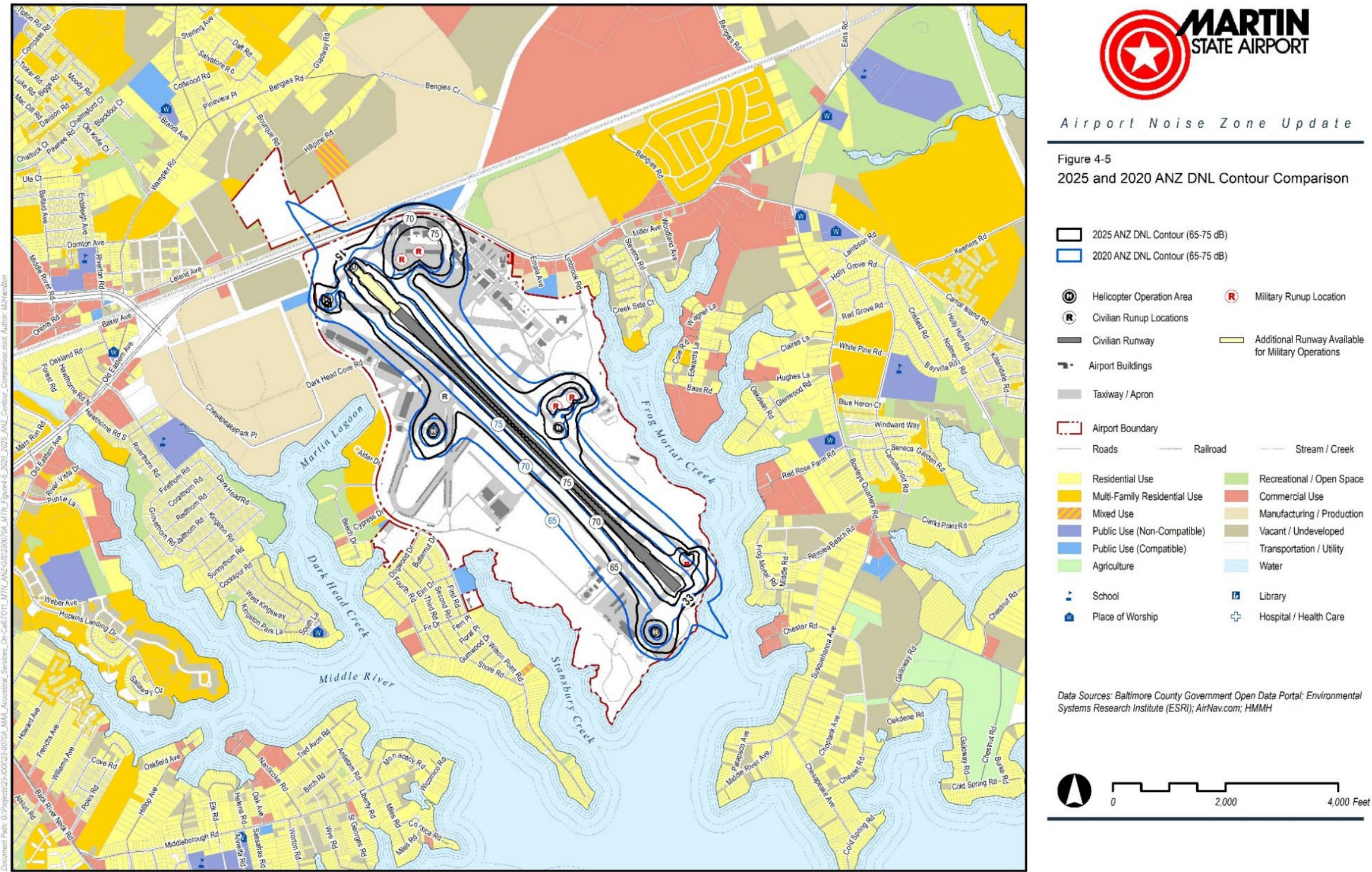


Figure 4-5. 2025 ANZ Compared to 2020 ANZ



5. Noise Abatement Plan

Martin State Airport (MTN) is owned by the State of Maryland and operated by the Maryland Department of Transportation Maryland Aviation Administration (MAA). Regulations regarding the Airport Noise Zone (ANZ) process indicate that if a noncompatible land use area exists within a noise zone, the airport operator shall develop a noise abatement plan (NAP) to reduce the size of or eliminate the impacted land use area by altering the coverage of the noise zone through the application of the best available technology, at a reasonable cost and without impairing safety of flight.⁶ The MTN NAP is established pursuant to the Maryland Environmental Noise Act of 1974 (Transportation Article, §§ 5-805, 5-806, and 5-819, Annotated Code of Maryland) and COMAR Section 11.03.02.10.

In 1984, MTN adopted an NAP designed to minimize the noise of aircraft operations within the constraints of the Federal Air Traffic Control System and aircraft safety. The NAP was developed with the cooperation of the MDANG, airport users, the aviation industry, and local governments. It was updated in 2020 to reflect operating conditions at MTN. A new measure was added for the 2025 update to discourage intersection departures from Runway 15.

The NAP is formulated to minimize noise disturbance to neighboring communities while maintaining safe and efficient MTN airport operations. The MAA Division of MTN Airport Operations is responsible for the overall administration of the MTN NAP, and the noise abatement procedures are reproduced on the Martin State Airport Noise Abatement webpage⁷ and in Martin State Airport Tenant Directive 501.1, which is distributed to all MTN tenants.⁸

Per COMAR Section 11.03.02.10C(3)(b), the MDANG, the Maryland State Police, and local law enforcement agencies are exempt from the provisions of this regulation when operational necessity dictates noncompliance, or in the event of a State or national emergency.

The NAP is comprised of two parts: (1) the efforts the MAA is taking to mitigate noise in the areas surrounding MTN, and (2) aircraft operating procedures.

5.1 Noise Mitigation Efforts

A. Airport Noise Zone (ANZ)

Maryland law requires the protection of citizens from the impact of transportation-related noise. The MAA is required to adopt an ANZ that minimizes the impact of aircraft noise on people living near MTN and prevents incompatible land development around the airport.

The MTN ANZ is depicted by noise contours surrounding MTN. These lines connect points of equal noise exposure and represent DNL 65 dB, 70 dB, and 75 dB noise contours. These contours represent the

⁶ Code of Maryland Regulations (COMAR) Title 11 Sections 03.03.04 and 03.01.10 and Sections 5-805, 5-806, and 5-819 of the Transportation Article, Annotated Code of Maryland.

⁷ MAA, *Noise Abatement*, <https://martinstateairport.com/noise-abatement/>

⁸ MAA, *Tenant Information and Directives*, <https://martinstateairport.com/tenant-information-directives/>

boundaries for determining incompatible activities or land uses under Maryland law. The State uses the noise contours adopted in the MTN ANZ to restrict new development that would be incompatible with the cumulative noise exposure level acceptable for an area.

B. Control of Incompatible Development

The State of Maryland regulates land use within the MTN ANZ. Anyone desiring to construct or modify a structure or land use is required to obtain an Airport Zoning Permit. An application can be obtained from the Baltimore County Office of Planning and Zoning or the MAA Office of Planning and Environmental Services.⁹ The MAA is required by law to approve or deny zoning permits based on the location relative to the MTN ANZ and the compatibility standards listed in the chart below.

NOISE COMPATIBILITY STANDARDS	
Land Use	Areas of Compatibility (Noise Levels)
Residences, schools, hospitals, libraries, churches, auditoriums, rest homes, nursing homes, concert halls.	Up to 65 DNL
Transient lodging, hotels, motels, sports arenas, outdoor spectator sports, playgrounds, neighborhood parks, noise sensitive manufacturing.	Up to 70 DNL
Golf courses, riding stables, water recreation, cemeteries, office buildings, retail and wholesale establishments, movie theaters, restaurants, industry, manufacturing, utilities, livestock farming, animal breeding.	Up to 75 DNL
Agriculture (except livestock), mining, fishing, aviation related uses.	All

Source: COMAR 11.03.03.03, *Limits for Cumulative Noise Exposure*, <http://mdrules.elaws.us/comar/11.03.03.03>

For example, a person may wish to build a new housing development within the DNL 65 dB noise contour (i.e. within the ANZ). As the maximum limit for new residential land use is DNL 65 dB, the applicant would be denied a permit by the MAA. In the event a permit application is denied by the MAA, the applicant may appeal to the Board of Airport Zoning Appeals (BAZA) for a variance. The BAZA may deny an appeal or grant a variance requiring construction standards designed to reduce noise exposure to future occupants. The BAZA was created in 1974 by the Maryland General Assembly and is composed of 10 citizen members appointed by the Governor.

Under the current procedures, a house built within the ANZ would require a variance from BAZA. If the Board approves a variance, the applicant is typically required to meet the following conditions:

- Provide a report from an acoustical engineer demonstrating that the proposed construction will provide adequate sound insulation and achieve an interior noise level of 45 dB.
- Agree to complete a post construction noise test to demonstrate that the house meets the required interior noise level of 45 dB.
- Agree not to apply for a Use and Occupancy Permit until BAZA approves the results of the post construction test.

⁹ MAA, *Permits & Forms*, <https://www.marylandaviation.com/content/permitsandforms/constructionzoning/index.html>

- Agree to grant an aviation easement to the MAA that includes a provision relinquishing any right to receive remuneration or any other compensation or benefit under any program designed to allay, abate, or compensate for the effects of aircraft noise and emissions in connection with the operation of MTN Airport.

C. Noise Concerns

MTN maintains telephone service to enable citizens to register noise-related complaints at any time 24 hours per day, 7 days a week. The telephone number is 410-682-8802. Complaints are investigated if appropriate and the complainant is provided with any relevant information.

Additionally, citizens can monitor MTN aircraft operations and register complaints utilizing MAA's WebTrak system (<https://webtrak.emsbk.com/bwi3>). WebTrak provides an interactive portal for the viewing of aircraft in the vicinity of MTN as well as BWI Marshall and provides the opportunity to file noise complaints directly to the MAA. WebTrak users can geolocate a place of interest (home, work, etc.) and view either current (20-minute delayed) or historical aircraft overflights. WebTrak includes an aircraft's type, altitude, origin and destination airports, and flight identification. Inquiries and complaints about aircraft flights at MTN submitted through WebTrak are passed to MTN Operations and Maintenance staff for review and follow-up. Note: WebTrak does not include data on military aircraft flights or operations due to reasons of national security.

D. Maryland Air National Guard (MDANG) Noise Barriers:

In 1989, MDANG erected noise barriers to provide reductions in noise impacts from engine maintenance activity for areas east and northeast of MTN.

E. Aircraft Maintenance Engine Run-up Areas

Aircraft maintenance engine run-ups are to be accomplished only in areas designated by the Chief, MTN Operations & Maintenance in accordance with MTN Tenant Directive 200.2.

5.2 MTN Noise Abatement Procedures

A. Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) Departures

1. VFR Piston-engine Aircraft:
Runway 15/33 – Unless otherwise instructed by Air Traffic Control (ATC), aircraft fly runway heading to 1,000 feet Mean Sea Level (MSL) prior to turning to the ATC approved on-course heading or crosswind leg of the traffic pattern.
2. VFR Turbine Powered Aircraft:
Runway 15/33 – Unless otherwise instructed by ATC, aircraft shall fly runway heading to 1,500 feet MSL prior to turning to the ATC approved, on-course heading or crosswind leg of the traffic pattern.
3. VFR Helicopter Departures:
Unless operating under a Letter of Agreement (LOA) with MTN ATC specifying otherwise, helicopters shall climb to 500 feet above ground level (AGL) on initial departure heading before turning on-course.

4. All IFR Departures:

IFR departures shall be accomplished in accordance with ATC direction or clearance.

B. VFR and IFR Arrivals and Traffic Patterns

VFR and IFR aircraft approach should, to the maximum extent feasible, maintain the highest practical altitude, commensurate with flight and ATC procedures in order to minimize aircraft noise exposure to communities underlying the final approach courses.

C. Closed Traffic Patterns

A left-hand traffic pattern shall be used at MTN unless otherwise directed by ATC. Piston fixed-wing aircraft should fly runway heading until reaching 1,000 feet MSL prior to turning to the crosswind leg of the traffic pattern. Turbine aircraft should fly runway heading until reaching 1,500 feet MSL prior to turning to the crosswind leg of the traffic pattern.

Traffic pattern altitudes are:

Fixed Wing	Piston engine	1,000' MSL
Fixed Wing	Civil turbine and military turboprop	1,500' MSL
Fixed Wing	Military Jet	2,000' MSL
Rotary Wing		500' MSL

D. Touch-and-Go or Practice Approaches

1. No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance staff.
2. Between 6:00 a.m. – 10:00 p.m. daily:

FAA Weight Class	Description	Weight	Limitation
Small	Small Single Engine/Twin Engine Aircraft, Helicopters, and Transient Military (e.g. Cessna 172, Piper Cherokee)	12,500 lbs. or less	No restrictions
Medium	Medium Aircraft and Transient Military* (e.g. military fighter jets, Learjet 35, Bombardier CRJ-200LR)	Between 12,500 and 41,000 lbs.	Limit of two practice approaches
Large	Large Jet/Large Commuter/757/Heavy Aircraft	More than 41,000 lbs.	Practice approaches and landings are not authorized without prior permission from MTN Operations and Maintenance staff.

* Military aircraft shall be limited to two practice landings/take-offs or approaches unless additional operations are approved by MTN Operations and Maintenance staff.

Source: FAA, https://aspmhelp.faa.gov/index.php/Weight_Class

E. Intersection Departures

Aircraft departing Runway 15 are discouraged from utilizing intersection departures.

6. Public Consultation

The ANZ update process included multiple public consultation efforts to ensure that MTN stakeholder input is reflected in the resulting ANZ contour and NAP documentation. This public involvement component included two major initiatives: (1) voluntarily forming and convening a Stakeholder Advisory Committee (SAC) and (2) conducting a public workshop and hearing.

6.1 Stakeholder Advisory Committee (SAC)

The SAC was formed to include representatives of community and industry stakeholder groups with an interest in airport activities, ensuring they remained informed of the 2025 MTN ANZ update process and methodology. SAC members were invited to participate throughout the MTN ANZ update process by attending meetings and providing input on the process. SAC members were expected to share pertinent MTN ANZ update information with the groups or any interested citizens that they represent.

The SAC served in an advisory role to the MAA solely for purposes of the MTN ANZ update process. The SAC is composed of stakeholders representing all significant interests at MTN, including representatives from:

- Local government planning staff
- Community organizations
- MTN tenants and users
- Aviation trade associations

The MAA encouraged SAC members to review study inputs, assumptions, analyses, and documentation. They were also encouraged to provide input, advice, and guidance related to the ANZ and NAP. SAC members were asked to review the land use inventory and planning considerations.

The SAC was convened three times during the ANZ update process. All meetings were held in Hangar 4 at MTN. The first meeting was held on April 2, 2025. During the first meeting the MAA presented the purpose and objectives of the update process, along with preliminary planning parameters. At the second meeting, held on June 26, 2025, noise modeling inputs and additional background information was presented to the SAC. At the third meeting, held on September 25, 2025, the presentation covered the resulting contours and land use inventory, as well as a review of the NAP. Prior to the third meeting, ANZ noise contours and the related land-use inventory, along with the NAP, were shared with all SAC members for review. All meeting materials, including the SAC committee roster, meeting invitations, sign-in sheets, meeting minutes, and presentations are included in Appendix C.

6.2 Public Workshop and Hearing

As required by Maryland law, a public workshop and hearing were held concerning the 2025 MTN ANZ, which offered all interested persons an opportunity to comment on proposed revisions to the MTN ANZ and NAP.

The public workshop and hearing was held on March 18, 2026 from 6:00 p.m. to 8:00 p.m. at Hangar 4, 701 Wilson Point Road, Middle River, Maryland. During the workshop, MAA and HMMH staff discussed the MTN ANZ update process and outcomes. Public comments on the MAA’s 2025 MTN ANZ and NAP were accepted during the hearing via a court reporter. Additional public comments were accepted via email or postal mail until April 20, 2026. The public workshop materials are provided in Appendix E, including invitations, documentation of public notices, attendance information, presentation materials, and the hearing transcript. Appendix F contains documentation of public comments.

Public Hearing and Workshop Information		
Date: March 18, 2026	Time: 6:00 p.m. – 8:00 p.m. EDT	Location: 701 Wilson Point Rd, Middle River, MD 21220

The MAA considered all oral and written comments received during the public comment period. Notification in the Maryland Register formally adopts the 2025 ANZ and NAP into Maryland regulations. The MAA will then certify and submit the adopted ANZ to the Baltimore County Land Record Officer for use in land-use planning and development.

2025 Airport Noise Zone Update

Appendices



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Appendix A. Aircraft Noise Terminology

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Noise is a complex physical quantity. The properties, measurement, and presentation of noise involve specialized terminology that can be difficult to understand. To provide a basic reference on these technical issues, this section introduces fundamentals of noise terminology, the effects of noise on human activity, and noise propagation.

A.1 Introduction to Noise Terminology

Analyses of potential impacts from changes in aircraft noise levels rely largely on a measure of cumulative noise exposure over an entire calendar year, expressed in terms of a metric called the Day-Night Average Sound Level (DNL/L_{dn}). However, DNL is not the only metric for measuring noise. A variety of metrics, which are further described in subsequent subsections, are used to describe noise, including:

- Sound Pressure Level, SPL, and the decibel, dB
- A-Weighted Decibel, dBA
- Maximum A-Weighted Sound Level, L_{max}
- Time Above, TA
- Sound Exposure Level, SEL
- Equivalent A-Weighted Sound Level, L_{eq}
- Day-Night Average Sound Level, DNL/L_{dn}

A.2 Sound Pressure Level, SPL, and the Decibel, dB

All sounds come from a sound source—a musical instrument, a voice speaking, an airplane passing overhead. It takes energy to produce sound. The sound energy produced by any sound source travels through the air in sound waves—tiny, quick oscillations of pressure just above and just below atmospheric pressure. The ear senses these pressure variations and, with much processing in our brain, translates them into “sound.”

Our ears are sensitive to a wide range of sound pressures. The loudest sounds that we can hear without pain contain about one million times more energy than the quietest sounds we can detect. To allow us to perceive sound over this very wide range, our ear/brain “auditory system” compresses our response in a complex manner, represented by a term called sound pressure level (SPL), which is expressed in units called decibels (dB).

Mathematically, SPL is a logarithmic quantity based on the ratio of two sound pressures: the numerator being the pressure of the sound source of interest (P_{source}) and the denominator being a reference pressure (P_{reference}).¹

$$\text{Sound Pressure Level (SPL)} = 20 * \text{Log} \left(\frac{P_{\text{source}}}{P_{\text{reference}}} \right) \text{dB}$$

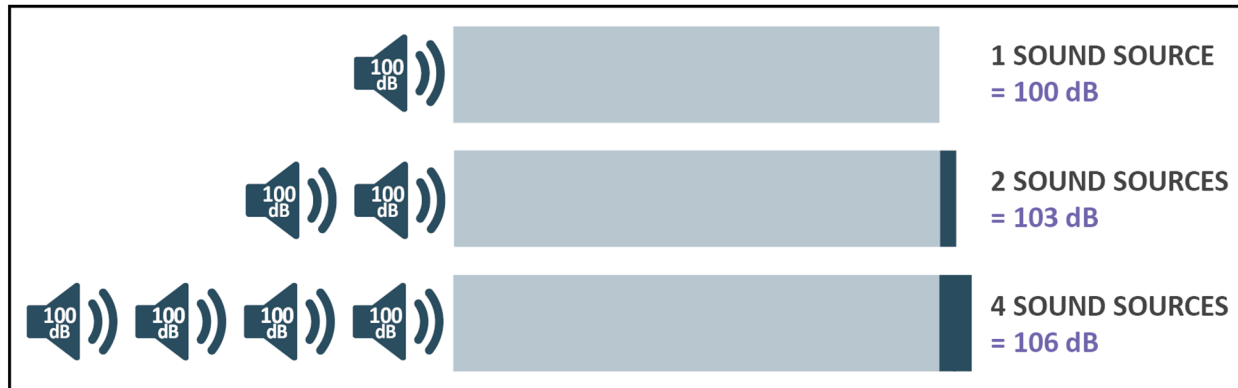
The logarithmic conversion of sound pressure to SPL means that the quietest sound that we can hear (the reference pressure) has a sound pressure level of about 0 dB, while the loudest sounds that we hear

¹ The reference pressure is approximately the quietest sound that a healthy young adult can hear.

without pain have sound pressure levels of about 120 dB. Most sounds in our day-to-day environment have sound pressure levels from about 40 to 100 dB.²

Because decibels are logarithmic quantities, we cannot use common arithmetic to combine them. For example, if two sound sources each produce 100 dB operating individually, when they operate simultaneously, they produce 103 dB, not the 200 dB we might expect. Increasing to four equal sources operating simultaneously will add another 3 dB of noise, resulting in a total SPL of 106 dB. For every doubling of the number of equal sources, the SPL increases by another 3 dB. This is illustrated in **Figure A-1**.

Figure A-1. Combined Sound Levels for Equal Sources



If one noise source is much louder than another is, the louder source "masks" the quieter one and the two sources together produce virtually the same SPL as the louder source alone. For example, a 100 dB and an 80 dB source produce approximately 100 dB of noise when operating together.

Two useful "rules of thumb" related to SPL are worth noting: (1) humans generally perceive a 6 to 10 dB increase in SPL to be about a doubling of loudness,³ and (2) changes in SPL of less than about 3 dB for a particular sound are not readily detectable outside of a laboratory environment.

A.3 A-Weighted Decibel

An important characteristic of sound is its frequency, or "pitch." This is the per-second oscillation rate of the sound pressure variation at our ear, expressed in units known as Hertz (Hz).

When analyzing the total noise of any source, acousticians often break the noise into frequency components (or bands) to consider the "low," "medium," and "high" frequency components. This breakdown is important for two reasons:

- Our ear is better equipped to hear middle and high frequencies and is least sensitive to lower frequencies. Thus, we find mid- and high-frequency noise more annoying.
- Engineering solutions to noise problems differ with frequency content. Low-frequency noise is generally harder to control.

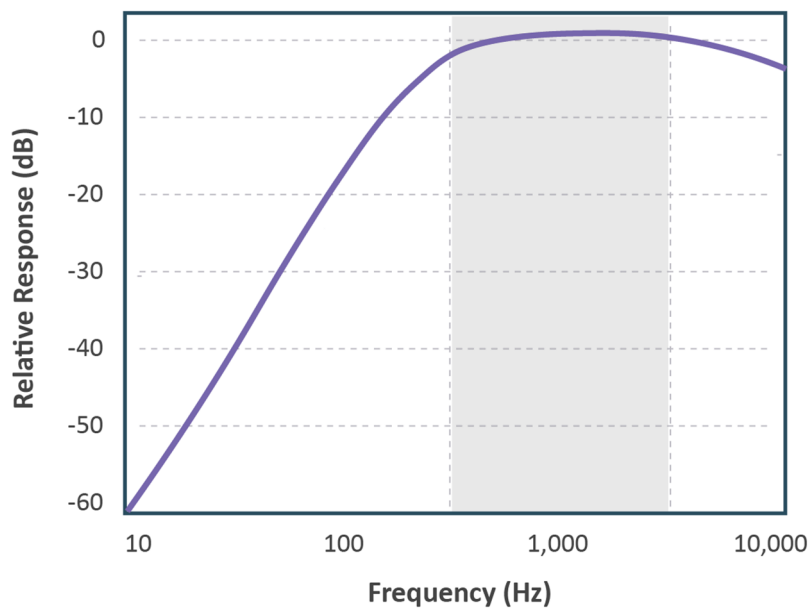
² The logarithmic ratio used in its calculation means that SPL changes relatively quickly at low sound pressures and more slowly at high pressures. This relationship matches human detection of changes in pressure. We are much more sensitive to changes in level when the SPL is low (for example, hearing a baby crying in a distant bedroom), than we are to changes in level when the SPL is high (for example, when listening to highly amplified music).

³ A "10 dB per doubling" rule of thumb is the most often used approximation.

The normal frequency range of hearing for most people extends from a low of about 20 Hz to a high of about 10,000 to 15,000 Hz. Most people respond to sound most readily when the predominant frequency is in the range of normal conversation, typically around 1,000 to 2,000 Hz. The acoustical community has defined several “filters,” which approximate this sensitivity of our ear and thus, help us to judge the relative loudness of various sounds made up of many different frequencies.

The so-called “A” filter (“A weighting”) generally does the best job of matching human response to most environmental noise sources, including natural sounds and sound from common transportation sources. “A-weighted decibels” are abbreviated “dBA.” Because of the correlation with our hearing, the U. S. Environmental Protection Agency (EPA) and nearly every other federal and state agency have adopted A-weighted decibels as the metric for use in describing environmental and transportation noise. **Figure A-2** depicts A-weighting adjustments to sound from approximately 20 Hz to 10,000 Hz.

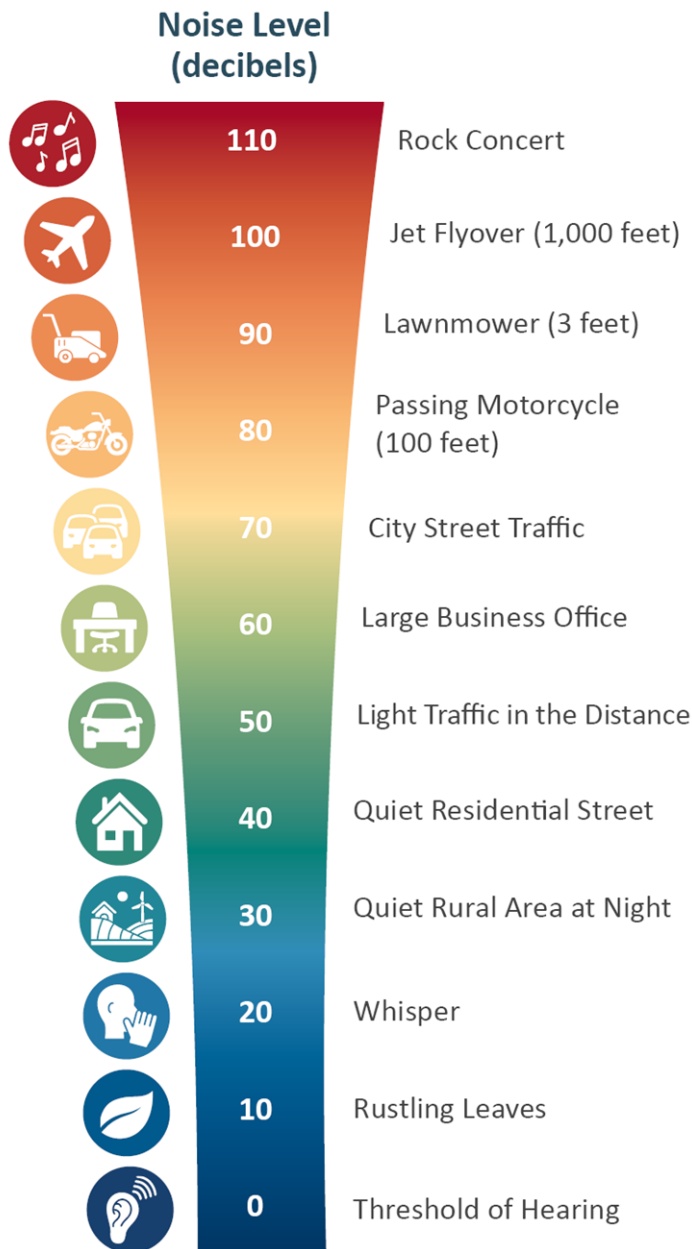
Figure A-2. A-Weighting Frequency Response



As the figure shows, A-weighting significantly de-emphasizes noise content at lower and higher frequencies where we do not hear as well, and has little effect, or is nearly “flat,” for mid-range frequencies between 1,000 and 5,000 Hz. All sound pressure levels presented in this document are A-weighted unless otherwise specified.

Figure A-3 depicts representative A-weighted sound levels for a variety of common sounds.

Figure A-3. A-Weighted Sound Levels for Common Sounds

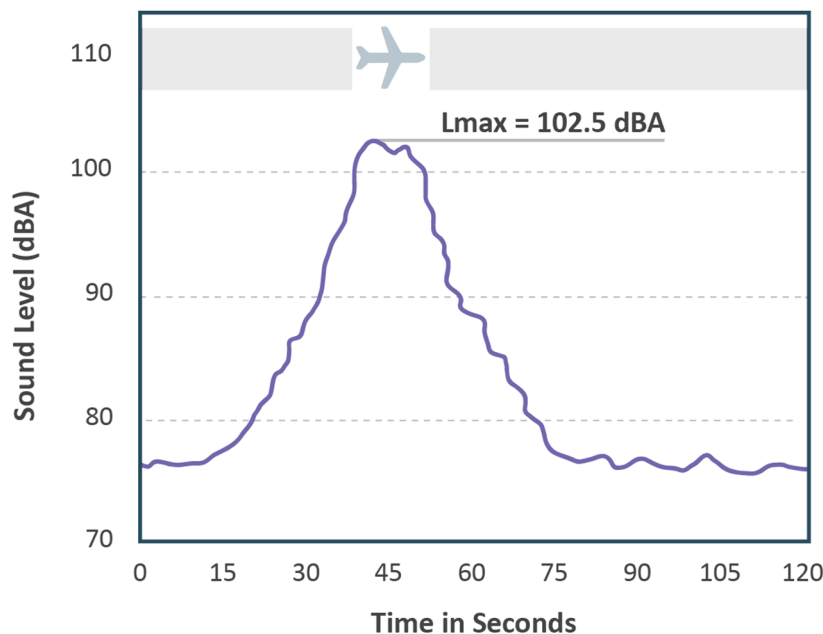


A.4 Maximum A-Weighted Sound Level, L_{max}

An additional dimension to environmental noise is that A-weighted levels vary with time. For example, the sound level increases as a car or aircraft approaches, then falls and blends into the background as the aircraft recedes into the distance. The background or “ambient” level continues to vary in the absence of a distinctive source, for example, due to birds chirping, insects buzzing, or leaves rustling. It is often convenient to describe a particular noise “event” (such as a vehicle passing by, a dog barking, etc.) by its maximum sound level, abbreviated as L_{max} .

Figure A-4 depicts this general concept, for a hypothetical noise event with an L_{max} of approximately 102 dB.

Figure A-4. Variation in A-Weighted Sound Level over Time and Maximum Noise Level



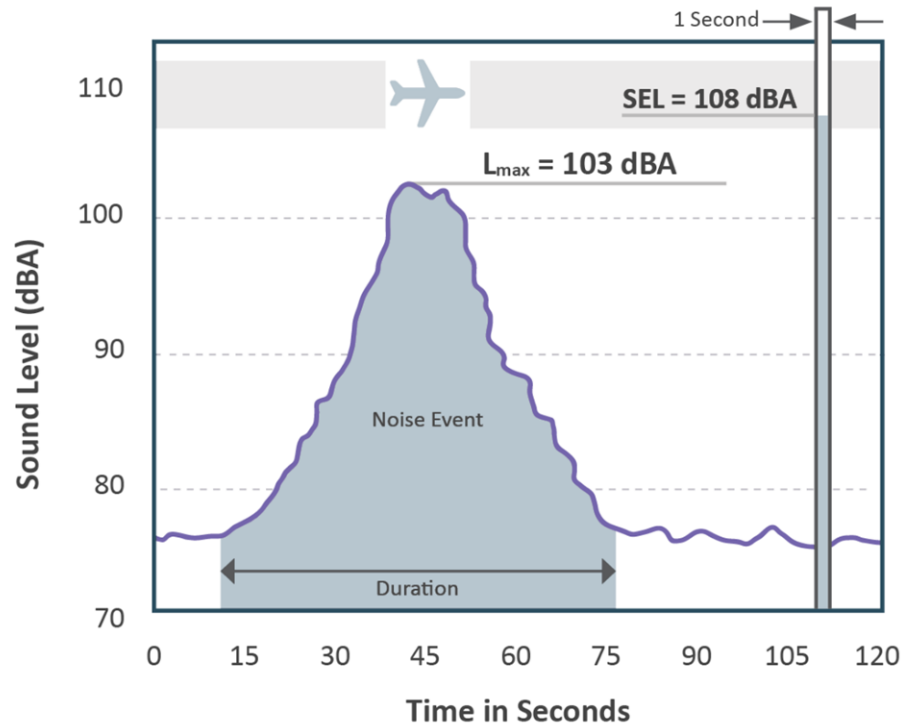
While the maximum level is easy to understand, it suffers from a serious drawback when used to describe the relative “noisiness” of an event such as an aircraft flyover, i.e., it describes only one dimension of the event and provides no information on the event’s overall, or cumulative, noise exposure. In fact, two events with identical maximum levels may produce very different total exposures. One may be of very short duration, while the other may continue for an extended period and be judged to be much more annoying. The next section introduces a measure that accounts for this concept of a noise “dose,” or the cumulative exposure associated with an individual “noise event” such as an aircraft flyover.

A.5 Sound Exposure Level, SEL

The most commonly used measure of cumulative noise exposure for an individual noise event, such as an aircraft flyover, is the Sound Exposure Level, or SEL. SEL is a summation of the A-weighted sound energy over the entire duration of a noise event. SEL expresses the accumulated energy in terms of the one-second-long steady-state sound level that would contain the same amount of energy as the actual time-varying level.

SEL provides a basis for comparing noise events that generally match our impression of their overall “noisiness,” including the effects of both duration and level. The higher the SEL, the more annoying a noise event is likely to be. In simple terms, SEL “compresses” the energy for the noise event into a single second. **Figure A-5** depicts this compression. Note that the SEL is higher than the L_{max} .

Figure A-5. Graphical Depiction of Sound Exposure Level



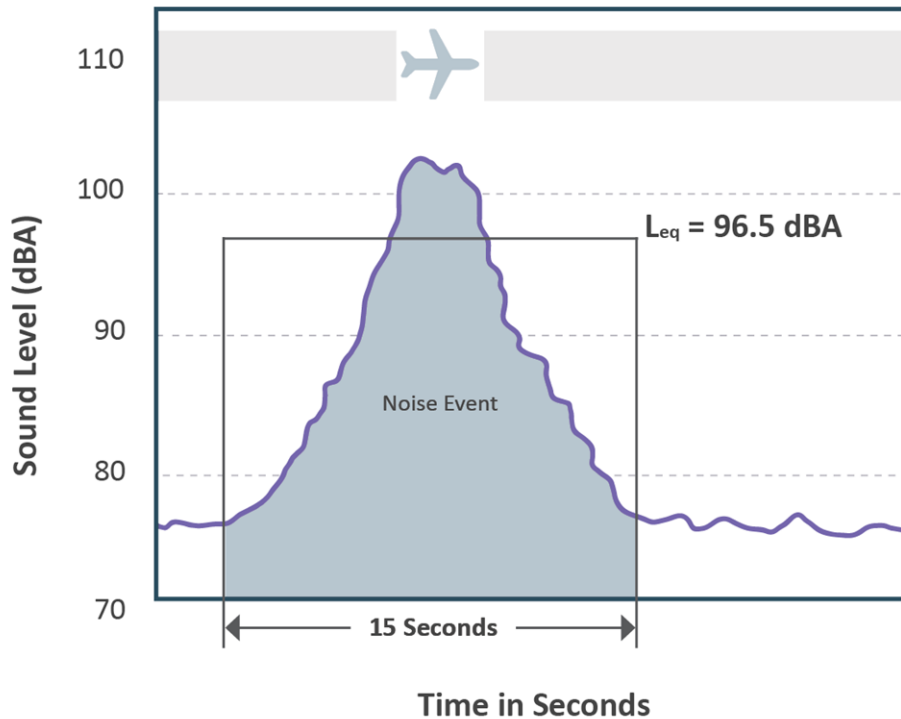
The “compression” of energy into 1 second means that a given noise event’s SEL will almost always will be a higher value than its L_{max} . For most aircraft flyovers, SEL is roughly 5 to 12 dB higher than L_{max} . Adjustment for duration means that relatively slow and quiet propeller aircraft can have the same or higher SEL than faster, louder jets, which produce shorter duration events.

A.6 Equivalent A-Weighted Sound Level, L_{eq}

The Equivalent Sound Level, abbreviated L_{eq} , is a measure of the exposure resulting from the accumulation of sound levels over a particular period of interest, e.g., 1 hour, an 8-hour school day, nighttime, or a full 24-hour day. L_{eq} plots for consecutive hours can help illustrate how the noise dose rises and falls over a day or how a few loud aircraft significantly affect some hours.

L_{eq} may be thought of as the constant sound level over the period of interest that would contain as much sound energy as the actual varying level. It is a way of assigning a single number to a time-varying sound level. **Figure A-6** illustrates this concept for the same hypothetical event shown in **Figure A-4** and **A-5**. Note that the L_{eq} is lower than either the L_{max} or SEL.

Figure A-6. Example of a 15-Second Equivalent Sound Level



A.7 Day-Night Average Sound Level, DNL or L_{dn}

The FAA requires that airports use a measure of noise exposure that is slightly more complicated than L_{eq} to describe cumulative noise exposure—the Day-Night Average Sound Level or DNL.

The EPA identified DNL as the most appropriate means of evaluating airport noise based on the following considerations.⁴

- The measure should be applicable to the evaluation of pervasive long-term noise in various defined areas and under various conditions over long periods.
- The measure should correlate well with known effects of the noise environment and on individuals and the public.
- The measure should be simple, practical, and accurate. In principle, it should be useful for planning as well as for enforcement or monitoring purposes.
- The required measurement equipment, with standard characteristics, should be commercially available.
- The measure should be closely related to existing methods currently in use.
- The single measure of noise at a given location should be predictable, within an acceptable tolerance, from knowledge of the physical events producing the noise.
- The measure should lend itself to small, simple monitors, which can be left unattended in public areas for long periods.

⁴ EPA, 1974, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, EPA Report No. 550/9-74-004, March.

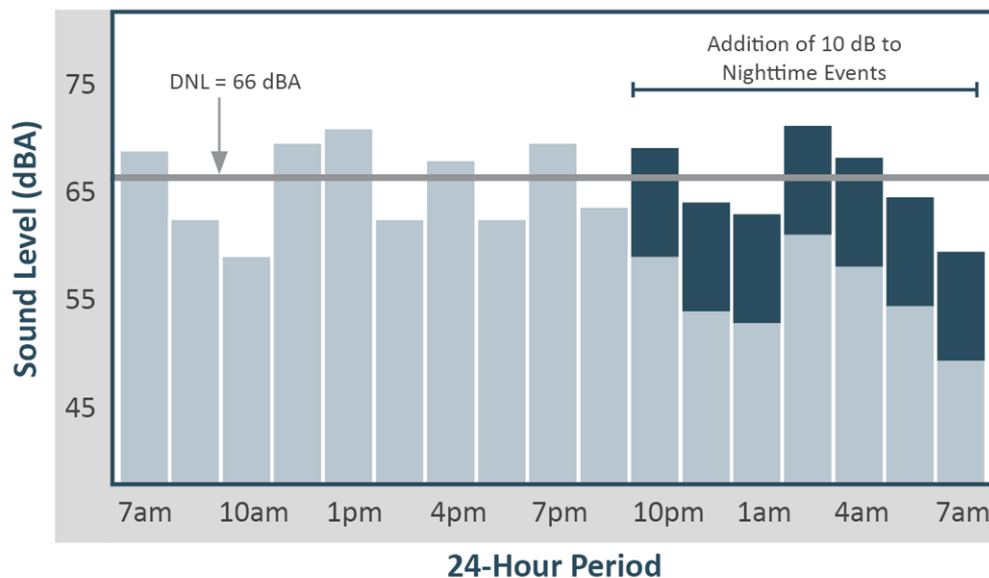
Most federal agencies dealing with noise have formally adopted DNL. The Federal Interagency Committee on Noise (FICON) reaffirmed the appropriateness of DNL in 1992. The FICON summary report stated, “There are no new descriptors or metrics of sufficient scientific standing to substitute for the present DNL cumulative noise exposure metric.”⁵ This determination was reaffirmed in 2018 in a report from the Federal Interagency Committee on Aviation Noise (FICAN), the successor to FICON. Additionally, in response to a requirement in the FAA Reauthorization Act of 2018 stating that the FAA “evaluate alternative noise metrics to current average day-night level standard, such as the use of actual noise sampling to address community airplane noise concerns”,⁶ in 2020 the FAA published a report that recommended the continued use of DNL for its decision-making regarding noise compatibility.

In simple terms, DNL is the 24-hour L_{eq} with one adjustment: all noises occurring at night (defined as 10 p.m. through 7 a.m.) are increased by 10 dB to reflect the added intrusiveness of nighttime noise events when background noise levels decrease. In calculating aircraft exposure, this 10 dB increase is mathematically identical to counting each nighttime aircraft noise event 10 times.

DNL can be measured or estimated. Measurements are practical only for obtaining DNL values for limited numbers of points, and, in the absence of a permanently installed monitoring system, only for relatively short periods. Most airport noise studies use computer-generated DNL estimates depicted as equal-exposure noise contours (much as topographic maps have contours of equal elevation).

The annual DNL is mathematically identical to the DNL for the average annual day, i.e., a day on which the number of operations is equal to the annual total divided by 365 (366 in a leap year). **Figure A-7** graphically depicts the manner in which the nighttime adjustment applies in calculating DNL.

Figure A-7. Example of a Day-Night Average Sound Level Calculation



⁵ FICON, 1992, Federal Agency Review of Selected Airport Noise Analysis Issues, August, https://www.faa.gov/fican/about_ficon_findings_1992.pdf

⁶ FAA Reauthorization Act of 2018, Pub. L. 115-254, § 188, 132 Stat. 3186, <https://www.congress.gov/115/plaws/publ254/PLAW-115publ254.pdf>

A.8 Aircraft Noise Effects on Human Activity

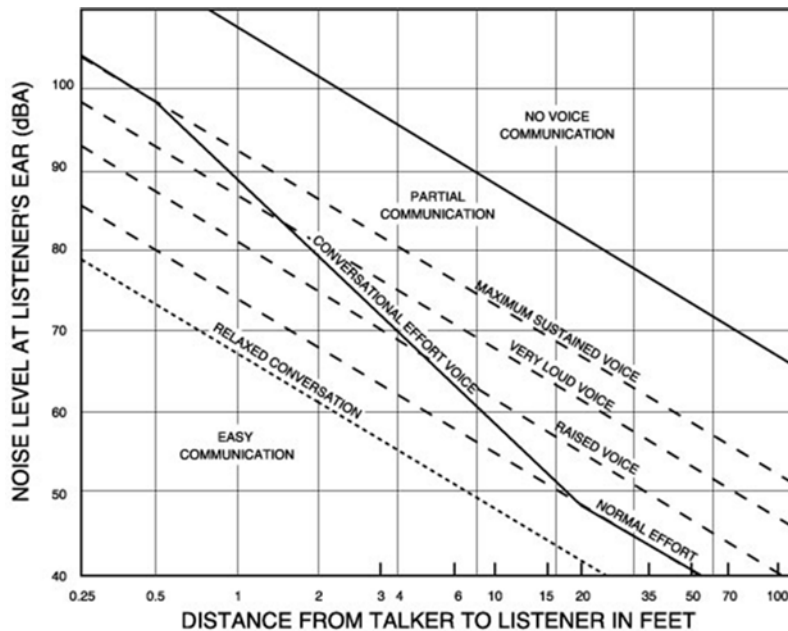
Aircraft noise can be an annoyance and a nuisance. It can interfere with conversation and listening to television, disrupt classroom activities in schools, and disrupt sleep. Relating these effects to specific noise metrics helps in the understanding of how and why people react to their environment.

Speech Interference

One potential effect of aircraft noise is its tendency to "mask" speech, making it difficult to carry on a normal conversation. The sound level of speech decreases as the distance between a talker and listener increases. As the background sound level increases, it becomes harder to hear speech.

Figure A-8 presents typical distances between talker and listener for satisfactory outdoor conversations, in the presence of different steady A-weighted background noise levels for raised, normal, and relaxed voice effort. As the background level increases, the talker must raise their voice, or the individuals must get closer together to continue talking.

Figure A-8. Outdoor Speech Intelligibility



Source: EPA, 1974, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March, p.D-5.

Satisfactory conversation does not always require hearing every word; 95 percent intelligibility is acceptable for many conversations. In relaxed conversation, however, we have higher expectations of hearing speech and generally require closer to 100 percent intelligibility. Any combination of talker-listener distances and background noise that falls below the bottom line in the figure (which roughly represents the upper boundary of 100 percent intelligibility) represents an ideal environment for outdoor speech communication. Indoor communication is generally acceptable in this region as well.

One implication of the relationships in **Figure A-8** is that for typical communication distances of 3 or 4 feet, acceptable outdoor conversations can be carried on in a normal voice as long as the background noise

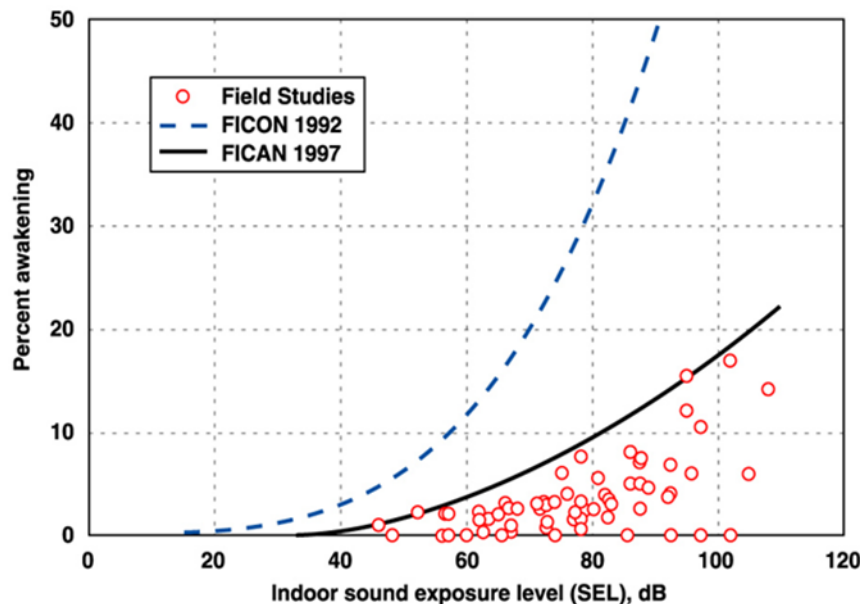
outdoors is less than about 65 dB. If the noise exceeds this level, as might occur when an aircraft passes overhead, intelligibility would be lost unless vocal effort were increased or communication distance were decreased.

Indoors, typical distances, voice levels, and intelligibility expectations generally require a background level less than 45 dB. With windows partly open, housing generally provides about 10 to 15 dB of interior-to-exterior noise level reduction. Thus, if the outdoor sound level is 60 dB or less, there is a reasonable chance that the resulting indoor sound level will afford acceptable interior conversation. With windows closed, 24 dB of attenuation is typical.

Sleep Interference

Research on sleep disruption from noise has led to widely varying observations. In part, this is because (1) sleep can be disturbed without awakening, (2) the deeper the sleep the more noise it takes to cause arousal, and (3) the tendency to awaken increases with age and other factors. **Figure A-9** shows a summary of findings on the topic.

Figure A-9. Sleep Interference



Source: FICAN, 1997, *Effects of Aviation Noise on Awakenings from Sleep*, June, p. 6

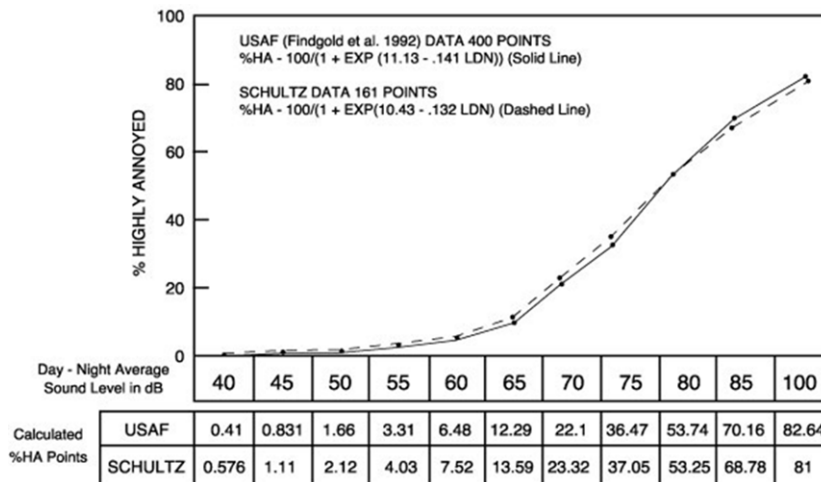
Figure A-9 uses indoor SEL as the measure of noise exposure; current research supports the use of this metric in assessing sleep disruption. An indoor SEL of 80 dBA results in a maximum of 10 percent awakening.

Community Annoyance

Numerous psychoacoustic surveys provide substantial evidence that individual reactions to noise vary widely with noise exposure level. Since the early 1970s, researchers have determined (and subsequently confirmed) that aggregate community response is generally predictable and relates reasonably well to cumulative noise exposure such as DNL. COMAR provides methods for the calculation of noise exposure

including metrics and measurement methods.⁷ **Figure A-10** depicts the widely recognized relationship between environmental noise and the percentage of people “highly annoyed,” with annoyance being the key indicator of community response usually cited in this body of research. This relationship is commonly referred to as the Schultz curve and has formed the basis for the significance threshold of DNL 65 dB.

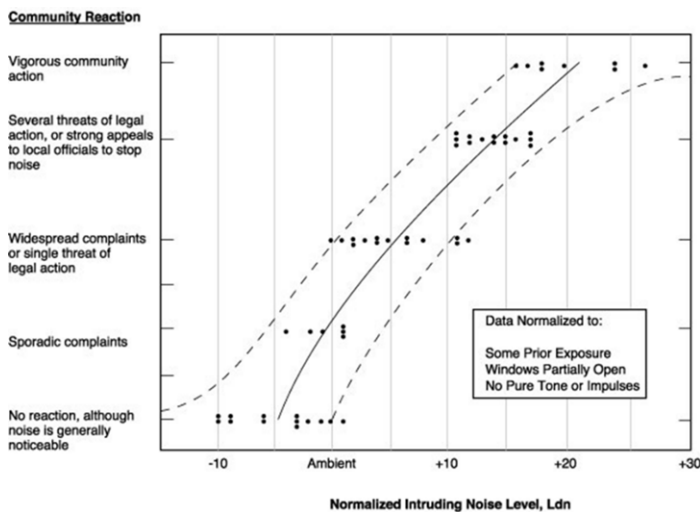
Figure A-10. Percentage of People Highly Annoyed



Source: FICON, 1992, *Federal Agency Review of Selected Airport Noise Analysis Issues*, September

Separate work by the EPA has shown that overall community reaction to a noise environment also depends on DNL. **Figure A-11** depicts this relationship. Data summarized in the figure suggest that little reaction would be expected for intrusive noise levels five decibels below the ambient level, while widespread complaints can be expected as intruding noise exceeds background levels by about five decibels. Vigorous action is likely when levels exceed the background by 20 dB.

Figure A-11. Community Reaction as a Function of Outdoor DNL



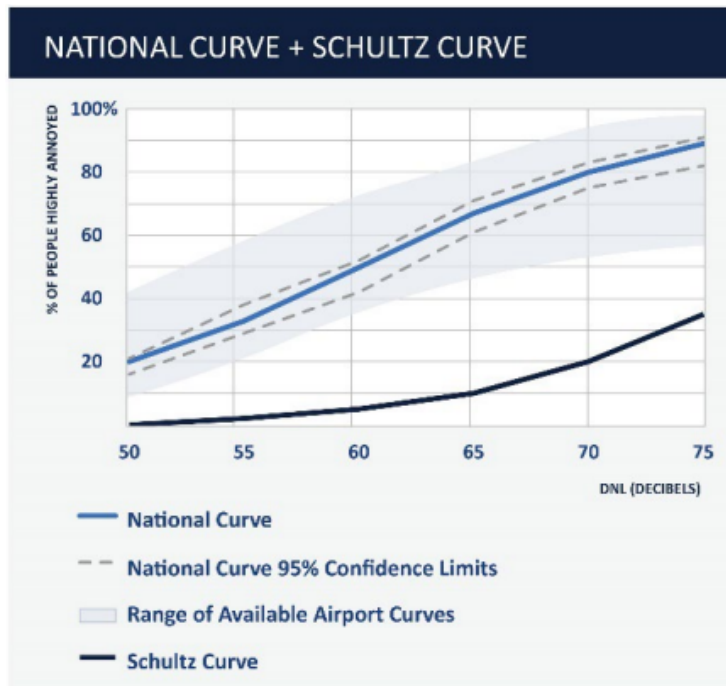
Source: Wyle Laboratories, 1971, *Community Noise*, prepared for the U.S. Environmental Protection Agency, Office of Noise Abatement and Control, Washington, D.C., December, p. 63

⁷ COMAR. 11.03.03.02. Methods for Calculation and Measurement of Levels of Cumulative Noise Exposure. <http://mdrules.elaws.us/comar/11.03.03.02>

In 2017, the FAA initiated the Neighborhood Environmental Survey (NES), a multi-year research program to update scientific evidence on the relationship between aircraft noise exposure and its effects on communities around airports. The NES resulted in an updated dose-response curve for the percentage of people highly annoyed by environmental noise at varying levels of DNL. This updated curve shows a marked increase in the number of people highly annoyed by environmental noise at a given DNL compared to the Schultz curve, as shown in **Figure A-12**. The analysis of the NES data, published in 2021, notes that the Schultz curve is over 40 years old and aircraft operational environment at the time of Schultz’s work was very different from today, with louder and less frequent operations.⁸

In 2023, the FAA initiated a review of its policies regarding civil aviation noise in response to public and stakeholder input on the FAA’s ongoing research. This National Policy Review (NPR) includes a review of research on the effects of exposure to aviation noise and review and possible revision of the noise metrics used to describe exposure to aircraft and vehicle noise, the defined thresholds for significant noise exposure, and thresholds for land uses compatible with airport operations.⁹ Specifically, the FAA is reviewing the use of DNL as the primary noise metric for cumulative aircraft noise exposure, as well as the threshold of DNL 65 dB for significant noise effects and land use compatibility.

Figure A-12. Comparison of Dose-Response Curves for Annoyance at a Given DNL



Source: FAA, 2023, Noise Policy Review, *The Foundational Elements of the FAA Civil Aviation Noise Policy: The Noise Measurement System, its Component Noise Metrics, and Noise Thresholds*, FAA Office of Environment and Energy, April 28

⁸ FAA, 2021, *Analysis of the Neighborhood Environmental Survey*, April

⁹ FAA, 2023, FAA Noise Policy Review, *The Foundational Elements of the FAA Civil Aviation Noise Policy: The Noise Measurement System, its Component Noise Metrics, and Noise Thresholds*, FAA Office of Environment and Energy, April 28

A.9 Noise Propagation

This section presents information on sound-propagation effect due to weather, source-to-listener distance, and vegetation.

A.10 Weather-Related Effects

Weather (or atmospheric) conditions that can influence the propagation of sound include humidity, precipitation, temperature, wind, and turbulence (or gustiness). The effect of wind—turbulence in particular—is generally more important than the effects of other factors. Under calm wind conditions, the importance of temperature (in particular vertical “gradients”) can increase, sometimes to very significant levels. Humidity generally has little significance relative to the other effects.

Influence of Humidity and Precipitation

Humidity and precipitation rarely affect sound propagation in a significant manner. Humidity can reduce propagation of high-frequency noise under calm-wind conditions. This is called “atmospheric absorption.” In very cold conditions, listeners often observe that aircraft sound “tinny” because the dry air increases the propagation of high-frequency sound. Rain, snow, and fog also have little, if any noticeable effect on sound propagation. A substantial body of empirical data supports these conclusions.¹⁰

Influence of Temperature

The velocity of sound in the atmosphere is dependent on the air temperature.¹¹ As a result, if the temperature varies at different heights above the ground, sound will travel in curved paths rather than straight lines. During the day, temperature normally decreases with increasing height. Under such “temperature lapse” conditions, the atmosphere refracts (“bends”) sound waves upwards and an acoustical shadow zone may exist at some distance from the noise source.

Under some weather conditions, an upper level of warmer air may trap a lower layer of cool air. Such a “temperature inversion” is most common in the evening, at night, and early in the morning when heat absorbed by the ground during the day radiates into the atmosphere.¹² The effect of an inversion is just the opposite of lapse conditions. It causes sound propagating through the atmosphere to refract downward.

The downward refraction caused by temperature inversions often allows sound rays with originally upward-sloping paths to bypass obstructions and ground effects, increasing noise levels at greater distances. This type of effect is most prevalent at night, when temperature inversions are most common and when wind levels often are very low, limiting any confounding factors.¹³ Under extreme conditions, one study found that noise from ground-borne aircraft might be amplified 15 to 20 dB by a temperature inversion. In a

¹⁰ Ingard, Uno, 1953, “A Review of the Influence of Meteorological Conditions on Sound Propagation,” *Journal of the Acoustical Society of America*, Vol. 25, No. 3, May, p. 407.

¹¹ In dry air, the approximate velocity of sound can be obtained from the relationship:
 $c = 331 + 0.6T_c$ (c in meters per second, T_c in degrees Celsius). Pierce, Allan D., *Acoustics: An Introduction to its Physical Principles and Applications*. McGraw-Hill. 1981. p. 29.

¹² Embleton, T.F.W., G.J. Thiessen, and J.E. Piercy, 1976, “Propagation in an inversion and reflections at the ground,” *Journal of the Acoustical Society of America*, Vol. 59, No. 2, February, p. 278.

¹³ Ingard, Uno, 1953, “A Review of the Influence of Meteorological Conditions on Sound Propagation,” *Journal of the Acoustical Society of America*, Vol. 25, No. 3, May, p. 407.

similar study, noise caused by an aircraft on the ground registered a higher level at an observer location 1.8 miles away than at a second observer location only 0.2 miles from the aircraft.¹⁴

Influence of Wind

Wind has a strong directional component that can lead to significant variation in propagation. In general, receivers that are downwind of a source will experience higher sound levels, and those that are upwind will experience lower sound levels. Wind perpendicular to the source-to-receiver path has no significant effect.

The refraction caused by wind direction and temperature gradients is additive.¹⁵ One study suggests that for frequencies greater than 500 Hz, the combined effects of these two factors tend towards two extreme values: approximately 0 dB in conditions of downward refraction (temperature inversion or downwind propagation) and -20 dB in upward refraction conditions (temperature lapse or upwind propagation). At lower frequencies, the effects of refraction due to wind and temperature gradients are less pronounced.¹⁶

Wind turbulence (or “gustiness”) can also affect sound propagation. Sound levels heard at remote receiver locations will fluctuate with gustiness. In addition, gustiness can cause considerable attenuation of sound due to effects of eddies traveling with the wind. Attenuation due to eddies is essentially the same in all directions, with or against the flow of the wind, and can mask the refractive effects discussed above.¹⁷

A.11 Distance-Related Effects

People often ask how distance from an aircraft to a listener affects sound levels. Changes in distance may be associated with varying terrain, offsets to the side of a flight path, or aircraft altitude. The answer is a bit complex, because distance affects the propagation of sound in several ways.

The principal effect results from the fact that any emitted sound expands in a spherical fashion—like a balloon—as the distance from the source increases, resulting in the sound energy being spread out over a larger volume. With each doubling of distance, spherical spreading reduces instantaneous or maximum level by approximately 6 dB and SEL by approximately 3 dB.

A.12 Vegetation-Related Effects

Sound can be scattered and absorbed as it travels through vegetation. This results in a decrease in sound levels. The literature on the effect of vegetation on sound propagation contains several approaches to calculating its effect. Though these approaches differ in some aspects, they agree on the following:

- The vegetation must be dense and deep enough to block the line of sight.
- The noise reduction is greatest at high frequencies and least at low frequencies.

¹⁴Dickinson, P.J., 1976, “Temperature Inversion Effects on Aircraft Noise Propagation,” (Letters to the Editor) *Journal of Sound and Vibration*. Vol. 47, No. 3, p. 442.

¹⁵ Piercy JE and Embleton, TF. 1977. “Review of noise propagation in the atmosphere.” *J Acoust Soc Am*. Jun;61(6):1403-18, p. 1412. Note, in addition, that as a result of the scalar nature of temperature and the vector nature of wind, the following is true: under lapse conditions, the refractive effects of wind and temperature add in the upwind direction and cancel each other in the downwind direction. Under inversion conditions, the opposite is true.

¹⁶ Piercy JE and Embleton, TF. 1977. “Review of noise propagation in the atmosphere.” *J Acoust Soc Am*. Jun;61(6):1403-18, p. 1413.

¹⁷ Ingard, Uno, 1953, “A Review of the Influence of Meteorological Conditions on Sound Propagation,” *Journal of the Acoustical Society of America*, Vol. 25, No. 3, May, pp. 409-410.

The International Standard ISO 9613-2¹⁸ provides a useful example of the types of calculations employed in these methods. Originally developed for industrial noise sources, ISO 9613-2 is well-suited for the evaluation of ground-based aircraft noise sources under favorable meteorological conditions for sound propagation. ISO 9613-2's methodology for calculating sound propagation includes geometric dispersion from acoustical point sources, atmospheric absorption, the effects of areas of hard and soft ground, screening due to barriers, and reflections. The attenuation provided by dense foliage varies by octave band and by distance as shown in **Table A-1**.

For propagation through less than 10 m of dense foliage, no attenuation is assumed. For propagation through 10 m to 20 m of dense foliage, the total attenuation is shown in the first row of Table A-1.

For distances between 20 m and 200 m, the total attenuation is computed by multiplying the distance of propagation through dense foliage by the dB/m values shown in the second row of Table A-1.

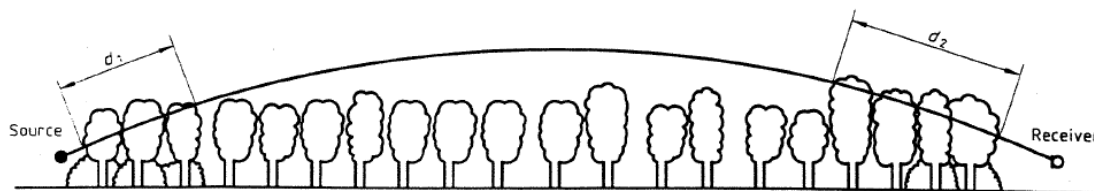
Table A-1. Dense Foliage Noise Attenuation

Propagation Distance	Nominal Midband Frequency (Hz)							
	63	125	250	500	1,000	2,000	4,000	8,000
10 m to 20 m (dB Attenuation)	0	0	1	1	1	1	2	3
20 m to 200 m (dB/m Attenuation)	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.12

Source: ISO 9613-2, Table A.1

ISO 9613-2 assumes a moderate downwind condition. The equations in the ISO Standard also hold, equivalently, for average propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs on clear, calm nights. In either case, the sound is refracted downward. The radius of this curved path is assumed to be 5 km. With this curved sound path, only portions of the sound path may travel through the dense foliage, as illustrated by **Figure A-13**. Thus, the relative locations of the source and receiver, the dimensions of the volume of dense foliage, and the contours of the intervening terrain are essential to the estimation of the noise attenuation.

Figure A-13. Downward Refracting Sound Path (source: ISO 9613-2)



As illustrated in **Figure A-13**, the foliage only provides attenuation if the sound path passes through the foliage. For aircraft in the air, the sound will pass through little, if any foliage. Additionally, either the noise source or receiver must be near the foliage for it to have an effect.

¹⁸ International Organization for Standardization, 1996, *Acoustics – Attenuation of sound during propagation outdoors – Part 2: General Method of calculation*, International Standard ISO9613-2, Geneva, Switzerland, December.

Appendix B. MTN 2025 Airport Noise Zone Overlaid on County Tax Maps

These are reduced scale versions of the MTN ANZ. The official versions have six sheets plotted at 1 inch=2,000 feet and six sheets plotted at 1 inch = 600 feet.

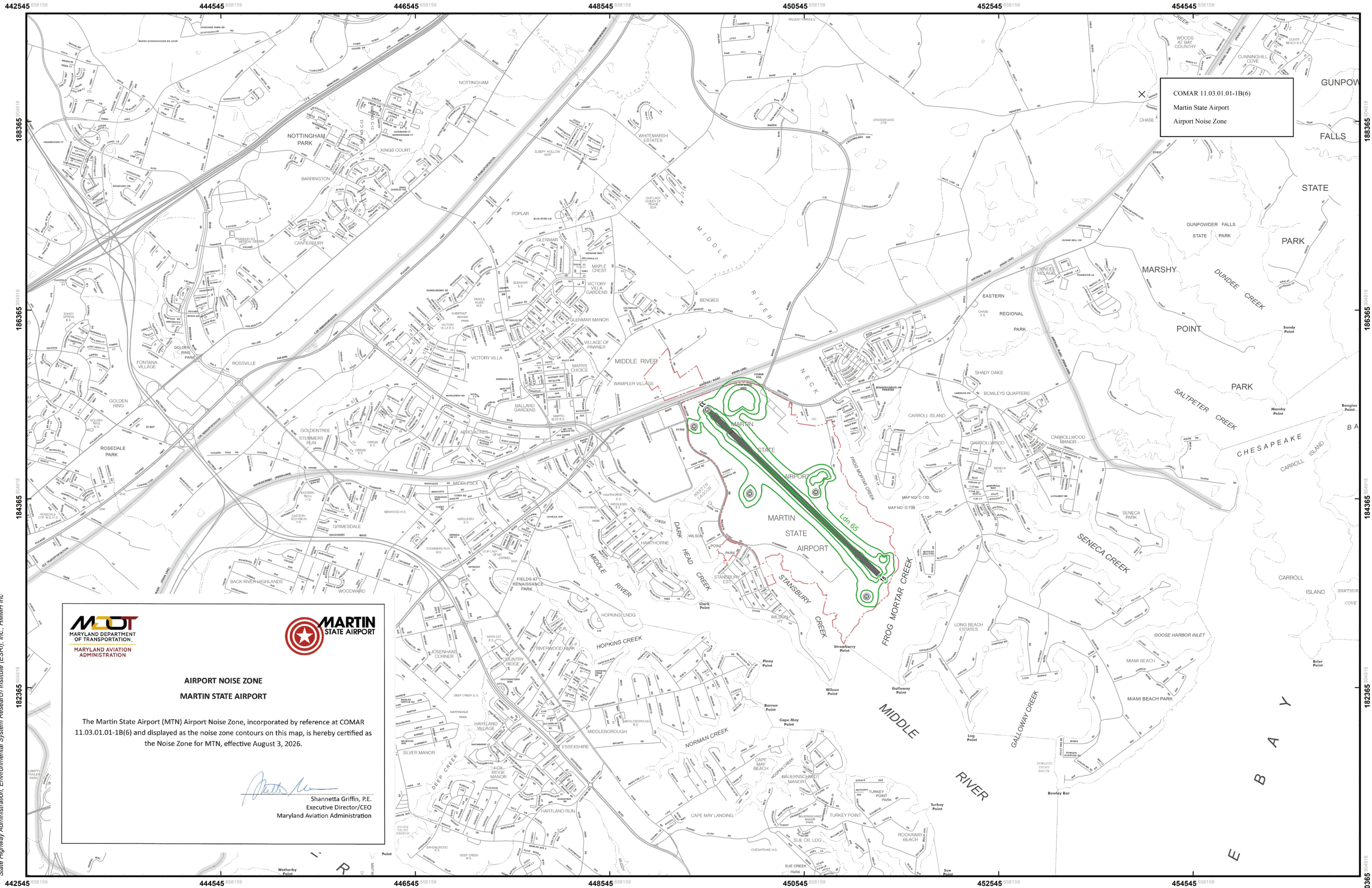
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MARTIN STATE AIRPORT AIRPORT NOISE ZONE

Prepared by:
Maryland Department of Transportation
Maryland Aviation Administration

Assisted by:
Harris Miller Miller & Hanson Inc.



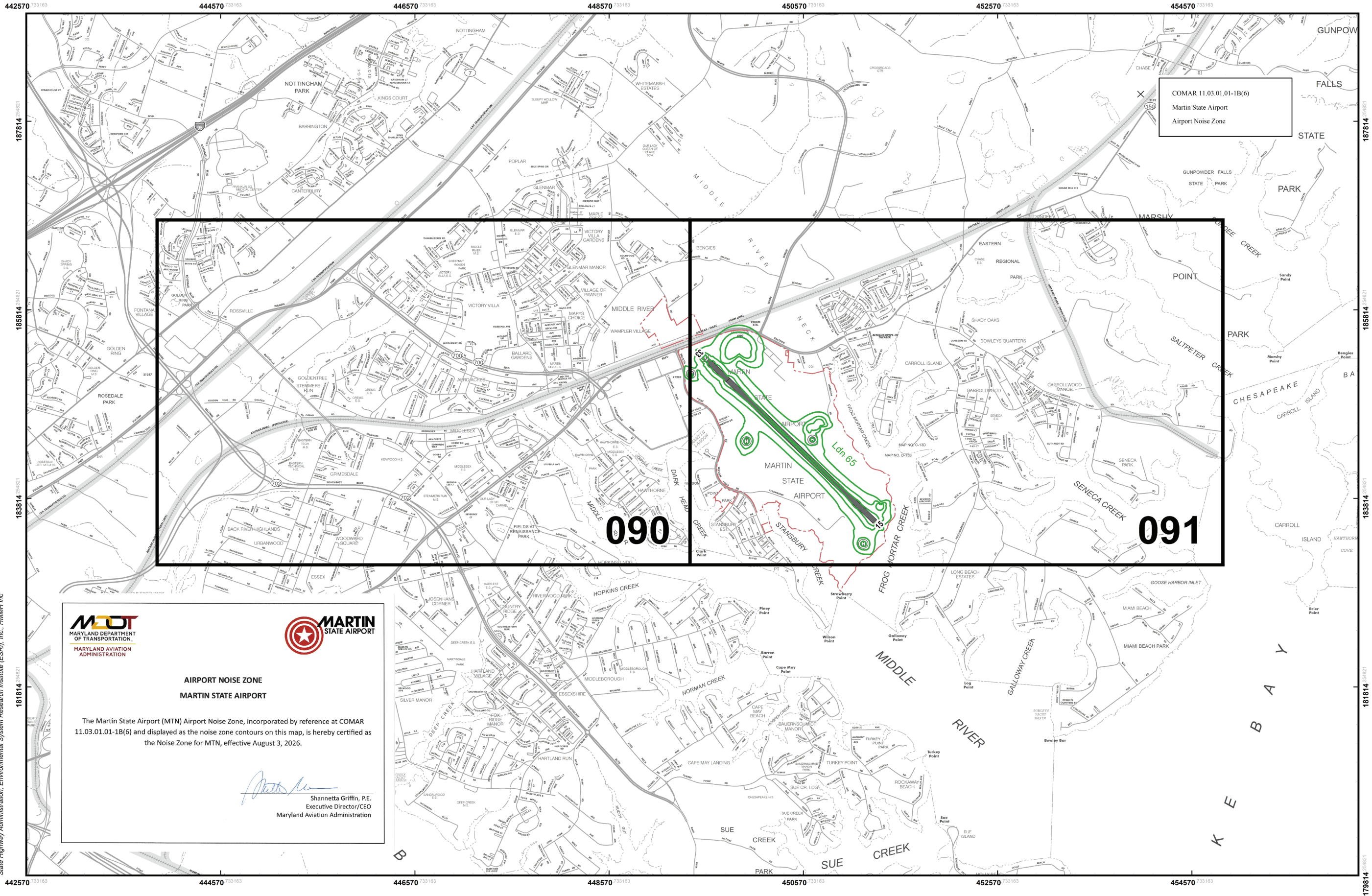


Data Sources: Maryland Department of Transportation, Maryland Aviation Administration,
Office of Environmental Services, Maryland Department of Planning, Maryland Department of Transportation,
State Highway Administration, Environmental System Research Institute (ESRI), Inc., HMMH Inc

2025 Airport Noise Zone

Baltimore County, Maryland

2025 Airport Noise Zone
Prepared October 15, 2025



Data Sources: Maryland Department of Transportation, Maryland Aviation Administration, Office of Environmental Services, Maryland Department of Planning, Maryland Department of Transportation, State Highway Administration, Environmental System Research Institute (ESRI), Inc., HMMH Inc



0 3000 6000 Feet

2025 Airport Noise Zone

Baltimore County, Maryland

Tax Map Grid
Prepared October 15, 2025

443917 247639

445917 247639

447917 247639

COMAR 11.03.01.01-1B(6)
Martin State Airport
Airport Noise Zone



**AIRPORT NOISE ZONE
MARTIN STATE AIRPORT**

The Martin State Airport (MTN) Airport Noise Zone, incorporated by reference at COMAR 11.03.01.01-1B(6) and displayed as the noise zone contours on this map, is hereby certified as the Noise Zone for MTN, effective August 3, 2026.



Shannetta Griffin, P.E.
Executive Director/CEO
Maryland Aviation Administration

Data Sources: Maryland Department of Transportation, Maryland Aviation Administration, Office of Environmental Services;
Maryland Department of Planning, Tax Map - March, 2016; Maryland Department of Transportation,
State Highway Administration, Environmental System Research Institute (ESRI), Inc.; HMMH Inc

443917 247639

445917 247639

447917 247639

183109 079155



0 1200 2400 3600 Feet

2025 Airport Noise Zone

Baltimore County, Maryland

Tax Map
Prepared October 15, 2025

MAP NO.
090

449403 886139

451403 886139

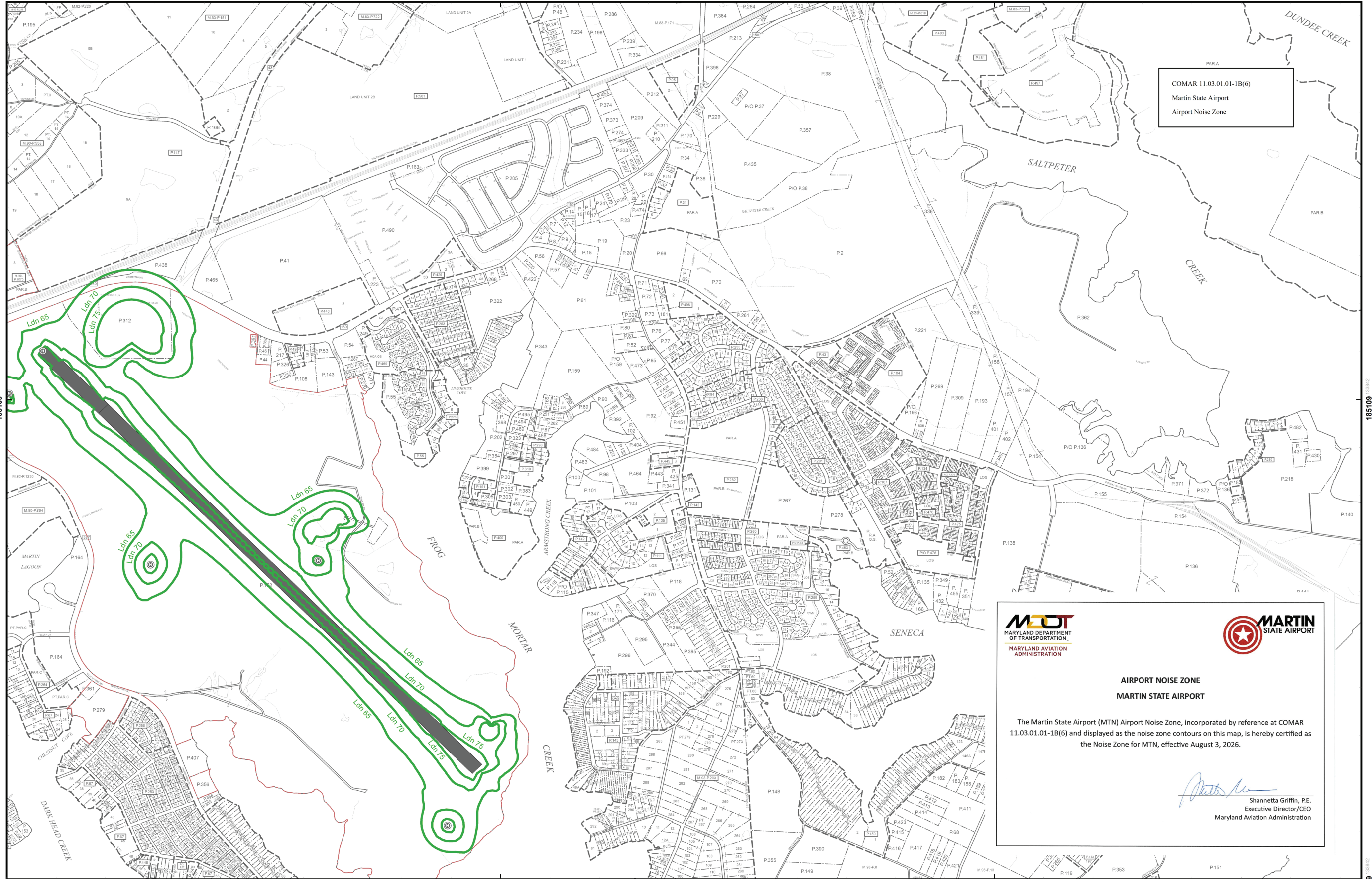
453403 886139

Data Sources: Maryland Department of Transportation, Maryland Aviation Administration, Office of Environmental Services,
Maryland Department of Planning, Tax Map - March, 2016; Maryland Department of Transportation,
State Highway Administration, Environmental System Research Institute (ESRI), Inc.; HMMH Inc

449403 886139

451403 886139

453403 886139



0 1200 2400 3600 Feet

2025 Airport Noise Zone

Baltimore County, Maryland

Tax Map
Prepared October 15, 2025

MAP NO.
091

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Appendix C MTN Stakeholder Advisory Committee (SAC) Meeting Materials

Appendix C includes the MTN SAC roster, along with materials from the three SAC meetings held in April 2025, June 2025, and September 2025. Related materials include invitations, sign-in sheets, presentations, and meeting minutes.

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Organization	Contact Name	SAC 1 Attendee(s)	SAC 2 Attendee(s)	SAC 3 Attendee(s)
Advanced Aviation Group, LLC	Melissa Torres			
ATP Flight School	n/a			
Baltimore City Police Department – Helicopter Unit	Lt. George Hauf; Matthew Cloud			
Baltimore County Department of Planning	Steve Lafferty			
Baltimore County Police Department -Aviation Unit	Sgt. Brandon Branham	X	X	X
Bowley's Quarters Community Association	Allen Robertson			
Bowley's Quarters Community Association	Jim Merritt	X	X	X
Bowley's Quarters Improvement Association	Jim Hock	X	X	
Bowley's Quarters Improvement Association	Kim Fry	X	X	
Bowley's Quarters Improvement Association	Marsha Ayres	X	X	
Bowley's Quarters Improvement Association	Mary Muth	X		
Brett Aviation	Helen Frado; James Hardwick			
Civil Air Patrol	John Henderson			
Essex Middle River Civic Council, Inc.	Josh Sines			
First Class Flight Academy, LLC	Jonathan Stitzinger			
Greenleigh Homeowners' Association	Ashley Zayas			
Greenleigh Homeowners' Association	Matthew Algiers		X	X
Maryland Air National Guard	Andrew Dewitt			X
Maryland Air National Guard	Brig. Gen. Richard Hunt			
Maryland Air National Guard	Colonel Chris Palmer		X	
Maryland State Police Aviation Command	W. Ernie Jenkins			
Maryland State Police Aviation Command	Joseph Ireton	X	X	X
Midwest Air Traffic Control	Nikolaus Wagenfeiler	X		
Nottingham Improvement Association, Inc.	Judith Davies			
Oliver Beach Improvement Association	Carol Sue Hart			
The Hawthorne Civic Association, Inc.	Pat Hook	X	X	
The Hawthorne Civic Association, Inc.	Sharon Pinkerton			
Trident Jet Aviation	Napoleon Martinez			
Wilson Point Civic Improvement Association	David Abassi			
Wilson Point Civic Improvement Association	Jeff Kyger	X	X	X
Wilson Point Civic Improvement Association	Robert Bendler			
Windlass Run Improvement Association, Inc.	William Kammer			
Total		10	10	6



Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Paul J. Wiedefeld
Secretary
Ricky D. Smith, Sr.
Executive Director/CEO

March 26, 2025

[STAKEHOLDER]
[ORGANIZATION]
[ADDRESS]
[CITY], [STATE] [ZIP CODE]

Dear [STAKEHOLDER],

The Maryland Department of Transportation Maryland Aviation Administration (MAA) has begun the process of updating the **2025 Airport Noise Zone (ANZ) for Martin State Airport (MTN)**. Updating the ANZ is required under the Code of Maryland Regulations (COMAR) and involves studying airport noise and developing noise contours for existing and future conditions at MTN, as well as a review of the existing MTN Noise Abatement Plan. The most recent ANZ study for MTN was completed in 2020 and can be reviewed at the following link: <https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>. Community stakeholders' involvement is critical to the success of the MTN ANZ update. Therefore, we seek input from affected stakeholders.

This letter invites you or another organization representative to join the MTN ANZ Stakeholder Advisory Committee (SAC). The purpose of the SAC is to convene stakeholders affected by airport activities and to present the preliminary ANZ contour planning parameters as we prepare for this MTN ANZ update. Members of the SAC will collaborate with MAA during the MTN ANZ update process and be asked to share pertinent information with the groups or impacted citizens they represent. The SAC will include state and local government representatives, the Maryland Air National Guard and Civil Air Patrol, local community organizations, tenants of MTN, industry organizations, and MAA staff. Your participation in the SAC is vital to the success of the MTN ANZ update process.

The first meeting of **MTN ANZ SAC** is scheduled for **Wednesday, April 2nd, 2025**, from **6:00 p.m. to 8:00 pm**. It will be held in Room 416, located at the lower level of Hanger 4 at **701 Wilson Point Rd Ste 1, Baltimore, MD 21220**. We appreciate your interest in airport issues and look forward to working with you to update the MTN ANZ.

701 Wilson Point Road Box 1, Baltimore, MD 21220 | 410.682.8800 | fax 410.682.8822 | MD Relay TTY 410.859.7727 | martinstateairport.com

C-4

If you have any questions or comments about this process, please contact me at 410-859-7813 or via email at brineer@bwiairport.com. To RSVP or register online to attend the MTN SAC meeting, please follow bit.ly/4imvJal.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bruce Rineer".

Bruce Rineer, Manager
Noise Program Section
Office of Environmental Compliance and Sustainability
Maryland Aviation Administration



Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Paul J. Wiedefeld
Secretary
Ricky D. Smith, Sr.
Executive Director/CEO

Martin State Airport
Airport Noise Zone Update
Stakeholder Advisory Committee (SAC) Meeting #1

AGENDA

Wednesday, April 2, 2025, 6:00 PM – 8:00 PM
701 Wilson Point Rd Ste
Hanger 4, Room 416
Baltimore, MD 21220

- Welcome, Introductions, Opening Remarks
- Airport Noise Zone (ANZ)
- Noise Abatement Plan (NAP) Overview
- Stakeholder Advisory Committee (SAC)
- Martin State Overview
- Fundamentals of Noise
- Noise Modeling Overview
- Schedule and Additional Resources

Maryland Aviation Administration

Please Sign In
 Martin State Airport (MTN)
 Airport Noise Zone Update
 Stakeholder Advisory Committee (SAC)
 April 2, 2025



	NAME/TITLE	ORGANIZATION	PHONE	EMAIL	INITIALS
1.	Marsha L. Ayres	BQIA			MA
2.	Jim Hock	BQIA	410-977-5698	James.N.Hock@gmail.com	JNH
3.	Nikolus Wagenfeiler	Martin State Tower	410-682-8807	mtntfet@midweststates.com	[Signature]
4.	Kevin Clarke	MAA		Kclarke@bwinairport.com	[Signature]
5.	Jeff Kyger	WPCIA	(443) 904-5467	Jeff.Kyger@gmail.com jkygsf62	
6.	Jim Mearlitt	BQIA	443 676 3555	jamearlitt@comcast.net	[Signature]
7.	Joe Iretton	MSPAC	410 238 5800	joseph.ireton@maryland.gov	APJ
8.	Kim Fry	BQIA	(215) 490-2048	Kim.fry1@verizon.net	[Signature]
9.	Emily Martishius	MTN	910 746 8307	emartishius@martishius.com martinstateairport.com	[Signature]
10.	Jerome Fernandez	MTN/MAA	410-508-1931	J.FERNANDEZ@MARTINSTATEAIRPORT.COM	[Signature]

* Stakeholder Advisory Committee Member

Maryland Aviation Administration

Please Sign In
 Martin State Airport (MTN)
 Airport Noise Zone Update
 Stakeholder Advisory Committee (SAC)
 April 2, 2025



	NAME/TITLE	ORGANIZATION	PHONE	EMAIL	INITIALS
1.	BRANDON BRANHAM	BALTO G POLKE	443 992 0542	BBRANHAM@BALTIMORECOUNTYMD.GOV	BB
2.	PATRICK HOOK	ESSEX MIDDLE RIVER CIVIC COUNCIL HAWTHORNE CIVIC ASSOC	443-240-7997	PJhook11@aol.com	P.H.
3.	Harold A. Fowler	MTAA	410-508-8563	h.fowler@mta.state.md.us	H.F.
4.					
5.					
6.					
7.					
8.					
9.					
10.					

* Stakeholder Advisory Committee Member



Airport Noise Zone Update Stakeholder Advisory Committee

Meeting #1
Martin State Airport

April 2, 2025
6:00 PM – 8:00 PM

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Welcome to Martin State

Safety Briefing

- Follow emergency exits
- Call 911
- Assist those who need assistance
- Be sure to take a head count during the emergency event
- Nearest AED – #4 (Hangar 5)
- Nearest Fire Extinguisher – Room 527 (Hangar 5)
- Accountability Site: Parking lot outside of Hangar 4
- Always report any hazards in the meeting room



Source: [MTN State Airport Photo Gallery](#)



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Agenda

- » Welcome and Introductions
- » Airport Noise Zone (ANZ)
- » Noise Abatement Plan (NAP) Overview
- » Stakeholder Advisory Committee (SAC)
- » Martin State Overview
- » Fundamentals of Noise
- » Noise Modeling Overview
- » Schedule and Additional Resources

3

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Meeting Facilitation

The meeting facilitator is responsible for ensuring SAC meetings:

- Run efficiently, respectfully, and effectively
- Focus on the published agenda
- Provide appropriate opportunities for all members to participate
- Result in consensus conclusions to the maximum extent feasible
- Are documented through preparation of accurate meeting notes

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Introductions

- Maryland Aviation Administration (MAA) representatives
- Stakeholder Advisory Committee (SAC) members
- Consultant team



Welcome and Introductions

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Expected Meeting Takeaways

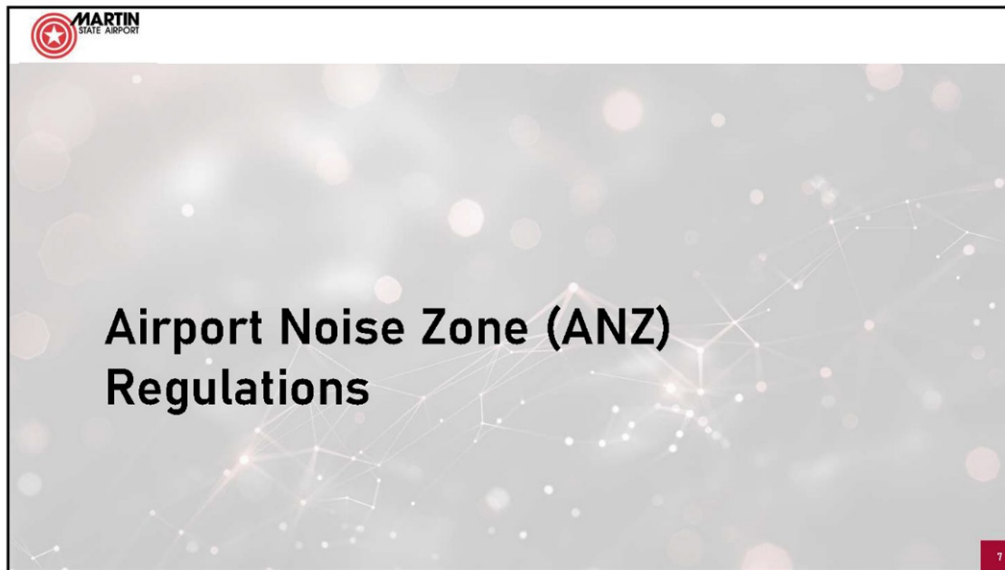
- What an Airport Noise Zone (ANZ) is
- What a Noise Abatement Plan (NAP) is
- Why MAA is undertaking this process
- Why you are needed as a member of the SAC
- How noise is evaluated, especially with the DNL metric
- What inputs go into the noise model
- What the end results of the study will be



Welcome and Introductions

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Maryland Airport Noise Zone (ANZ) Regulations

- Maryland Environmental Noise Act of 1974
 - *"Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems."*
- Maryland law requires MAA to complete an ANZ update approximately every 5 years
- The certified ANZ consists of Day-Night Average Sound Level (DNL) contours at 65, 70, and 75 decibels printed on:
 - Airport Noise Zone Map

MARTIN STATE AIRPORT

Airport Noise Zone 8

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State Law and Regulations

Transportation Code	Code of Maryland Regulations (COMAR)
Noise Zone Regulations; Part I The purpose of this subtitle is to: (1) Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems; and (2) Protect the health and general welfare of the occupants of land near airports.	Chapter 11.03.03 Defines the prediction method to be used to develop 'noise contours of equal noise exposure' (subject to the approval of the Executive Director) Provides direction for development of contours, including 5 and 10 year, plus cumulative condition, provides methods for determination of impacted land use areas, and direction on noise abatement plans.
Noise Zone Regulations; Part II Requires assessment of the noise environment, existing projected future use, following procedures the Executive Director establishes, delineates a "noise zone", requires development of a noise abatement plan – every five years	Section 11.03.03.05 Provides a process for permits for construction within the Noise Zone Surrounding a State-Owned Airport



ANZ Study Update

The ANZ update process includes status review of the NAP.

Airport Noise Zone (ANZ)	Noise Abatement Plan (NAP)
Provides the means to identify and control incompatible land development around Martin State Is a composite of the farthest extents of the annual Day-Night Average (DNL) contours for each of the study years (2025 base, 2030 and 2035 forecast)	Prescribes measures to monitor, reduce, and/or eliminate incompatible land use areas within the ANZ to the extent possible while maintaining efficient airport operations



Major Components

- Models noise through current year, 5-year, and 10-year contours
- Models noise exposure using FAA's AEDT and airport operational data
- Mitigates noise through Noise Abatement Plan
- Land Use
- Flight Procedures
- State Funded – not eligible for Federal funding

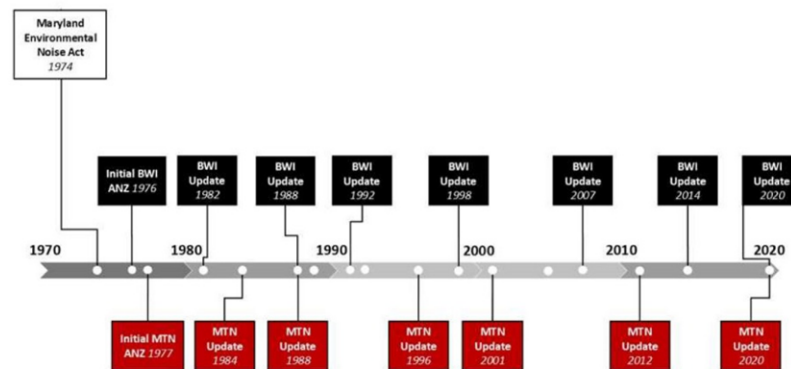


Airport Noise Zone

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MTN ANZ History



Airport Noise Zone

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Expectations

The ANZ provides a means to:

- Understand existing and future noise exposure around Martin State
- Assist local land use jurisdictions in the control of potentially incompatible development
- Identifies potential strategies to mitigate noise, including voluntary noise abatement procedures

The ANZ cannot:

- Restrict the hours of operations
- Impose curfews or restrictions
- Require the FAA to change flight procedures
- Be used to limit demand or forecast growth

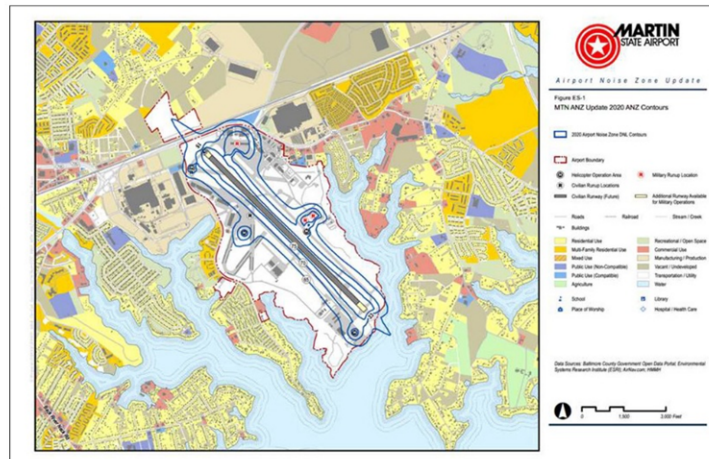


Airport Noise Zone

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Martin State Noise Zone (2020)



Airport Noise Zone

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Land Use Planning Process

Airport Noise Zone (ANZ)

Certified ANZ is based on composite noise contours lines at specified noise levels (65, 70 and 75 DNL)

Land development within the ANZ is subject to Maryland law, which dictates that an applicant be denied approval if the proposed land use is found to be incompatible with the noise level

An applicant may petition the Board of Airport Zoning Appeals (BAZA) for a variance from the regulations. BAZA may issue conditions such as the addition of sound insulation components to buildings within the Certified ANZ



Airport Noise Zone

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Noise Abatement Plan (NAP) Overview

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Noise Abatement Plan (NAP)

NAP Goal: To the extent possible, reduce incompatible land use within ANZ while maintaining efficient airport operations.

- **General categories of NAP measures:**
 - Noise abatement elements
 - Land use elements
- NAP status review only at this time



Noise Abatement Plan

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Noise Abatement Plan Measures

Noise Abatement Measures

Departure Procedures:

VFR and IFR Flight Rules

Arrival Procedures:

Attempt to keep arriving aircraft as high as possible and to take advantage of compatible land uses

Closed Traffic Patterns:

A left-hand traffic pattern shall be used at MTN unless otherwise directed by ATC.

Touch-and-Go or Practice Approaches:

No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance staff.

Programmatic Measures

Continued Monitoring and Annual Review:

Efforts to monitor the overall noise abatement program

Land Use Measures

Control of Incompatible Development:

Includes the ANZ program, BAZA, and Noise Zone Notification in Real Estate transactions

Noise Assistance Programs:

For residents and schools in the ANZ, to reduce number of affected properties and noise impacts



Noise Abatement Plan

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Martin State NAP Caveats

Noise abatement procedures are voluntary:

- MTN NAP is formulated to minimize noise disturbance to neighboring communities while maintaining safe and efficient MTN Airport operations. MAA Division of MTN Airport Operations is responsible for the overall administration of MTN.
- Aircraft may not follow noise abatement procedures if deemed necessary by Air Traffic Control (ATC) or flight crews to maintain operational safety.



ANZ Update Scope and Process

- Form and engage with Stakeholder Advisory Committee (SAC)
- Conduct public informational meeting
- Prepare base year, 5-year, 10-year forecast noise contours
- Compile ANZ (composite of the three contour sets)
- Conduct land use inventory within ANZ
- Review existing Noise Abatement Plan (NAP)
- Conduct public hearing/ workshop
- Update Code of Maryland Regulations (COMAR)



Administrative Procedure - COMAR

- Amending COMAR requires a 'Notice of Proposed Action' to incorporate the updated ANZ by reference
 - Requires consideration and approval in a meeting of the Maryland Aviation Commission
 - Provides an opportunity for public comment and public hearing
 - Updated ANZ provided to counties
- Airport Executive Director certifies ANZ
- MTN ANZ COMAR
 - <https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone>
 - <https://dsd.maryland.gov/regulations/Pages/11.03.01.01-1.aspx>



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Stakeholder Advisory Committee

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SAC Roles and Responsibilities

- The SAC serves in an advisory role to the MAA solely for purposes of the Martin State ANZ update process.
 - Review of study inputs, assumptions, analyses, documentation, etc.
 - Input, advice, and guidance related to Noise Abatement Plan
- SAC members are expected to provide two-way communication between the SAC and their organizations / constituents.
- MAA shall respect and consider SAC input but retains overall responsibility for the Martin State ANZ update.



Stakeholder Advisory Committee

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SAC Responsibilities

- **Contribute to study inputs**
 - Discussion and feedback at SAC meetings
- **Review modeling assumptions**
 - Base year and forecasts
- **Review analysis results**
 - Base, 5-year and 10-year contours
- **Review documentation**
 - NAP and Draft ANZ document



Stakeholder Advisory Committee

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SAC Makeup

- The SAC is composed of stakeholders representing a wide range of interests at Martin State:
- State and local agencies
- Community organizations
- Airport tenants and users
- Aviation trade associations
- Members serve on a voluntary basis without compensation.



Stakeholder Advisory Committee

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Invited SAC Participants



Bruce Rineer
Karen Harrell
Kevin Clarke
Shawn Ames
Harold Fowler

Darline Terrell-Tyson
Emily Martishius
Royce Bassarab
Jerome Fernandez
Paul Shank



Tyler White
Rhea Hanrahan
Paul Krusell



Odessa Phillip
Elsa Arias
Monica Watson
Kayla Woods

Baltimore City/County/State Police

Lt. George Hauf
Sgt. Matthew Cloud
Sgt. Brandon Branham
Lt. W. Ernie Jenkins

Associations

Mary Muth
Bowleys Quarters
Allen Robertson
Bowleys Quarters
Josh Sines
Essex Middle River
Pat Hook
Hawthorne Civic Assn

Carol Sue Hart
Oliver Beach
Ashley Zayas
Greenleigh
Robert Bendler
Wilson Point
William Kammer
Windlass Run

James Gates
Baltimore Mobile Home Assn
Judith Davies
Nottingham
Jim Merrit
Community Roundtable

Jeff Mayhew
Baltimore Dept of Planning
John Henderson
Civil Air Patrol
Brig. Gen. Richard Hunt
Maryland Air National Guard
Nikolaus Wagenfeiler
Midwest Air Traffic Control
Jonathan Stitzinger
First Class Flight Academy

Napoleon Martinez
Trident
Michael McCabe
PHI Air Medical Maryland
Melissa Torres
Advanced Aviation Group
Helen Frado
Brett Aviation
ATP Flight School



Stakeholder Advisory Committee

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We need you!

- To understand ANZ effects on stakeholders
- To review land use inventory and planning considerations
- To share information with your neighbors and organizations
- To review Noise Abatement Plan and provide insight
- To spread the word about future opportunities for public feedback



Stakeholder Advisory Committee

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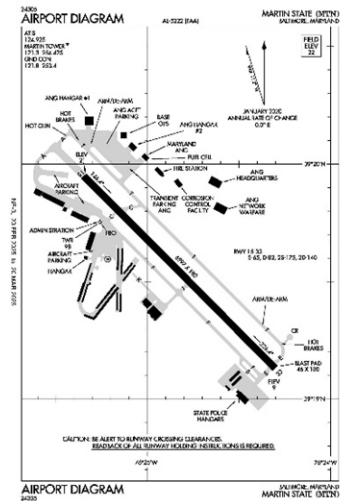


Martin State Overview

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Existing Airport Layout



Martin State Overview

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Fundamentals of Noise

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Fundamentals of Noise

- Sound vs. noise
- Decibels (dB) and noisiness
- The A-weighted decibel (dBA)
- Single event noise metrics - Lmax and SEL
- Cumulative exposure metric - DNL
- Noise modeling vs. measurements: ANZ requirements



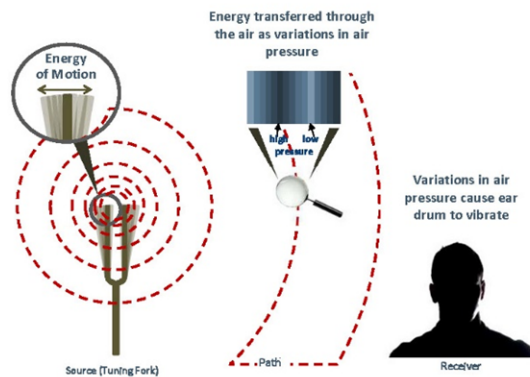
Fundamentals of Noise

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Sound vs Noise

- Sound is pressure variation our ears can detect
 - An objective quantity
- Noise is "unwanted sound"
 - A subjective quantity
- We relate sound and noise by considering effects
 - Annoyance
 - Speech interference
 - Sleep disruption



Fundamentals of Noise

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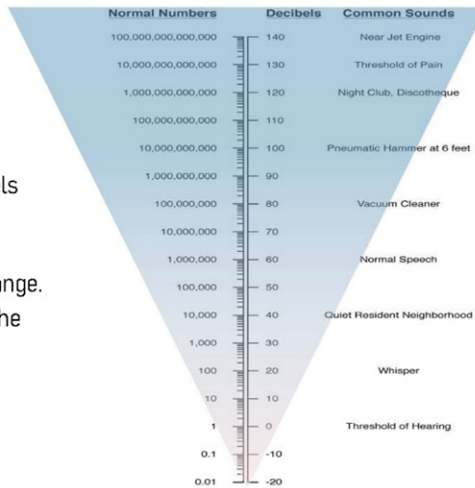
The Decibel Scale

Use a logarithmic scale

- Decibels (dB) used to express sound levels and noise levels

Why?

- We hear sound pressures over a HUGE range.
- Decibels compress this range to match the way we interpret sound pressures.
 - 0 to 140 dB
 - 0.00000003 to 0.003 lbs. per sq. inch (psi)
- We “hear” in decibels.



Real-Time Decibel Change “Rules of Thumb”

- In a laboratory test, a 1 dB change is generally detectable.
- In a normal environment, a 3 dB change is generally the threshold of detectability for a careful listener.
 - Why? Distinct A:B comparisons are rare.
- A 6 dB change is clear in most day-to-day situations.
- In general, a 10 dB change seems twice as loud.
 - Ten times the sound energy
- Different rules of thumb apply to cumulative exposure.



Caution: Decibel addition isn't ordinary math!

- Decibels are a logarithmic quantity, so...
 - Two equal sources:
 - $70 + 70 \text{ dB} =$ ~~140 dB~~ **73 dB**
 - Four equal sources:
 - $70 + 70 + 70 + 70 \text{ dB} =$ **76 dB**
 - Ten equal sources:
 - $70 + 70 + 70 + 70 + 70 + 70 + 70 + 70 + 70 + 70 \text{ dB} =$ **80 dB**



Judging Noisiness

Sound *quality* matters

- Sources with the same overall dB level may "sound" different



Judging Noisiness

Duration matters

- Longer durations increase exposure, even for sources with the same dB level



Fundamentals of Noise – Decibels and Noisiness

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Judging Noisiness

Time of day matters



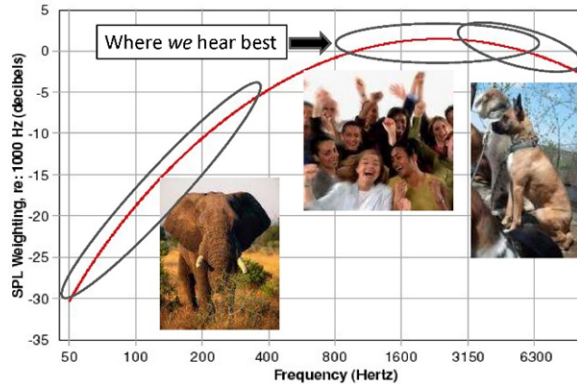
Fundamentals of Noise – Decibels and Noisiness

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COMAR Requires use of A-Weighted Sound Level

- Our ear is not equally sensitive to all frequencies
- A-weighted decibels (dB) measure sound the way we "hear" it
- Consistent with worldwide practice



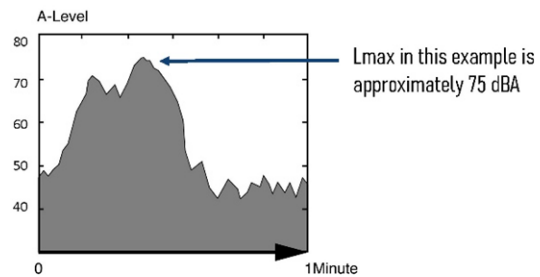
Fundamentals of Noise – A-weighted Decibel

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Maximum Sound Level (Lmax)

The simplest way to describe a discrete noise "event" is its maximum sound level (Lmax)



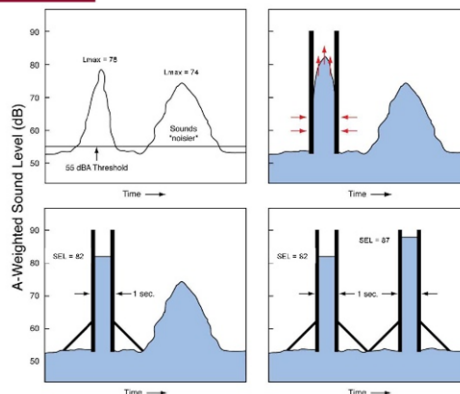
Fundamentals of Noise – Single Event Noise Metrics

40

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Sound Exposure Level (SEL)

- Duration matters: A longer event may seem “noisier,” even if it has a lower or equal maximum level
- SEL measures the total “noisiness” of an event by taking duration into account



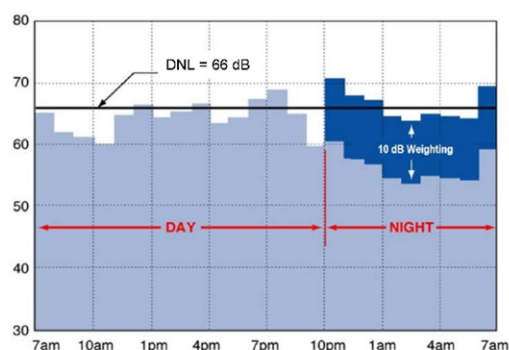
Fundamentals of Noise – Single Event Noise Metrics

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Day-Night Average Sound Level (DNL)

- Describes 24-hour exposure
- Noise from 10 pm to 7 am is factored up by 10 dB
 - “Weighting” is equal to counting each night aircraft 10 times
- Sometimes abbreviated Ldn (as in COMAR documents)
- DNL is the only metric that COMAR requires for ANZ

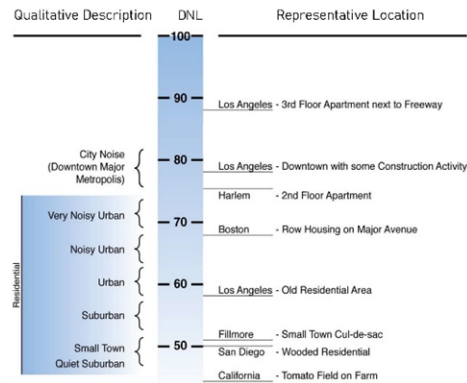


Fundamentals of Noise – Cumulative Exposure

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Typical Community DNL Examples



Source: United States Environmental Protection Agency, Information on Levels of Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, March 1974, p. 14.



Interpreting Changes in DNL

1 - 2 dB change in level

- May be noticeable
- Abatement may be beneficial

2 - 5 dB change in level

- Generally noticeable
- Abatement should be beneficial

Over 5 dB change in level

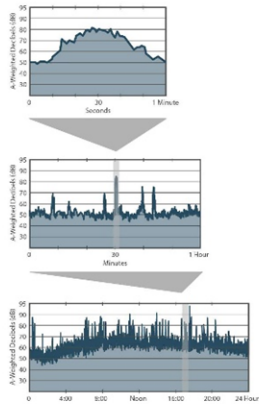
- Community reaction is likely

These differ from previously cited "rules of thumb" for "real-time" change.

- 1 dB threshold of detectability in a laboratory test
- 3 dB threshold of detectability for a careful listener in a normal environment
- 6 dB in most day-to-day situations



Why We Use DNL



DNL is a way to describe the noise dose for a 24-hour period.

DNL accounts for each event's "noisiness" (intensity and duration).

DNL accounts for number of noise events (frequency of operations).

DNL provides an additional weighting for nighttime operations (time of occurrence).

The Aviation Safety and Noise Abatement Act of 1979 ("ASNA")

Established a single, uniform, repeatable system for considering aviation noise around airport communities.

Established a single system for determining noise exposure from aircraft, which takes into account noise intensity, duration of exposure, frequency of operations, and time of occurrence.

Identified land uses which are normally compatible with various exposures of individuals to noise.



Fundamentals of Noise

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Noise Metric Summary

- The decibel is a complex logarithmic quantity based on sound pressure
- A-weighted decibels correlate well with how humans hear
- Noise levels can be expressed many ways, including but not limited to:
 - Instantaneous maximum (Lmax)
 - Single event dose (SEL)
 - Long-duration exposure (DNL)
- Best metric to use in a situation depends on purpose

COMAR considers all land uses compatible below DNL 65 dB.



Fundamentals of Noise

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COMAR Requires Noise Modeling

Allows Noise Measurements

Sec. 11.03.03.02.

§C. Development of noise contours of equal noise exposure are to be determined using a prediction method in accordance with the procedures of §D, below. Measurements, undertaken in accordance with the procedure of §E of this regulation, may be used to confirm the locations of contours of equal noise exposure.

Source: <http://www.dsd.state.md.us/comar/comarhtml/11/11.03.03.02.htm>



Measured vs Modeled

- Most airport noise studies use computer-generated DNL estimates depicted as equal-exposure noise contours (much like topographic maps that indicate contours of equal elevation).
- Modeled DNL contours reflect average annual conditions, accounting for
 - Average number of flights each day/night,
 - Type of aircraft
 - How often each runway is used throughout the year,
 - Where, over the surrounding communities, the aircraft normally fly



Measured vs Modeled

Measured noise data (permanent or portable noise monitors) cannot be used for creating airport DNL contours:

1. Measured noise levels can contain non-aircraft noise sources.
2. It is not possible to measure at enough locations to draw contours from the results.
 - Modeling calculates DNL for a full year's airport operations at every point in a precise grid.
3. Measured noise levels cannot be used to predict future noise levels. Measurements only document what has already occurred.



Airport Noise and Operations Monitoring System

MAA maintains a Noise and Operations Monitoring System (NOMS) that:

- Manages and analyzes aircraft flight track data and associated noise and complaint data
- Supports MAA's Noise Abatement Program

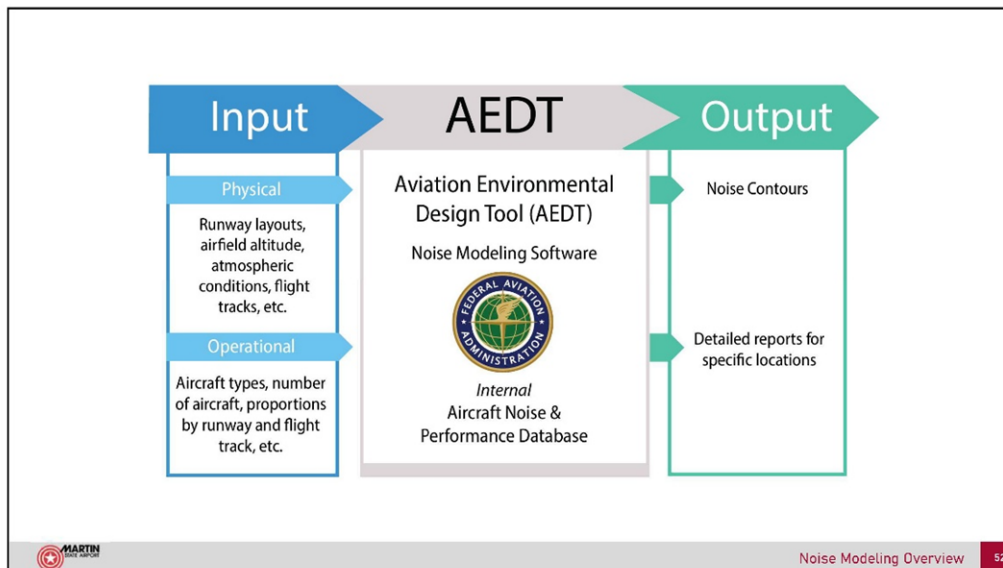
NOMS Purpose:

- Monitor flight operations at BWI, MTN and within the regional airspace
- Improve public understanding of MTN operations
- Assist in investigating and responding to noise complaints related to specific aircraft operations
- Objectively document aircraft operations and noise exposure for historical records



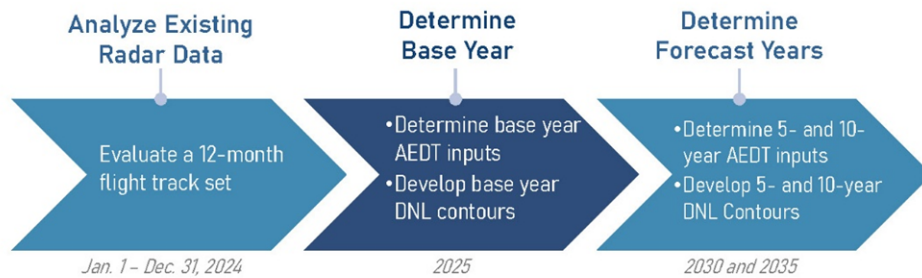


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Noise Modeling Process



Noise Modeling Overview

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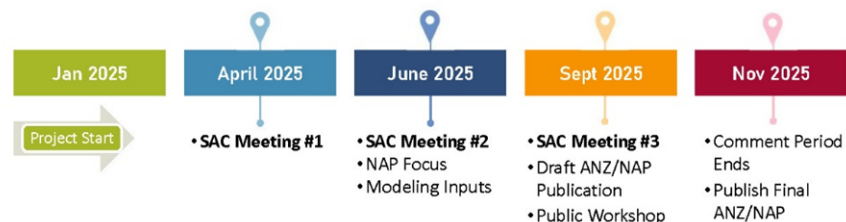


Schedule and Resources

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Proposed Project Schedule



Schedule and Resources

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Project Contacts

Project Primary Contact

Email: MDOT-MAA-ANZ@assedollc.com

Phone: (240) 200-5176

MAA Project Manager

Bruce Rineer, Manager, Office of Environmental Compliance and Sustainability,
Noise Section BRineer@bwairport.com

ANZ Project Managers

Tyler White, Principal Consultant, twhite@hmmh.com

Rhea Hanrahan, Director, AES, ghanrahan@hmmh.com



Schedule and Resources

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Additional Resources

2020 Martin State ANZ

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>

WebTrak

<https://webtrak.emsbk.com/bwi3>



Schedule and Resources

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Wrap Up

- SAC member questions, comments, and discussion
- Public Comments
- Next SAC meeting:
 - June 2025 – Specific date TBD

Topics:

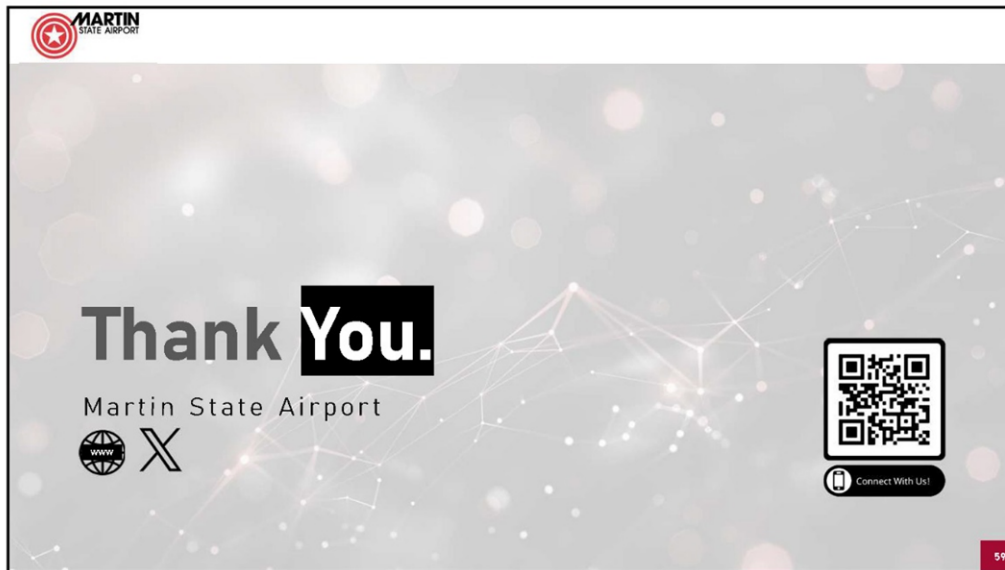
- Primary focus will be the NAP
- Review detailed land use
- Present model inputs and forecast



Schedule and Resources

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**Martin State Airport Noise Zone (ANZ) Update
Stakeholder Advisory Committee (SAC) Meeting 1**

MEETING MINUTES

Wednesday, April 2, 2025, 6:00 PM – 8:00 PM

Martin State Airport
701 Wilson Point Road, Hanger 4
Baltimore, MD 21220

Discussion Item	Notes	Presenter
Welcome	Mr. Bruce Rineer welcomed attendees and conducted a safety briefing, identifying emergency exits, AED and fire extinguisher locations, and the accountability site outside Hangar 4. Attendees were reminded to report any hazards in the meeting room. He introduced the MAA and consultant team (HMMH), and each SAC member introduced themselves and the organizations they represent. Mr. Rineer emphasized that this process aims to update the existing Airport Noise Zone (ANZ) through stakeholder input and data collection. He noted that the last ANZ update for Martin State Airport occurred during the COVID pandemic and received little public feedback. This year, the process will include SAC meetings, a public hearing, and a workshop, offering multiple opportunities for engagement and feedback.	Bruce Rineer
Meeting Facilitation and Introductions	Ms. Rhea Hanrahan (HMMH) facilitated the meeting. Attendees, including members of the SAC, MAA, consultant teams (HMMH), and local stakeholders, introduced themselves and the organizations they represent.	Rhea Hanrahan
Expected Meeting Takeaways	Mr. Rineer outlined the key objectives of the meeting: • Provide an ANZ and Noise Abatement Plan (NAP) overview. • Explain the rationale for the ANZ update process. • Describe the regulatory background, including COMAR requirements. • Introduce the noise metrics used in the study, particularly DNL (Day-Night Average Sound Level). • Clarify the role of SAC members in shaping inputs and sharing information with their communities.	Bruce Rineer

He also clarified that while the NAP includes voluntary procedures, the ANZ update is a regulatory requirement incorporating modeling, forecasting, and community input.

**Airport Noise
Zone**

Mr. Rineer began the discussion by providing an overview of the purpose and statutory basis of the ANZ. He explained that the ANZ is mandated by the Maryland Environmental Noise Act of 1974 and is used to identify noise contour boundaries, specifically at 65, 70, and 75 dB DNL, that help guide land use compatibility near state-owned airports. The objective is not to limit airport operations but to support local planning decisions that reduce the impact of aviation noise on surrounding communities.

Ms. Hanrahan followed by clarifying the acoustic metrics used in the study. She explained that the Day-Night Average Sound Level (DNL) is the required metric under the Code of Maryland Regulations (COMAR) and is designed to reflect long-term noise exposure by accounting for both daytime and nighttime operations, with added weighting for nighttime noise.

The presenter explained that the ANZ is updated on a five-year cycle and includes a base year, a five-year projection, and a ten-year forecast. For this ANZ update, these years will be 2025, 2030, and 2035. They emphasized that the modeling process is data-driven and does not include speculation about unknown or future changes. For example, introducing commercial airline services would require an environmental review and could trigger a new update.

Bruce
Rineer

**Noise
Abatement Plan
(NAP) Overview**

Mr. Rineer introduced the Noise Abatement Plan (NAP), describing it as a set of voluntary operational procedures designed to reduce noise impacts on surrounding communities. While the NAP is not mandatory, it plays a key role in MAA's commitment to responsible airport operations.

Mr. Nikolaus Wagenfeiler provided an example of an active noise abatement strategy at Martin State Airport. He explained that the airport only allows up to three aircrafts in the pattern to perform concurrent touch-and-go operations. Previously, having five or six aircraft performing these maneuvers at once could delay runway access and contribute to elevated noise levels. This change has improved both operational flow and community satisfaction.

Mr. Rineer added that these initiatives were added to develop collaborations with local stakeholders, and that the airport has already seen positive effects. During this portion of the meeting, SAC members

Bruce
Rineer

raised concerns and asked questions. Jim Merritt noted that aircraft noise varies widely depending on the type of plane and expressed frustration that a few particularly noisy aircraft affect the community's perception of the airport.

Mr. Jeff Kyger questioned how effective long-term planning can be when future changes, like tree removal or new aircraft types, are still uncertain. Mr. Rineer responded that the ANZ process relies on confirmed data and operational trends. If significant changes arise, such as the introduction of commercial carriers, those will require a separate environmental review and could trigger an ANZ revision.

Mr. Harold Fowler asked whether the NAP language could be strengthened during this update. Mr. Rineer confirmed that the upcoming meetings and the broader process were intended to gather such input and potentially revise the NAP language to reflect better and respond to community concerns.

Stakeholder
Advisory
Committee
(SAC)

The next portion of the meeting centered on the purpose and expectations of the Stakeholder Advisory Committee (SAC). Mr. Rineer described the SAC as a vital part of the ANZ update process, composed of local representatives, community members, and aviation stakeholders. He emphasized that the SAC operates voluntarily, but its work is essential in creating a transparent and community-driven process.

Mr. Rineer explained that the SAC's responsibilities include reviewing technical assumptions, evaluating noise modeling inputs, and helping MAA understand local concerns and conditions. Members are also encouraged to act as liaisons to the broader public, sharing information and collecting feedback to ensure a two-way flow of communication.

Ms. Hanrahan added that SAC members bring invaluable local knowledge to the table. She emphasized that their participation builds the credibility and consensus needed for a successful update process. She encouraged members to stay engaged and continue contributing their perspectives as the project progresses.

Bruce
Rineer

Martin State
Overview

This section provided a foundational perspective on how Martin State Airport functions differently from larger commercial airports like BWI. Mr. Rineer began framing Martin State Airport as a unique facility that supports many users, including the military, flight schools, law enforcement, and medevac operations.

Bruce
Rineer

Mr. Rineer detailed recent technical upgrades to MAA's airport noise and operations modeling system (ANOMS), particularly the installation of an ADS-B antenna, that improves the capture and analysis of MTN. The discussion then transitioned into long-term infrastructure planning. Mr. Kevin Clarke addressed the committee with information about the Airport Layout Plan (ALP). He noted that if elements like lighting upgrades or tree removal are scheduled to occur within the 5- or 10-year planning window, they will be reflected in the noise modeling forecasts.

Fundamentals
of Noise

Ms. Hanrahan presented noise fundamentals to ensure all participants understood how noise is quantified and evaluated. She began by explaining the difference between sound and noise: sound is a physical phenomenon, while noise is subjective and varies by individual perception.

Rhea
Hanrahan

Ms. Hanrahan walked attendees through the basics of the decibel scale, emphasizing that it is logarithmic. She noted that every 3 dB increase represents a doubling of sound energy, while a 10 dB increase is perceived as twice as loud to the human ear. This led to a discussion of several noise metrics that are used when describing airport noise:

- **LMAX:** the peak level of noise during a single event.
- **SEL:** Sound Exposure Level integrates a noise event's intensity and duration.
- **DNL:** Day-Night Average Level, which applies a weighting to nighttime noise to reflect its increased potential for disturbance.

Ms. Hanrahan explained that DNL is the FAA and COMAR-required standard because it captures a 24-hour average noise exposure, ensuring national consistency. She also noted that DNL allows noise to be analyzed in a way that accounts for frequency, intensity, and timing of events, providing a more complete picture.

Ms. Hanrahan stated that communities begin to notice and react to increases in DNL of 5 dB, and many consider a 10 dB increase to be a doubling of noise. She also noted that use of DNL allows comparison of noise exposure across all airports nationwide.

Noise Modeling
Overview

The technical portion of the meeting focused on how aircraft noise is modeled to update the ANZ. Mr. Paul Krusell led this discussion, introducing the Aviation Environmental Design Tool (AEDT), a sophisticated modeling platform for simulating and forecasting noise exposure around airports.

Paul
Krusell

Mr. Krusell described how the model integrates a wide range of data, including aircraft types, operational counts, flight paths, runway usage, and time-of-day information. "We use AEDT, the Aviation Environmental Design Tool. It factors in aircraft types, flight paths, operations, time of day, runway use, even weather and terrain," he said.

Mr. Rineer elaborated on how the data is categorized, noting that while military data is available only in aggregate due to security concerns, civilian aircraft are individually identifiable through the ADS-B system. "We don't get tail numbers, but we do get counts," he said. "Civilian aircraft are more transparent thanks to ADS-B."

Ms. Hanrahan reinforced that the goal of the modeling isn't just accuracy, it's about providing a foundation for community input and responsible land use decisions. The contours produced by AEDT for 2025, 2030, and 2035 will inform zoning and community planning for years to come.

"Community feedback is critical to validating our assumptions," Ms. Hanrahan noted. "While the system is highly technical, it's meant to translate complex data into something meaningful for decision-makers and community members alike."

Schedule and
Additional
Resources

To conclude the meeting, Mr. Krusell presented the overall project schedule, outlining each upcoming milestone in the ANZ update process. The SAC will reconvene for two additional sessions, one focused on reviewing model inputs and the NAP and another to preview the draft contours before the public workshop. After gathering public input, the finalized plan will be submitted for codification in COMAR.

Paul
Krusell

"Here's the timeline we're working with," Mr. Krusell began:

- April 2025: SAC Meeting #1 (Completed)
- June 2025: SAC Meeting #2 (Review modeling inputs and the NAP)
- September 2025: SAC Meeting #3 (Preview ANZ Contours)
- Fall 2025: Public hearing, workshop, and comment period.
- Winter 2025: Codification in COMAR

Mr. Rineer followed up with a practical overview of Web Trak, the online tool for tracking aircraft and submitting noise complaints. He acknowledged its BWI-centered interface but noted that it can still provide useful insights for the Martin State community. "Use Web Trak to track aircraft and submit complaints," he encouraged. "It's a BWI-focused system, but it can still help. And we're always here to answer questions."

Ms. Hanrahan closed the session by assuring attendees that future meeting materials would be distributed in advance. She emphasized flexibility in participation, stating, "You'll have options for how involved you want to be, and that's okay. Some people dig into the data; others just want the summary. We support both."

Adjournment	The meeting concluded around 7:45 pm, with the project team appreciating all participants. Mr. Rineer thanked attendees for their input and emphasized MAA's commitment to transparency and community collaboration in the ANZ update process.	Bruce Rineer
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Kayla Woods

From: MDOT-MAA-ANZ
Sent: Friday, April 11, 2025 2:15 PM
To: Hfowler2@martinstateairport.com
Subject: Thank you for your participation!
Attachments: 2025_04-10 MDOT_MTN-SAC-Thank You Letter Fowler.pdf



Regards,

BWI Marshall and Martin State Airport Noise Zone
Outreach Team

Phone: 240-200-5176

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>



June 18, 2025

Dear [STAKEHOLDER]
[ORGANIZATION]

Thank you again for your continued participation in the Martin State Airport Noise Zone (ANZ) Update Stakeholder Advisory Committee (SAC). Your engagement, feedback, and community insight are crucial to the success of this process, and we appreciate your ongoing commitment. We are pleased to continue working with you as we prepare for our second SAC meeting.

The Maryland Aviation Administration (MAA) is continuing its effort to update the 2025 ANZ for Martin State Airport. As required by the Code of Maryland Regulations (COMAR), this update includes modeling current and future aircraft noise conditions and reviewing the existing Martin State Noise Abatement Plan. Your participation as a member of the SAC ensures that the study is informed by local expertise and aligns with the community's priorities.

We are excited to invite you to the second SAC meeting, which will take place on:

Thursday, June 26, 2025
6:00 PM – 8:00 PM
Martin State Airport – Hanger 4
701 Wilson Point Road, Baltimore, MD 21220

At this meeting, the project team will present preliminary modeling inputs and assumptions that will inform the development of updated noise contours, providing a foundation for future discussions and decisions. We'll also continue discussions around the Noise Abatement Plan and provide space for questions, feedback, and collaborative discussion. In addition, we will continue to welcome new SAC members as the process progresses. If you were not able to attend the first meeting, we encourage you to join us for SAC Meeting 2 and participate in the ongoing discussions.

We kindly request that all attendees confirm their participation at <https://MtnAnzSAC2.eventbrite.com>. Those who RSVP will receive the meeting materials beforehand, including the agenda, presentation slides, and the SAC Meeting 1 minutes, to ensure a productive and informed discussion.

If you have any questions or would like to discuss the meeting in more detail, please contact me at 410-859-7813 or brineer@bwiaairport.com. We look forward to seeing you.

Sincerely,



Bruce Rineer, Manager
MAA Noise Program Section
Office of Environmental Compliance and Sustainability

MAA MTN ANZ SAC 1 Reminder Emails:

(sent to full invitee list on 06/25/2025)

Good afternoon,

This is a friendly reminder about tomorrow's Stakeholder Advisory Committee (SAC) meeting to discuss the **Martin State Airport Noise Zone (ANZ) Update**.

Meeting Details:

Thursday, June 26, 2025, from 6:00 PM – 8:00 PM

at Martin State Airport, Hangar 4 – 701 Wilson Point Rd, Baltimore, MD 21220

Your participation is critical in shaping this update and ensuring it reflects the needs of the impacted communities.

The Agenda for this meeting is as follows:

- Welcome and Introductions
- SAC Meeting #1 Recap
- ANZ Noise Modeling Process
- Noise Model Inputs
- ANZ Land Use Inventory
- Noise Abatement Plan (NAP)
- Schedule and Resources

To **RSVP**, please register online here: <https://MtnAnzSAC2.eventbrite.com>. Thank you to those who have already done so.

If you have any questions, please contact our Outreach Team at 240-200-5176 or MDOT_MAA-ANZ@assedollc.com.

We look forward to working with you!

Regards,

Bruce Rineer,

Manager Noise Program Section
Office of Environmental Compliance and Sustainability

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>



Maryland Aviation Administration

Please Sign In
MARTIN STATE AIRPORT
Airport Noise Zone Update
Stakeholder Advisory Committee (SAC 2)
June 26 2025



	NAME/TITLE	ORGANIZATION	PHONE	EMAIL	INITIALS
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2.	Jeff Kyger	WPCIA	(443) 904-5467	jkyger62@gmail.com	JK
3.	CHRIS PALMER	175 WG	662-549-7745	CHRISTOPHER.PALMER.29C US.AF.MIL	CP
4.	PAT HOOK	EMRCC/HANTHORNE	443-250-7991	pjhook11@aol.com	P.H.
5.	Kim Fry	BQIA	(215) 490-2048	KimFry.Fry1@VENUE.VA	KF
6.	Jim Hock	BQIA	410-977-6698	James.N.Hock@gmail.com	JNH
7.	JOE IRETON	MSPAC	410 238 5800	joseph.ireton@maryland.gov	JIR
8.	Jim MacInt	BQIA	443 676 3555	JimMacInt@concord.net	JM
9.	Matthew Alsiers	Greenleigh HOA	443 787 5849	mett.alsiers@gmail.com	MTA
10.	Marsha Ayres	BQIA	410 335 7973	mayres1027@gmail.com	MA

* Stakeholder Advisory Committee Member



Airport Noise Zone Update Stakeholder Advisory Committee

Meeting #2
Martin State Airport

June 26, 2025
6:00 PM – 8:00 PM

1

1

Welcome to Martin State

Safety Briefing

- Follow emergency exits
- Call 911
- Assist those who need assistance
- Be sure to take a head count during the emergency event
- Nearest AED – #4 (Hangar 5)
- Nearest Fire Extinguisher – Room 527 (Hangar 5)
- Accountability Site: Parking lot outside of Hangar 4
- Always report any hazards in the meeting room



Source: [MTN State Airport Photo Gallery](#)



2

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Agenda

- » Welcome and Introductions
- » SAC Meeting #1 Recap
- » ANZ Noise Modeling Process
- » Noise Model Inputs
- » ANZ Land Use Inventory
- » Noise Abatement Plan (NAP)
- » Schedule and Resources

3

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Meeting Facilitation

The meeting facilitator is responsible for ensuring SAC meetings:

- Run efficiently, respectfully, and effectively
- Focus on the published agenda
- Provide appropriate opportunities for all members to participate
- Result in consensus conclusions to the maximum extent feasible
- Are documented through preparation of accurate meeting notes

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Introductions

- Maryland Aviation Administration (MAA) representatives
- Stakeholder Advisory Committee (SAC) members
- Consultant team



Welcome and Introductions

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SAC Meeting #1 Recap

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ANZ Update Scope and Process

- Form and engage with Stakeholder Advisory Committee (SAC)
- **Prepare base year, 5-year, 10-year forecast noise contours**
- Compile ANZ (composite of the three contour sets)
- Conduct land use inventory within ANZ
- Review existing Noise Abatement Plan (NAP)
- Conduct public hearing/workshop
- Update Code of Maryland Regulations (COMAR)



SAC Meeting #1 Recap

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ANZ Study Update

The ANZ update process includes status review of the NAP.

Airport Noise Zone (ANZ)	Noise Abatement Plan (NAP)
Provides the means to identify and control incompatible land development around Martin State Is a composite of the farthest extents of the annual Day-Night Average (DNL) contours for each of the study years (2025 base, 2030 and 2035 forecast)	Prescribes measures to monitor, reduce, and/or eliminate incompatible land use areas within the ANZ to the extent possible while maintaining efficient airport operations



Airport Noise Zone

8

8

Maryland Airport Noise Zone (ANZ) Regulations

- Maryland Environmental Noise Act of 1974
 - *"Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems."*
- Maryland law requires MAA to complete an ANZ update approximately every 5 years
- The certified ANZ consists of Day-Night Average Sound Level (DNL) contours at 65, 70, and 75 decibels printed on:
 - Airport Noise Zone Map



State Law and Regulations

Transportation Code	Code of Maryland Regulations (COMAR)
Noise Zone Regulations; Part I The purpose of this subtitle is to: (1) Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems; and (2) Protect the health and general welfare of the occupants of land near airports.	Chapter 11.03.03 Defines the prediction method to be used to develop 'noise contours of equal noise exposure' (subject to the approval of the Executive Director) Provides direction for development of contours, including 5 and 10 year, plus cumulative condition, provides methods for determination of impacted land use areas, and direction on noise abatement plans.
Noise Zone Regulations; Part II Requires assessment of the noise environment, existing projected future use, following procedures the Executive Director establishes, delineates a "noise zone", requires development of a noise abatement plan - every five years	Section 11.03.03.05 Provides a process for permits for construction within the Noise Zone Surrounding a State-Owned Airport



Expectations

The ANZ provides a means to:

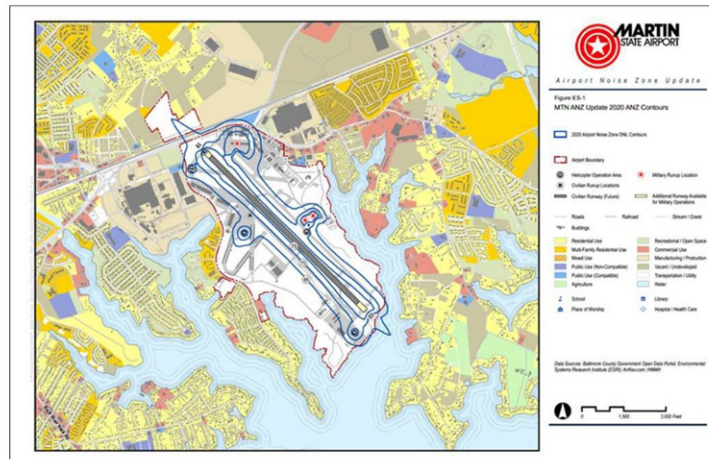
- Understand existing and future noise exposure around Martin State
- Assist local land use jurisdictions in the control of potentially incompatible development
- Identifies potential strategies to mitigate noise, including voluntary noise abatement procedures

The ANZ cannot:

- Restrict the hours of operations
- Impose curfews or restrictions
- Require the FAA to change flight procedures
- Be used to limit demand or forecast growth

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Martin State Noise Zone (2020)



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SAC Responsibilities

- **Contribute to study inputs**
 - Discussion and feedback at SAC meetings
 - Provide input, advice, and guidance related to Noise Abatement Plan
 - understand ANZ effects on stakeholders
- **Review modeling assumptions**
 - Base year and forecasts
- **Review analysis results**
 - Base, 5-year, and 10-year contours
- **Review documentation**
 - NAP and Draft ANZ document
- **Provide two-way communication between the SAC and their organizations / constituents**
 - Share information with your neighbors and organizations
 - Spread the word about future opportunities for public feedback

MAA will respect and consider SAC input but retains overall responsibility for the Martin State ANZ update.



Stakeholder Advisory Committee

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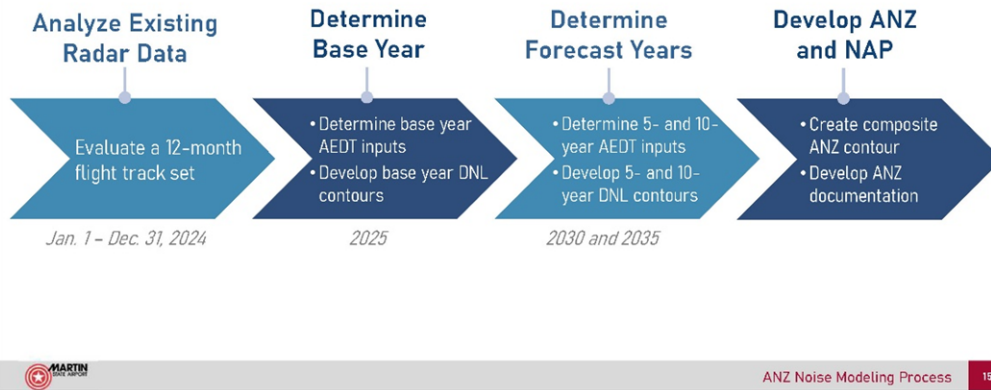


ANZ Noise Modeling Process

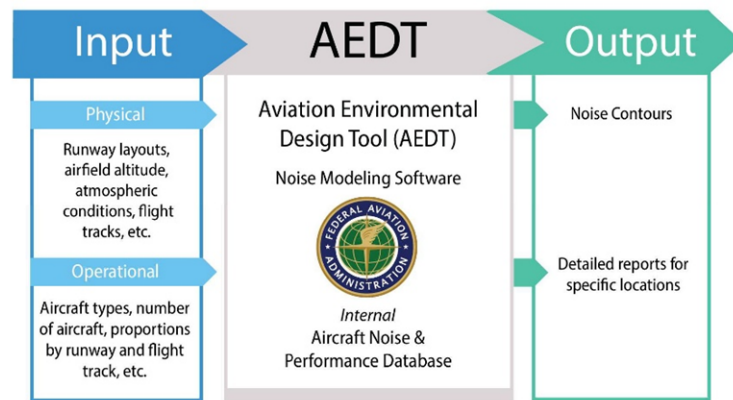
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ANZ Noise Modeling Process



15



16

Model Track Development

- HMMH AEDT Preprocessor
 - Models each and every operation as an AEDT Flight Track
 - Used for all Fixed Wing Arrivals and Departure operations
- Representative Model Tracks
 - Representative model tracks were use for helicopter operations and fixed-wing circuit operations
 - Military operations use model tracks based on prior ANZ updates and validated by MDANG

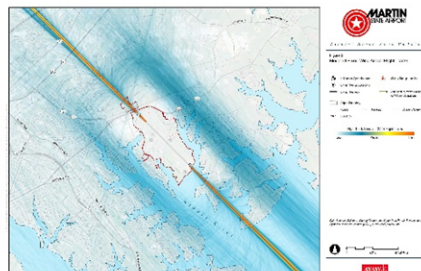


Noise Model Inputs

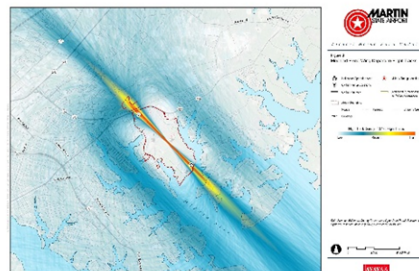
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Fixed Wing Modeled Flight Track Density



Arrival tracks



Departures tracks

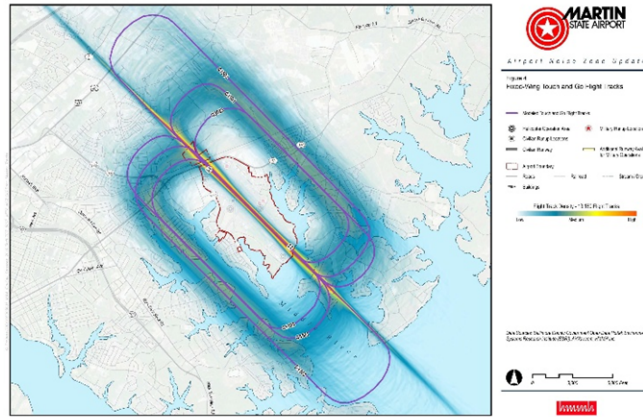


Noise Model Inputs

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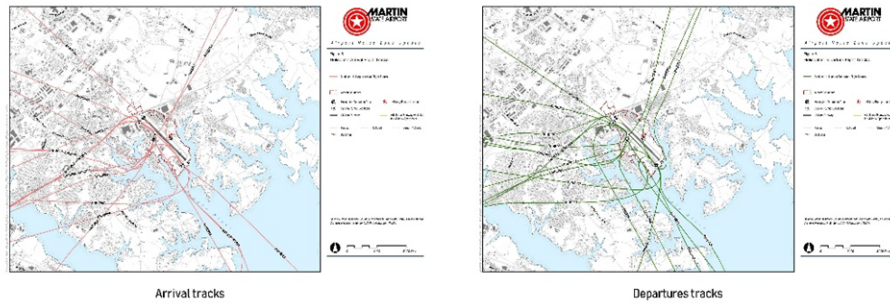
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Fixed Wing Modeled Circuit/Touch and Go Tracks



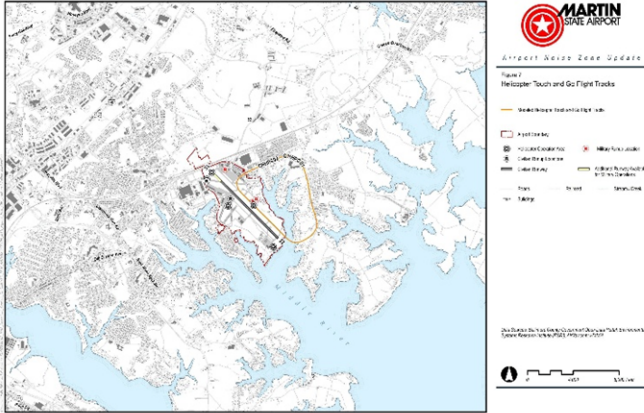
21

All Helicopter Modeled Flight Tracks



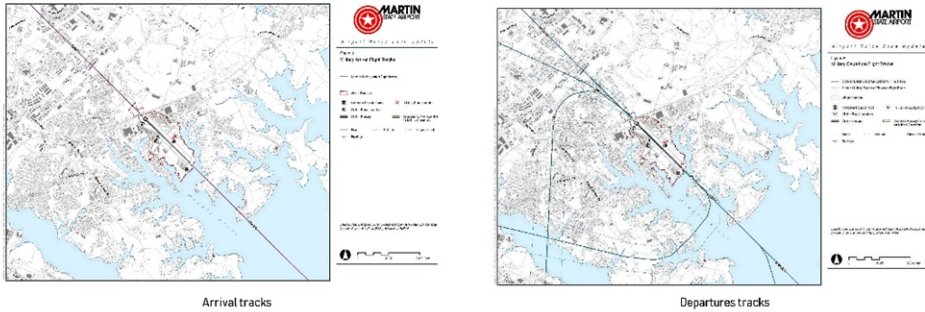
22

Helicopter Modeled Circuit/Touch and Go Tracks



23

Military Modeled Flight Track



24

Base Year (2025) Operations

- Operations levels determined from 2024 edition of the FAA's Terminal Area Forecast (issued Jan 2025)
 - Calendar year 2024 data scaled to 2025 TAF
- Aircraft fleet mix, runway use, and flight tracks derived from ANOMS data
 - Model flight tracks were created using flight data from the 2024 calendar year.

Operations Category	Operations Count	Operations Percentage
Air Carrier (AC)	5	<0.1%
Air Taxi (AT)	2,772	3.1%
General Aviation (GA)	84,939	94.9%
Military (ML)	1,773	2.0%
Total	89,489	
Average Annual Day (AAD)	245.18	



Noise Model Inputs

25

25

Runway Utilization

Base Year (2025)



West Flow 54%



East Flow 46%



Noise Model Inputs

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Base Year (2025) Aircraft Fleet mix

- Air Carrier
 - EMB175 (Embraer ERJ175)
- Air Taxi
 - SA330J (Leonardo AW139)
 - CNA680 (Cessna 680-A Citation Latitude)
 - CNA55B (Embraer Phenom 300 (EMB-505))
- General Aviation
 - CNA172 (Cessna 172 Skyhawk)
 - GASEPF (Piper PA-28 Cherokee Series and other single-engine fixed pitch propeller aircraft)
 - SA350D (Airbus Helicopters H125)
- Military
 - A10C (Fairchild A-10C Thunderbolt II)
 - S70 (Sikorsky UH-60 Black Hawk)
 - DHC6 (Raytheon Super King Air 200 and other military twin-engine turboprop aircraft)

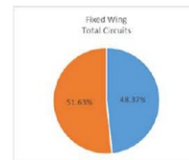
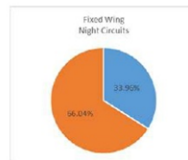
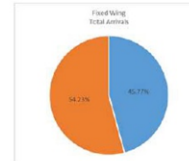
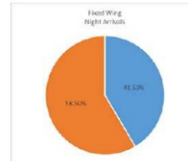
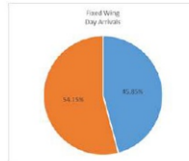
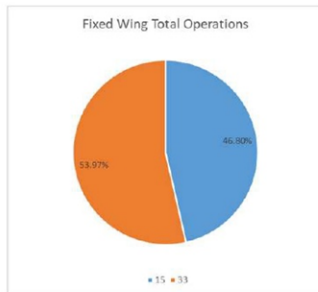


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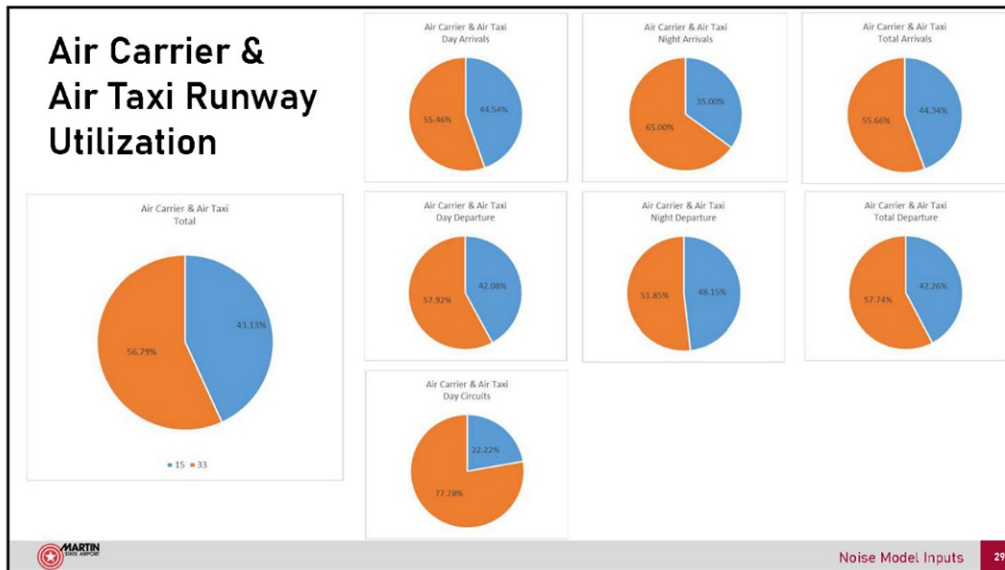
Total Fixed Wing Runway Utilization



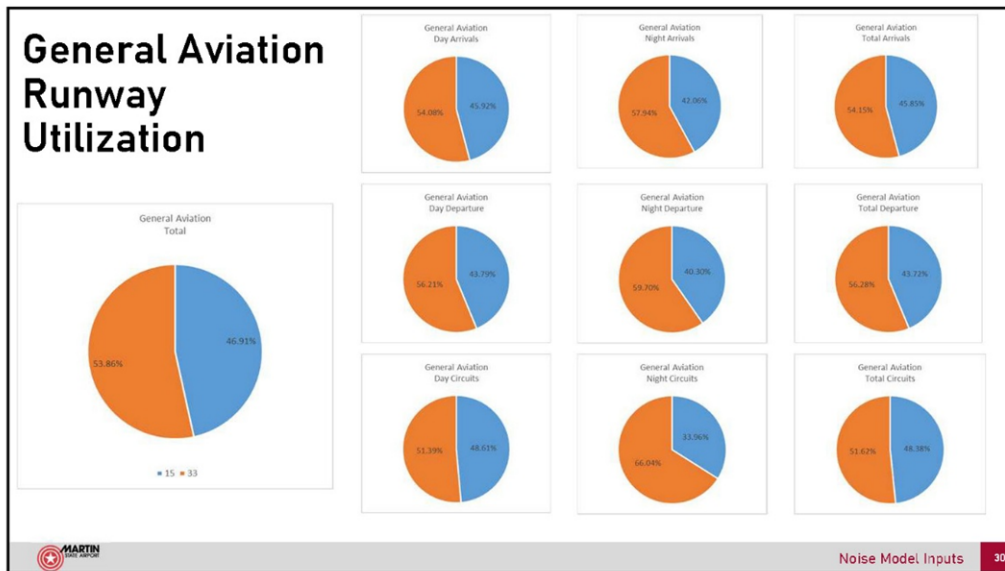
Noise Model Inputs

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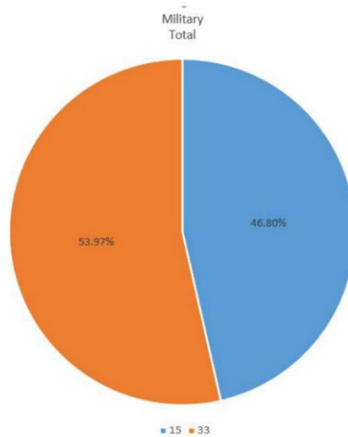


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Military Runway Utilization



Noise Model Inputs

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Meteorological and Terrain Data

AEDT's database includes 30-year average weather for each airport. For MTN:

- Temperature: 55.47°F
- Station pressure: 1017.21 millibars
- Dew point: 47.7°F
- Relative humidity: 75.08%
- Wind speed: 4.4 knots

Terrain Data

- Obtained from the United States Geological Survey (USGS) National Elevation Dataset with one-third arc second resolution.
- Terrain data will be utilized in conjunction with the terrain feature of AEDT to generate the base year noise contours for the MTN ANZ update.



Noise Model Inputs

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Five-Year (2030) Operations

- Relocation of Runway 15/33 ends for civilian aircraft – from 6,997 to 7,430 ft
- Operations levels derived from 2024 TAF
- Runway use, and flight tracks are the same as the base year operations

Operations Category	Operations Count	Operations Percentage
Air Carrier (AC)	5	<0.1%
Air Taxi (AT)	3,202	3.5%
General Aviation (GA)	89,122	96.2%
Military (ML)	523	0.3%
Total	92,852	
Average Annual Day (AAD)	254.39	



Noise Model Inputs

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33

Ten-Year (2035) Operations

- Relocation of Runway 15/33 ends for civilian aircraft – from 6,997 to 7,430 ft
- Operations levels derived from 2024 TAF
- Runway use, and flight tracks are the same as the base year operations

Operations Category	Operations Count	Operations Percentage
Air Carrier (AC)	5	<0.1%
Air Taxi (AT)	3,632	3.8%
General Aviation (GA)	91,604	95.9%
Military (ML)	523	0.3%
Total	95,764	
Average Annual Day (AAD)	262.37	



Noise Model Inputs

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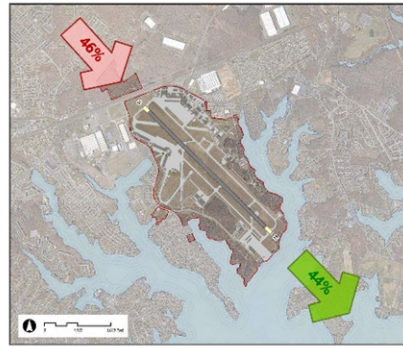
34

Runway Utilization

Five-Year (2030), Ten-Year (2035)



West Flow 54%



East Flow 46%



Noise Model Inputs

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Aircraft Fleet Mix

Base Year (2025), Five-Year (2030), Ten-Year (2035)

- AEDT Type (Aircraft Types) with the Highest Growth
 - COMSEP (Cirrus SR20 and Cirrus SR22)
 - CNA560XL (Cessna 560 Citation XLS)
 - CNA208 (Pilatus PC-12)
- AEDT Type (Aircraft Types) with the Largest Decrease
 - CNA525C (Cessna CitationJet CJ/CJ1 (Cessna 525))
 - LEAR35 (Bombardier Learjet 35)
 - GASEPV (Piper PA-32 Cherokee Six and other Single Engine Variable-pitch Propeller Aircraft)

AEDT Type	Average Daily Ops (2025)	Changes (2030)	Changes (2035)
COMSEP	11.1	53%	83%
CNA560XL	1.7	25%	56%
CNA208	2.0	17%	39%
CNA525C	1.6	-41%	-100%
LEAR35	1.2	-41%	-100%
GASEPV	4.5	-25%	-43%



Noise Model Inputs

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Noise Contours (Next Meeting)

- Base Year Noise Contour
- 2030 Forecast Noise Contour
- 2035 Forecast Noise Contour



Noise Model Inputs

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Noise Abatement Plan (NAP) Overview

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Noise Abatement Plan (NAP)

Originally adopted in 1984, updated in 1987, reviewed and approved with no changes in 2012. The NAP was reviewed and updated as part of the 2020 MTN ANZ update process in order to accurately reflect current operating conditions at MTN.

NAP Goal: To the extent possible, reduce incompatible land use within ANZ while maintaining efficient airport operations.

General categories of NAP measures:

- Noise abatement elements
- Land use elements

Evaluate current NAP and allow for potential modifications or updates to be made.



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Noise Abatement Plan (NAP)

Noise abatement procedures are voluntary and designed to minimize exposure of residential areas to aircraft noise, while ensuring safety of flight operations.

- Visual Flight Rules (VFR) / Instrument Flight Rules (IFR)
- Departures
- Arrivals
- Closed traffic patterns
- Taxiing aircraft
- Touch and Go and/or Practice Approach Restrictions
- Aircraft Maintenance Engine Run-up Areas

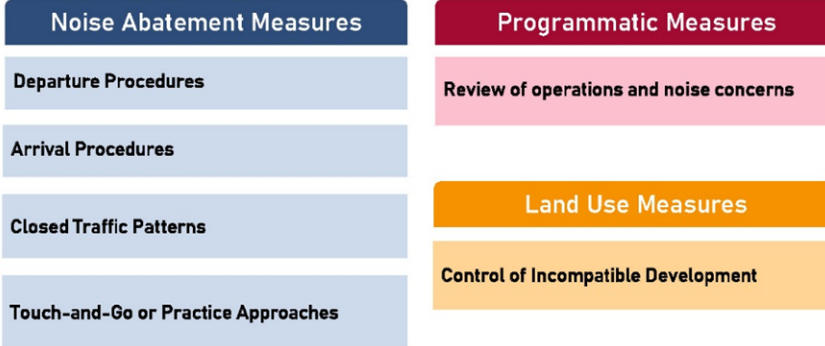


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Noise Abatement Plan Measures



Martin State NAP Caveats

Noise abatement procedures are voluntary.

- MTN NAP is formulated to minimize noise disturbance to neighboring communities while maintaining safe and efficient MTN Airport operations. MAA Division of MTN Airport Operations is responsible for the overall administration of MTN.
- Aircraft may not follow noise abatement procedures if deemed necessary by Air Traffic Control (ATC) or flight crews to maintain operational safety.



Noise Abatement Plan (NAP):

- VFR Piston-engine Aircraft:
 - Runway 15/33 – Unless otherwise instructed by Air Traffic Control (ATC), aircraft fly runway heading to 1000' Mean Sea Level (MSL) prior to turning to the ATC approved on-course heading or crosswind leg of the traffic pattern.
- VFR Turbine Powered Aircraft:
 - Runway 15/33 – Unless otherwise instructed by ATC, aircraft shall fly runway heading to 1,500' MSL prior to turning to the ATC approved, on-course heading or crosswind leg of the traffic pattern.
- VFR Helicopter Departures:
 - Unless operating under a Letter of Agreement (LOA) with MTN ATC specifying otherwise, helicopters shall climb to 500' AGL on initial departure heading before turning on-course.
- All IFR Departures:
 - IFR departures shall be accomplished in accordance with ATC direction or clearance.

Note: IFR departures will be accomplished in accordance with Air Traffic Control (ATC) direction or clearance.



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Noise Abatement Plan (NAP):

VFR and IFR Arrivals and Traffic Patterns:

VFR and IFR aircraft approach should, to the maximum extent feasible, maintain the highest practical altitude, commensurate with flight and ATC procedures in order to minimize aircraft noise exposure to communities underlying the final approach courses.



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Noise Abatement Plan (NAP):

Closed Traffic Patterns

A left-hand traffic pattern shall be used at MTN unless otherwise directed by ATC. Piston fixed-wing aircraft should fly runway heading until reaching 1,000' MSL prior to turning to the crosswind leg of the traffic pattern. Turbine aircraft should fly runway heading until reaching 1,500' MSL prior to turning to the crosswind leg of the traffic pattern.

Traffic pattern altitudes are:

Fixed Wing	Piston engine	1,000' MSL
	Civil turbine and military turboprop	1,500' MSL
	Military Jet	2,000' MSL
Rotary Wing		500' MSL



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Noise Abatement Plan (NAP):

Touch-and-Go or Practice Approaches

No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance staff.

FAA Weight Class	Description	Weight	Limitation
Small	Small Single Engine/Twin Engine Aircraft, Helicopters, and Transient Military (e.g. Cessna 172, Piper Cherokee)	12,500 lbs. or less	No restrictions
Medium	Medium Aircraft and Transient Military* (e.g. military fighter jets, Learjet 35, Bombardier CRJ-200LR)	Between 12,500 and 41,000 lbs	Limit of two practice approaches
Large	Large Jet/Large Commuter/757/Heavy Aircraft	More than 41,000 lbs.	Practice approaches and landings are not authorized without prior permission from MTN Operations and Maintenance staff.

* Military aircraft shall be limited to two practice landings/take-off approaches unless additional operations are approved by MTN Operations and Maintenance staff.
FAA Aircraft Weight Class - https://www.faa.gov/airrulenote/index/Weight_Class.html



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Noise Abatement Plan (NAP):

Aircraft Maintenance Engine Run-up Areas

Aircraft maintenance engine run-ups are to be accomplished only in areas designated by the Chief, MTN Operations & Maintenance in accordance with MTN Tenant Directive 200.2.



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Noise Abatement Plan (NAP)

Other Elements

Noise Concerns can be reported via telephone hotline

Zoning Permit and Appeal Procedure

- » MAA regulates land use within the Airport Noise Zone.
- » Anyone desiring to construct or modify a structure or land use is required to obtain an Airport Zoning Permit.

MDANG Noise Barriers

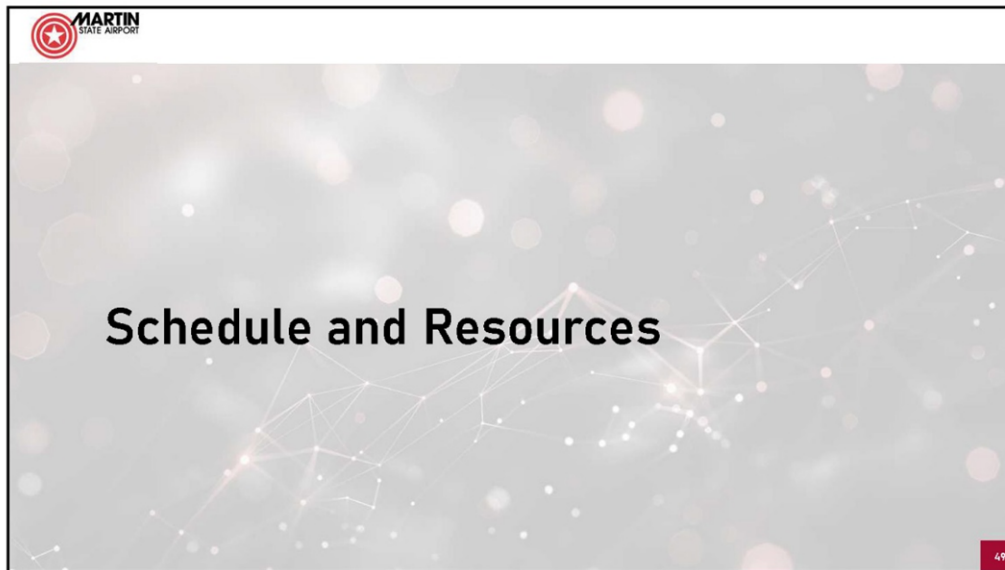
- » MDANG erected two noise barriers, both located between the MDANG's engine maintenance area and the homes northeast of the Airport.



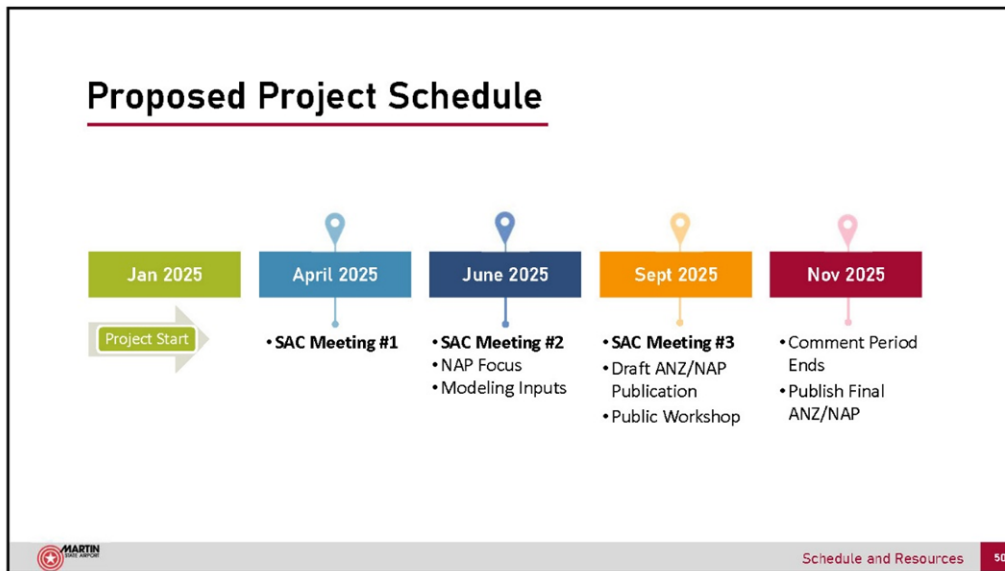
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Project Contacts

Project Primary Contact

Email: MDOT-MAA-ANZ@assedollc.com

Phone: (240) 200-5176

MAA Project Manager

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Noise Section BRineer@bwiairport.com

ANZ Project Managers

Tyler White, Principal Consultant, twhite@hmmh.com

Rhea Hanrahan, Director, AES, rhanrahan@hmmh.com



Schedule and Resources

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Additional Resources

2020 Martin State ANZ

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>

WebTrak

<https://webtrak.emsbk.com/bwi3>



Schedule and Resources

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Wrap Up

- SAC member questions, comments, and discussion
- Public Comments
- Next SAC meeting:
 - September 2025 – Specific date TBD

Topics:

- Draft noise modeling results, contours and land use inventory
- Updated Noise Abatement Plan



Schedule and Resources

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Thank You.

Martin State Airport



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**Martin State Airport
Airport Noise Zone (ANZ) Update
Stakeholder Advisory Committee (SAC) Meeting #2**

MEETING MINUTES

Thursday, June 26, 2025, 6:00 PM – 8:00 PM

Martin State Airport
701 Wilson Point Road, Hangar 4
Baltimore, MD 21220

Discussion Item	Notes	Presenter
Safety Briefing	Mr. Bruce Rineer opened the meeting with a brief safety overview specific to the Hangar 4 meeting space at Martin State Airport. He identified the location of the Automated External Defibrillator (AED), which was stationed down the hallway near Room 527, as well as a fire extinguisher located along the same corridor. In the event of an emergency, Mr. Rineer instructed attendees to exit the building promptly and proceed directly to the designated accountability area, located in front of the hangar. Mr. Rineer encouraged participants to remain alert to any safety concerns during the meeting and to report any issues they observed. He noted that the evening's meeting would not have a formal facilitator, but that Ms. Rhea Hanrahan from the project team would be available to step in and help guide the discussion if necessary.	Bruce Rineer
Welcome and Introductions	Following the safety briefing, Mr. Rineer welcomed everyone and thanked both returning and new SAC members for their time and continued participation in the Martin State Airport - Airport Noise Zone (ANZ) Update process. He provided a brief refresher on the project's purpose, explaining that the SAC plays a critical role in ensuring that noise modeling and policy recommendations are informed not only by technical data but also by the lived experiences of residents and stakeholders in the surrounding communities. Mr. Rineer emphasized that the update process involves reviewing current noise exposure levels, developing future-year forecasts, and aligning those findings with land use compatibility goals. He reiterated	Bruce Rineer

that the SAC's feedback would directly inform the revised ANZ, the Noise Abatement Plan (NAP), and future regulatory documents. He noted that this work is required under Maryland State law and governed by the Code of Maryland Regulations (COMAR). Each SAC member and project team participant then introduced themselves by name and affiliation.

SAC Meeting #1 Recap	Mr. Tyler White provided a recap of the first SAC meeting held in April. He began with the project timeline and pointing out where the process currently stood. He explained that the focus of SAC Meeting #2 would be on understanding the model inputs, but he first wanted to review the foundational context from the April session. Mr. White reminded the group that the ANZ update is required every five years and is designed to evaluate how aircraft noise impacts surrounding communities using the Day-Night Average Sound Level (DNL) thresholds of 65, 70, and 75 decibels.	Tyler White
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He noted that noise contours are not just lines on a map; they are used to guide compatible land use planning and to ensure that State and local policies are aligned with aviation noise exposure levels. The work is governed by COMAR, which provides a structured process for assessing existing noise impacts, projecting future impacts, and considering strategies for mitigation. However, Mr. White reminded everyone that the ANZ process cannot address all aviation concerns, it does not influence air traffic control decisions, cannot restrict federal airspace, and cannot change existing development.

He also displayed the 2020 ANZ composite contour, showing how the majority of noise exposure remained within airport boundaries. Mr. White closed the recap by underscoring the role of the SAC moving forward, stating that future meetings would focus on draft contours and documentation, and that feedback from the committee would be essential to ensure the updated contours accurately reflect on-the-ground conditions.

ANZ Noise Modeling Process	Mr. White then led a detailed presentation on the ANZ noise modeling process. He explained that the team is using the Federal Aviation Administration's (FAA) Aviation Environmental Design Tool (AEDT) to simulate how aircraft noise propagates from Martin State Airport under typical operating scenarios. The model is designed to integrate real-world radar data, flight paths, aircraft types, topography, and atmospheric conditions to calculate how noise travels over the surrounding communities.	Tyler White
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Mr. White emphasized that the AEDT model supports both current and forecast conditions. For the base year of 2025, the team used 2024 radar data and scaled it forward using FAA forecasts. For future years,

2030 and 2035, AEDT includes expected changes in operations and aircraft fleet mix. He explained that while the contours produced by the model reflect average daily noise exposure, they are still sensitive to several variables, including time of day, runway direction, and types of aircraft.

The model includes all types of operations, fixed-wing aircraft, helicopters, and military flights, and although military operations are not available in the ANOMS data for security purposes, they are included in the study and the project team received detailed information from the MDANG. Mr. White displayed diagrams showing how different types of aircraft are assigned specific track types within the model, such as circuit patterns for training flights or straight-in approaches for larger aircraft.

Several SAC members asked clarifying questions throughout the presentation. Mr. White explained that fixed-wing general aviation and on-demand air taxi flights are categorized separately within the model and that while Martin State Airport does not host commercial airline service, charter flights are included when they occur. When asked about the impact of tree removal near the north end of the runway, Mr. White stated that while it might slightly shift takeoff or landing points, it would not significantly change aircraft routing or noise exposure. He reiterated that runway use is primarily driven by wind conditions, not obstacles or changes in runway length.

Mr. Matthew Algiers inquired about the frequency of charter flights, and Mr. White responded that there had been five in the past year. He explained that the model differentiates between daytime and nighttime operations, with nighttime modeled as a separate component to accurately assess DNL values during noise-sensitive hours.

Mr. White also addressed the challenge of modeling military aircraft, noting that security protocols prevent radar access for flights. In those cases, the team relied on best-available data and conservative estimates to fill in the gaps, including discussions with the Maryland Air National Guard. Terrain, elevation, and long-term weather patterns are also taken into account in the model to produce the most accurate results possible.

Mr. James Hock raised concerns about how noise might carry across Middle River, pointing out that water surfaces can reflect noise in ways that land does not. Mr. White acknowledged that difference and

confirmed that the model accounts for those acoustic properties. Another SAC member asked why the noise of arrival aircraft appeared more concentrated on the north side. Mr. White said that aircraft like the A-10 historically followed arrival paths that produced more noise in that area, a pattern that would be accounted for in the 2025 modeling scenarios.

Noise Model
Inputs

Mr. White continued into Noise Model Inputs, walking through the radar-based modeling approach being used for Martin State Airport. He explained that the team was using an in-house preprocessor tool to feed actual radar tracks into the model, rather than relying solely on representative tracks. This allowed them to more accurately capture how aircraft were flying, including the dispersion in flight paths and variations from one track to another. He pointed to a heat map on the screen, showing how fixed-wing arrival and departure paths appeared, noting areas of heavier density with warmer colors.

Tyler
White

Mr. Hock asked for clarification on whether each radar track represented a single aircraft operation, particularly for touch-and-go activity. Mr. White confirmed that each track was counted individually, even for training circuits. He said the team would be modeling each occurrence and that the touch-and-go operations would be accounted for in the model accordingly. As he advanced to the next slide, he showed the tracks associated with touch-and-go operations and explained how these would be used to generate model input tracks, each associated with a specific number of aircraft operations.

He moved into helicopter traffic, explaining that model tracks for helicopters were developed by drawing centerlines through the densest radar returns. Each helipad had its own arrival and departure track, reflecting actual flows observed in the data. Mr. Hock commented that it seemed like most helicopter routes passed over Wilson Point and Hawthorne and asked whether the model would reflect that imbalance. Mr. White confirmed that the radar data supported the observation and said the model would include weighted allocations, meaning that routes experiencing more traffic, such as those over Wilson Point, would be modeled with proportionally more activity.

He then displayed the helicopter training circuit track, followed by the military tracks. The military flight paths included both straight-in and straight-out patterns, and an overhead break pattern was also being added, which would resemble a circuit track but with an extended leg. These paths would be used to model A-10s, C-130s, and other military aircraft based on historical data.

Mr. White then described how operational forecasts were derived. The model's baseline year was 2025, but since full 2025 data was not yet available, the team had used 2024 radar data and scaled it using the FAA's Terminal Area Forecast (TAF). This method allowed them to estimate total operations by category, air carrier, air taxi, general aviation, and military, and that breakdown would inform the fleet mix, runway utilization, and overall activity assumptions.

At this point, Mr. Rineer interjected to mention that engine run-up operations were performed during the monitoring period by Grandview Aviation, which has since ceased operations at the airport. He said those run-ups should be included in both the base and future-year models. Mr. White agreed and noted where the run-up locations were mapped. Mr. Rineer added that the team had originally planned to define a run-up area with Grandview's input, but the operator left before that could happen. He suggested modeling run-up activity in front of the hangar where those operations had previously taken place. Mr. White said he would make sure that was captured.

Mr. White continued, stating that for the base year 2025, the project team would model approximately 89,000 operations, or approximately 245 average daily operations. That number would increase in future years to approximately 95,000 by 2035. He displayed the modeled runway use data for both the base and future years. For arrivals and patterns, Runway 33 (west flow) would be used 54 percent of the time and Runway 15 (east flow) would be used 46 percent of the time. For departures, Runway 33 would account for 56 percent of departures and Runway 15 would account for the other 44 percent. These figures were derived directly from radar data and would be used for all future-year scenarios.

Mr. Jim Merritt mentioned a previous statement from Mr. Harold Fowler suggesting that when trees were cleared from the north end of the runway, the operation split would become more balanced, closer to 50/50, and asked if that was accurate. Mr. Kevin Clarke responded that he did not believe it would significantly affect operational patterns. He said that while removing the trees could increase the usable runway length from 7,000 to 8,000 feet, it would not alter air traffic control practices or pilot preferences, which were still largely dictated by wind and operational efficiency. The main change, Mr. Clarke said, would be that aircraft could take off or land slightly farther north, which could help them achieve greater altitude earlier, possibly benefiting areas like Long Beach Estates by reducing low-altitude overflights.

Returning to the presentation, Mr. White gave a more detailed look at the fleet mix, starting with the 2025 base year. He described the air carrier category as including larger commercial aircraft, such as 737s, but emphasized that these would only appear as charters at Martin State, not as regular service. Air taxis, he said, were small business jets flown on-demand. General aviation encompassed everything else that wasn't military or commercial, such as corporate jets, private pilots, and helicopters, among others.

Mr. Hock asked for clarification on what was included in the general aviation count, specifically whether it included general aviation jets or only small propeller planes. Mr. White said the 89,000 operations included all aircraft types. The team clarified that general aviation included both jets and propeller aircraft that weren't classified as air carriers or military. He said the air carrier category included aircraft like chartered Southwest or Delta flights, while air taxis were things like privately chartered Embraer jets. Ms. Hanrahan added that their modeling included every type of aircraft that flew in or out of Martin State Airport in 2024, with exact aircraft type data.

Ms. Kim Fry expressed concern upon hearing the mention of 737s, asking whether Martin State currently had contracts with any air carriers. Mr. Rineer responded that Martin State Airport is not a Part-139 airport like BWI and was therefore not certified for scheduled commercial service. Any commercial flights were charters and were extremely rare. Ms. Hanrahan confirmed there were five air carrier operations in 2024. A 737 had landed at Martin State recently, but it was a chartered flight, possibly for a sports team, which was an infrequent occurrence, and the airport is not designed to support commercial service. When someone asked for a charter count, Mr. Rineer confirmed again that there were five air carrier operations in 2024.

Mr. White transitioned into the runway utilization breakdown by aircraft category and time of day. He showed the data split into day and night operations, including circuits. Ms. Hanrahan noted that this section had been emailed out in advance due to the detailed data tables. Mr. Rineer pointed out that runway use is influenced by wind, not just runway length or nearby obstacles. Ms. Hanrahan emphasized that runway utilization was broken down not just overall, but by category, day arrivals, night circuits, and so on, to ensure that DNL values accurately reflected how and when aircraft were operating. She reminded the group that "night" in the model was defined as 10 PM to 7 AM.

Mr. White continued through additional charts for air taxis, general aviation, and military aircraft, stating that for military aircraft, radar data wasn't available due to safety restrictions, so modeling assumptions had to be applied. He then discussed other model inputs like long-term weather averages and terrain.

When he got to the 2030 model assumptions, Mr. White noted that operations were projected to increase slightly and that the only change to tracks would be the inclusion of a runway shift. Mr. Merritt asked why military aircraft were still included in 2030 modeling if A-10s had left and there were no future plans for fixed-wing military operations. Ms. Hanrahan explained that although the base wouldn't host fixed-wing units, military aircraft might still operate at the airport. Mr. White gave the number as 1,700 operations. Mr. Clarke added that although the A-10s had left, there was still some effort underway to bring new aircraft in, and that military presence at Martin State Airport wasn't necessarily over.

The discussion then shifted toward noise propagation over water and whether the model captured how sound might carry across Middle River. Mr. Hock raised the concern, arguing that trees and land absorb sound, but water reflects it, potentially increasing impacts on communities across the river. Ms. Hanrahan confirmed that the modeling software accounts for over-water reflection and said noise is still modeled over a wide geographical area. She emphasized, however, that 65 dB DNL contours, the focus of the regulatory analysis, typically do not extend far from the airport property at Martin State.

Mr. Hock requested that the model include points across the river so that actual noise levels could be compared now and in the future. Ms. Hanrahan agreed this was possible and said they could place model points wherever needed. Mr. Merritt said having those numbers would be useful in future SAC meetings to track change over time. He asked to pull up the map showing noise contours and pointed out that the northern lobe seemed to extend farther than the southern one, which seemed odd given the population on the south end. Ms. Hanrahan acknowledged that the contours would not be perfectly symmetrical and said that runway use and aircraft mix dictated the contour shape.

ANZ Land Use
Inventory

Mr. Rineer introduced the topic of land use by explaining that the ANZ Land Use Inventory is a key element of the update process. The goal of this component, he said, is to assess how current land use and zoning aligns with projected noise exposure contours and to identify any instances of incompatible development. Mr. Rineer emphasized that this work is intended to inform future policy guidance and collaboration with Baltimore County to prevent land use conflicts near Martin State Airport.

Bruce
Rineer

Mr. White elaborated that the modeling and analysis help determine whether current development patterns are consistent with the FAA's guidelines on land use compatibility in noise-impacted areas. He noted that Martin State is the second-busiest general aviation airport in Maryland, with a runway capable of handling more than 40 operations per hour. While the airport has not experienced significant development pressure to date, the land use inventory helps ensure that future growth is planned in a way that avoids placing sensitive uses, like residences or schools, too close to high-noise areas.

Mr. Rineer added that while the modeling data provides the technical foundation, the real aim of the land use inventory is to work with local partners to minimize future conflicts. He said that in past cases, coordination with planning agencies have helped prevent the introduction of incompatible new uses. He concluded that the inventory is not just a regulatory task, but a planning tool meant to benefit the long-term relationship between the airport and its surrounding communities.

Noise
Abatement Plan
(NAP)

Mr. Rineer then transitioned into a discussion of the NAP, noting that while the plan is voluntary, it plays a significant role in promoting noise-conscious flying behaviors. He explained that the current NAP, updated in 2020, includes recommended procedures for different types of aircraft. These include altitude minimums and turn restrictions aimed at minimizing overflight noise in nearby communities.

Bruce
Rineer

He detailed several of the plan's key guidelines: fixed-wing aircraft are encouraged to reach 1,000 feet before initiating any turns; turbine-powered aircraft are asked to reach 1,500 feet; helicopters should maintain a minimum of 500 feet when departing or arriving; and aircraft on arrival should remain at the highest possible altitude until initiating final approach. Instrument Flight Rules (IFR) traffic, he noted, follows published procedures that are less flexible but still within the scope of the plan's recommendations.

During the discussion, several SAC members raised questions about the effectiveness and enforceability of these procedures. One participant asked whether Visual Flight Rules (VFR) arrivals could fly at higher altitudes to further reduce noise. Mr. Rineer responded that this is something they could evaluate further, especially by studying pilot behavior and approach starting points.

Mr. Merritt asked whether aircraft could be required to use the full runway length for takeoffs to avoid steep climbs over water. Mr. Clarke responded that this is already being addressed through the design of a new parallel taxiway, which will allow aircraft to stage from the very

end of the runway. He noted that this change should help reduce the low-altitude noise footprint over communities like Long Beach Estates.

Another participant inquired whether the runway extension would lead to increased traffic. Mr. Clarke clarified that the purpose of the extension was to improve operational efficiency and safety, not to increase airport capacity. He emphasized that any significant increase in operations would require separate planning and likely another round of environmental review.

Further questions touched on aircraft noise characteristics. Mr. Merritt asked if twin-engine aircraft were louder than single-engine planes, to which the team acknowledged, noting they typically have more power and climb performance. Another member asked whether piston aircraft were louder than modern jets. Mr. Rineer said that in many cases, older piston aircraft can be louder due to outdated technology.

Responding to questions about oversight, Mr. Rineer confirmed that all aircraft undergo routine FAA inspections and that any safety violations are flagged. He added that flight schools operating at Martin State are limited to three aircraft in the traffic pattern at a time and that touch-and-go landings are not permitted between 10:00 PM and 6:00 AM unless explicitly approved by airport operations.

Mr. Merritt proposed adjusting the allowed start time for operations from 6:00 AM to 7:00 AM to reduce early-morning noise impacts. Ms. Fry followed up by asking when the control tower opens. Mr. Rineer responded that the tower opens at 6:00 AM.

The conversation briefly turned to the new community college aviation maintenance program planned for the airport. While this program would bring more people into aviation-related training, it is unlikely to have a meaningful impact on flight operations or noise levels.

Schedule and
Resources

As the presentation concluded, Mr. Rineer turned the discussion to planning the next SAC meeting. He explained that the project team would be compiling and analyzing the modeling outputs in the coming months, with the goal of presenting draft contours and documentation for review in the fall. In preparation, Mr. Rineer asked attendees to begin thinking about their availability in September and October so the team could begin coordinating a date for SAC Meeting #3.

Bruce
Rineer

Ms. Elsa Arias used the opportunity to ask SAC members to share any standing meeting dates or known conflicts that might interfere with scheduling. She emphasized the team's desire to avoid overlaps with regularly scheduled community meetings. Mr. Rineer clarified that the team was particularly looking at dates in September.

Ms. Hanrahan added that members could send their availability or conflicts by email if they did not have that information on hand during the meeting. Mr. Hock responded that the second Thursday of each month was reserved for his association's general meetings and would be the only time that would consistently conflict. He added that his group does not meet during July or August, which opened more scheduling flexibility in the summer months.

Mr. Rineer confirmed this, asking whether it was the first or second Thursday, and Mr. Hock reiterated it was the second. Another attendee added that the first Tuesday of the month would also pose a conflict for their group. Mr. Rineer repeated these two restrictions to the group, no meetings on the first Tuesday or the second Thursday of the month, to ensure the planning team would avoid those windows when proposing dates.

Ms. Hanrahan reminded the group that all SAC members would receive follow-up emails, including meeting materials and a summary of the discussion would be posted on the website, and encouraged anyone with additional scheduling notes to reach out directly. Mr. Rineer closed the topic by thanking everyone for their input and reaffirming the team's commitment to maintaining open communication as they transitioned into the next phase of work.

Q&A and Open
Discussion

At the conclusion of the formal meeting, the floor was opened for additional questions.

Rhea
Hanrahan

- Mr. Merritt asked whether the public workshop would be separate from SAC Meeting #3. Bruce Rineer confirmed that the public workshop would be a separate event from the third SAC meeting. The SAC meeting would be held with committee members, while the public workshop would be open to the broader community for feedback.
- Ms. Fry and Mr. Merritt engaged in a discussion about identifying the most noise-sensitive areas in the community using the heat map from the presentation. Mr. Rineer encouraged members to use tools like Google Maps to define sensitive zones, which could help in developing preferred flight patterns that minimize impacts on areas like Bowley's Quarters and Wilson Point.
- Mr. Merritt referenced Long Beach Estates as a particularly sensitive area based on the flight pattern screenshots he previously shared. Mr. Rineer acknowledged the point and used the heat map to help visually locate the area. Ms. Fry

supported the identification and said the map was a helpful visual tool.

- Mr. Hock and Mr. Merritt commented on the use of flight paths over less populated areas like parks or waterways to reduce community impact. Mr. Rineer agreed that redirecting patterns over low-density areas could help reduce complaints and suggested that the team could work with flight schools to explore alternate routing. Mr. Merritt also pointed out the potential benefit of utilizing waterways to reduce overflight impacts.
- Mr. Hock raised concerns about helicopters flying over Wilson Point. Mr. Joseph Ireton responded that the community generally understands the presence of helicopters and accepts them as necessary. Mr. Jeff Kyger added that law enforcement helicopters prioritize emergency responses and do not tend to raise complaints, except for specific operations like mosquito spraying, which can fly low. Mr. Brandon Branham said that pilots are encouraged to avoid neighborhoods whenever possible, but emergency situations sometimes require direct and fast routes. Mr. Ireton agreed, adding that police and medical flights are necessary operations. Mr. Rineer mentioned that most complaints about police helicopters tend to relate to return flights rather than outbound emergency runs.
- Mr. Rineer clarified that there is no longer an active helicopter training school at Martin State, so helicopter pattern traffic is now limited. Ms. Hanrahan added that the modeling still includes some helicopter pattern activity to ensure the full range of operations is accounted for.
- Ms. Fry asked whether the “500 MSL” label for helicopters indicated a required departure altitude. Mr. Ireton responded that while helicopters aim to reach a pattern altitude, they are not designed to climb vertically and must depart forward. A 500-foot altitude is a general target, but it is not always feasible.
- Ms. Fry asked whether helicopters could fly lower than fixed-wing aircraft to maintain separation. Mr. Ireton replied that helicopters sometimes do fly patterns but not often, and that separation is maintained for safety reasons.

- Ms. Marsha Ayres asked if helicopter activity occurred on weekends and late at night. Mr. Ireton answered that training is required but rarely happens after 10 PM and is generally minimal. Ms. Ayres followed up by asking whether helicopters fly over the water and return that way. Mr. Ireton confirmed that the State Police generally avoid flying over Wilson Point, instead turning over the water after takeoff and following river paths.
- Mr. Merritt asked about the rare times helicopters do fly over neighborhoods like Bowley's Quarters. Mr. Ireton clarified that this only happens during bad weather when they must follow instrument approach paths.
- Mr. Hock asked why the flight school had not attended the meeting, despite prior commitments to engage with the community. Mr. Rineer said he wasn't sure of Mr. Fowler's current efforts to involve the schools. The team noted that flight schools had been invited several times, including for the previous meeting, and only one representative showed up in the past. He proposed setting up a separate conversation outside of SAC meetings to discuss concerns and feedback directly. Mr. Merritt supported this idea, noting that a respectful, collaborative approach would likely be more effective than confrontational complaints.
- Mr. Kyger said he had been sent to the meeting with a question from his community regarding a planned charging station at the airport for electric aircraft. Mr. Clarke confirmed that a company called Beta was establishing an electric aircraft charging network along the East Coast, and a station was planned for Martin State. It would be similar to a Tesla charging station and would be located far enough from neighborhoods to avoid disturbance.
- Mr. Kyger asked whether the charging station would generate noise due to cooling fans. Mr. Clarke said the charging station itself would be quiet and wouldn't involve loud cooling fans like those found in industrial battery storage systems.
- Mr. Hock asked where the electricity would come from and raised concerns about the noise produced by fans used to cool battery storage facilities. Mr. Clarke clarified that the airport's

project did not include such large-scale battery storage. However, he acknowledged that companies were exploring nearby properties, including at Martin State, for potential battery storage projects, which would be governed by local permitting and not part of the current aviation study.

- Mr. Rineer added that if flight schools begin transitioning to electric aircraft, the airport would need the infrastructure to support that shift, which could reduce noise levels significantly.
- Mr. Hock expressed concern about lithium-ion battery fires, explaining that once ignited, they're difficult to extinguish and that local fire departments are monitoring these risks closely. Mr. Clarke acknowledged the concern and said it was an important data point for airport planning, though again unrelated to aircraft noise modeling.

Adjournment

With all scheduled topics covered and no further questions, Mr. Rineer thanked the SAC members for their continued involvement and thoughtful engagement. He reiterated that the SAC's feedback is a vital part of the process and expressed appreciation for the evening's discussion.

Rhea
Hanrahan

Mr. Rineer confirmed that the next SAC meeting would be scheduled once the modeling results were compiled and encouraged attendees to keep an eye out for draft materials in the coming months. The meeting concluded shortly after 8:00 PM.

Kayla Woods

From: MDOT-MAA-ANZ
Sent: Tuesday, July 29, 2025 1:14 PM
To: Bruce Rineer
Subject: Thank you for your participation!

Dear Stakeholder,

Thank you for attending the second **Stakeholder Advisory Committee (SAC) meeting for the 2025 Airport Noise Zone (ANZ) Update for Martin State Airport** on June 26, 2025. The Maryland Aviation Administration (MAA) appreciates your input and participation as a stakeholder on this important



committee. Materials from the first and second SAC meetings, including meeting presentations and meeting minutes, is available on the website: [Martin State Airport Noise Zone - Maryland Aviation Administration](#). The most recent Noise Abatement Plan (NAP) can be viewed here: [Noise Abatement - Martin State Airport](#).

Details concerning the Third SAC meeting and the Public Information Workshop, both anticipated to occur in the Fall of 2025, are forthcoming.

If you have questions about the ANZ process, please email Bruce Rineer at BRineer@bwiairport.com. If you have questions or concerns related to the logistics of the upcoming meetings, contact the MAA Outreach Team at

240-200-5176 or MDOT-MAA-ANZ@assedollc.com.

Sincerely,

Bruce Rineer, Manager
Noise Program Section
Office of Environmental Compliance and Sustainability
Maryland Aviation Administration



Kayla Woods

From: MDOT-MAA-ANZ
Sent: Friday, September 5, 2025 3:55 PM
To: Bruce Rineer
Subject: Stakeholder Advisory Committee 3 Invitation - Airport Noise Zone (ANZ) Update for Martin State Airport
Attachments: 2025_09-05 MAA MTN ANZ SAC 3 email letter.pdf

Good afternoon,

The Maryland Aviation Administration (MAA) is in the process of updating the **2025 Airport Noise Zone (ANZ)** for **Martin State Airport**, and we are seeking input from key stakeholders like you!

Your participation is essential to this process, and we appreciate your engagement. Please find attached the invitation with details about the upcoming **Stakeholder Advisory Committee (SAC) Meeting 3**. You also received a formal invitation in the mail.

Date: **Thursday, September 25, 2025**

Time: **6:00 to 8:00 PM**

Location: **Martin State Airport, Hangar 4; 701 Wilson Point Rd, Baltimore, MD 21220**

To RSVP, register online here: [MTN ANZ Eventbrite](#)

If you have any questions, feel free to contact our Outreach Team.

Regards,

Bruce Rineer, Manager
Noise Program Section
Office of Environmental Compliance and Sustainability
Maryland Aviation Administration



MAA MTN ANZ SAC 1 Reminder Emails:

(sent to all who RSVP'd on 09/19/2025 with readahead material included)

Good afternoon,

Thank you for registering for next week's Stakeholder Advisory Committee (SAC) meeting to discuss the **Martin State Airport Noise Zone (ANZ) Update**. Readahead material for this event is attached.

Meeting Details:

Thursday, September 25, 2025, from 6:00 PM – 8:00 PM

at Martin State Airport, Hangar 4 – 701 Wilson Point Rd, Baltimore, MD 21220

Thank you for your participation in shaping this update and ensuring it reflects the needs of the impacted communities.

If you have any questions, please contact our Outreach Team at 240-200-5176 or MDOT-MAA-ANZ@assedollc.com.

We look forward to working with you!

Regards,

Bruce Rineer,

Manager Noise Program Section

Office of Environmental Compliance and Sustainability

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>





SIGN IN SHEET
Martin State Airport (MTN)
Airport Noise Zone Update
Stakeholder Advisory Committee (SAC 3)
Date: September 25, 2025



NAME	ORGANIZATION/NEIGHBORHOOD	EMAIL ADDRESS	ZIP CODE	HOW DID YOU HEAR ABOUT THIS MEETING?
Dewitt, Andrew	175 th OSS A-1 Guard	andrew.dewitt andrew.dewitt.3@us.af.mil		☐ Web ☒ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
Pat Hook	HAWTHORNE	pjhook71@aol.com		☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
Jim McCreath	Long Beach	JimMcCreath@comcast.net	21220	☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
				☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
				☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
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				☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:

NAME	ORGANIZATION/NEIGHBORHOOD	EMAIL ADDRESS	ZIP CODE	HOW DID YOU HEAR ABOUT THIS MEETING?
Jeff Kyger	W.D.C.I.A.	jkyger62@gmail.com	21220	☐ Web ☒ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
Harold A. Fowler	MTAA	h.fowler2@martinstateairport.com	21220	☐ Web ☒ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
JOE IRETON	MSPAC			☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
BRANDON BRONHART	BGOOD			☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
				☐ Web ☐ Email ☐ Social Media ☐ Family/Friend ☐ DPW Newsletter ☐ Other:
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Airport Noise Zone Update Stakeholder Advisory Committee

Meeting #3
Martin State Airport

September 25, 2025
6:00 PM – 8:00 PM

1

1

Welcome to Martin State

Safety Briefing

- Follow emergency exits
- Call 911
- Assist those who need assistance
- Be sure to take a head count during the emergency event
- Nearest AED – #4 (Hangar 5)
- Nearest Fire Extinguisher – Room 527 (Hangar 5)
- Accountability Site: Parking lot outside of Hangar 4
- Always report any hazards in the meeting room



Source: [MTN State Airport Photo Gallery](#)



2

2

Agenda

- Welcome and Introductions
- SAC Meeting #2 Recap
- Noise Contours and Land Use
- Noise Abatement Plan (NAP)
- Schedule and Resources

3

3

Meeting Facilitation

The meeting facilitator is responsible for ensuring SAC meetings:

- Run efficiently, respectfully, and effectively
- Focus on the published agenda
- Provide appropriate opportunities for all members to participate
- Result in consensus conclusions to the maximum extent feasible
- Are documented through preparation of accurate meeting notes

4

4

Introductions

- Maryland Aviation Administration (MAA) representatives
- Stakeholder Advisory Committee (SAC) members
- Consultant team
- Opening remarks



Welcome and Introductions

5

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SAC Meeting #2 Recap

4

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ANZ Update Scope and Process

- Form and engage with Stakeholder Advisory Committee (SAC)
- Prepare base year, 5-year, 10-year forecast noise contours
- **Compile ANZ (composite of the three contour sets)**
- Conduct land use inventory within ANZ
- **Review existing Noise Abatement Plan (NAP)**
- Conduct public hearing/workshop
- Update Code of Maryland Regulations (COMAR)



SAC Meeting #2 Recap

7

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ANZ Study Update

The ANZ update process includes status review of the NAP.

Airport Noise Zone (ANZ)	Noise Abatement Plan (NAP)
Provides the means to identify and control incompatible land development around Martin State Is a composite of the farthest extents of the annual Day-Night Average (DNL) contours for each of the study years (2025 base, 2030 and 2035 forecast)	Prescribes measures to monitor, reduce, and/or eliminate incompatible land use areas within the ANZ to the extent possible while maintaining efficient airport operations

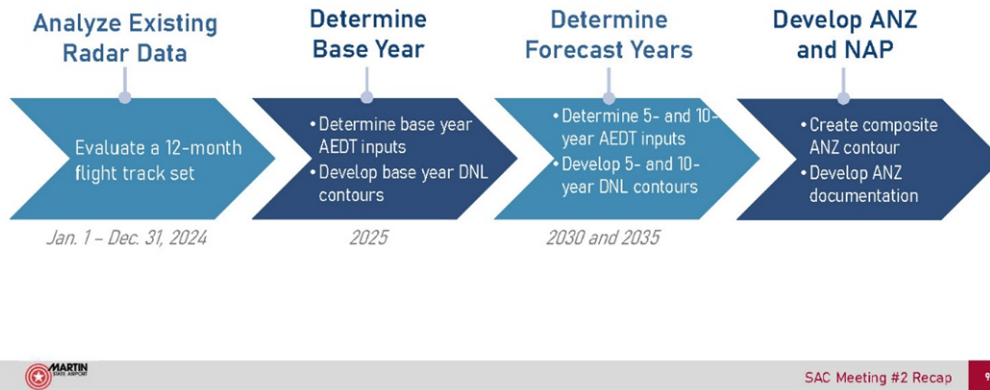


SAC Meeting #2 Recap

8

8

ANZ Noise Modeling Process



9

State Law and Regulations

Transportation Code	Code of Maryland Regulations (COMAR)
Noise Zone Regulations; Part I The purpose of this subtitle is to: (1) Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems; and (2) Protect the health and general welfare of the occupants of land near airports.	Chapter 11.03.03 Defines the prediction method to be used to develop 'noise contours of equal noise exposure' (subject to the approval of the Executive Director) Provides direction for development of contours, including 5 and 10 year, plus cumulative condition, provides methods for determination of impacted land use areas, and direction on noise abatement plans.
Noise Zone Regulations; Part II Requires assessment of the noise environment, existing projected future use, following procedures the Executive Director establishes, delineates a "noise zone", requires development of a noise abatement plan - every five years	Section 11.03.03.05 Provides a process for permits for construction within the Noise Zone Surrounding a State-Owned Airport

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Noise Model Inputs Summary

- Airport Layouts
 - 2025 (base year), 2030 (five-year), 2035 (ten-year)
- Operations
 - Counts, fleet mix, runway use, flight tracks, runups
- Weather and Terrain



SAC Meeting #2 Recap

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SAC Responsibilities

- **Contribute to study inputs**
 - Discussion and feedback at SAC meetings
 - Provide input, advice, and guidance related to Noise Abatement Plan
 - understand ANZ effects on stakeholders
- **Review modeling assumptions**
 - Base year and forecasts
- **Review analysis results**
 - Base, 5-year, and 10-year contours
- **Review documentation**
 - NAP and Draft ANZ document
- **Provide two-way communication between the SAC and their organizations / constituents**
 - Share information with your neighbors and organizations
 - Spread the word about future opportunities for public feedback

MAA will respect and consider SAC input but retains overall responsibility for the Martin State ANZ update.



Stakeholder Advisory Committee

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Land Use Compatibility

- Assemble and review land use, zoning, and population data
- Identify local land use policies referring to compatibility with airport operations
- Create existing land use maps
- Identify noise sensitive sites (churches, schools, etc.)
- Following contour development, survey and confirm use within the 65 DNL contour

Per **11.03.03.03** in COMAR, all land uses are compatible with aircraft noise exposure for DNL less than 65 dB.



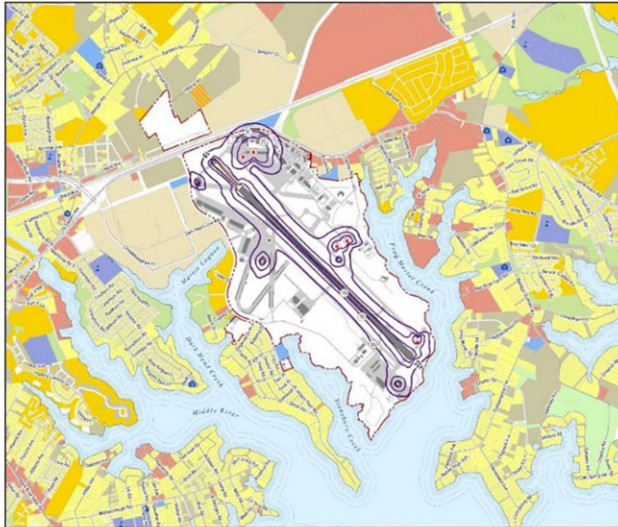
Noise Contours

- 2025 Base Year Noise Contour
- Forecast Contours
 - Five-Year 2030 Forecast Noise Contour
 - Ten-Year 2035 Forecast Noise Contour
- 2025 ANZ Noise Contour



Base Year (2025) Contours

- Total annual operations: 89,489
- Total area: 283 acres
 - Majority (97% / 278 acres) is on airport property
 - Only 5 acres (3%) off airport within the 65–70 dB range
 - Higher noise levels (70–75 dB and >75 dB) fall entirely on airport property
- No residential population or housing units are affected



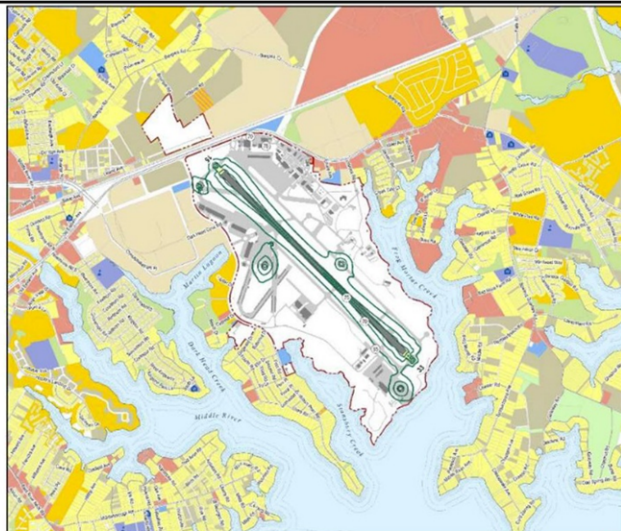
ANZ Contours and Land Use

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17

Five-Year (2030) Contours

- Total annual operations: 92,788
- Total area: 172 acres (down from 283 acres in 2025)
 - 99% of area on airport property (>1 acre off airport in 65–70 dB range)
 - Higher noise levels (70–75 dB and >75 dB) are fully contained on airport property
- No residential population or housing units affected



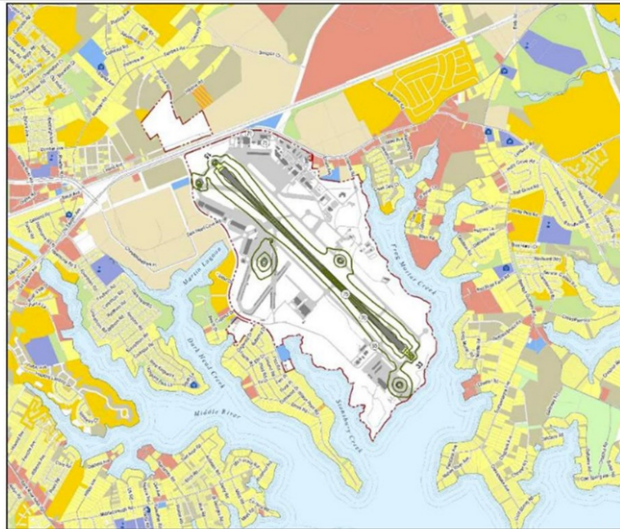
ANZ Contours and Land Use

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18

Ten-Year (2035) Contours

- Total annual operations: 95,700
- Total area: 174 acres (similar to 2030)
 - 99% of area on airport property (>1 acre off-airport in the 65–70 dB range)
 - Higher noise levels (70–75 dB and >75 dB) remain fully on airport property
- No residential population or housing units affected



ANZ Contours and Land Use

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2025 ANZ Contours

- Total area: 286 acres
 - Only 5 acres (5%) off airport within the 65–70 dB range
 - Higher noise levels (70–75 dB and >75 dB) remain fully on airport property
- No residential population or housing units affected



ANZ Contours and Land Use

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2025 ANZ and 2020 ANZ Contours Comparison

- Total area: Decrease of 31%
 - 76% decrease of off airport within the 65–70 dB range
 - Higher noise levels (70–75 dB and >75 dB) remain fully on airport property and decrease by 52%
- No residential population or housing units affected



ANZ Contours and Land Use

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Noise Abatement Plan (NAP) Overview

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Noise Abatement Plan (NAP)

Originally adopted in 1984, updated in 1987, reviewed and approved with no changes in 2012. The NAP was reviewed and updated as part of the 2020 MTN ANZ update process in order to accurately reflect current operating conditions at MTN.

NAP Goal: To the extent possible, reduce incompatible land use within ANZ while maintaining efficient airport operations.

General categories of NAP measures:

- Noise abatement elements
- Land use elements

Evaluate current NAP and allow for potential modifications or updates to be made.



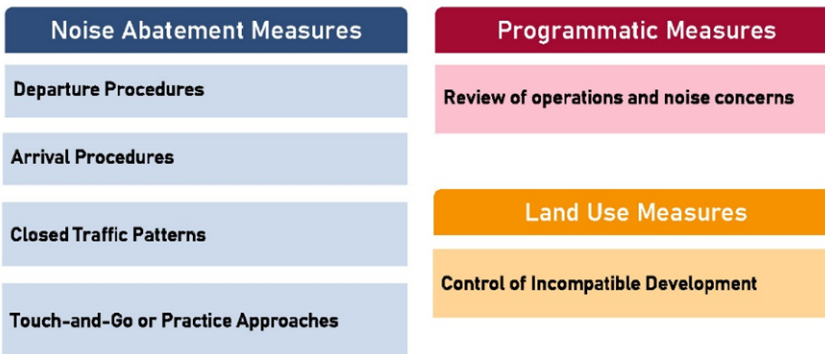
Noise Abatement Plan (NAP)

Noise abatement procedures are voluntary and designed to minimize exposure of residential areas to aircraft noise, while ensuring safety of flight operations.

- Visual Flight Rules (VFR) / Instrument Flight Rules (IFR)
- Departures
- Arrivals
- Closed traffic patterns
- Taxiing aircraft
- Touch and Go and/or Practice Approach Restrictions
- Aircraft Maintenance Engine Run-up Areas



Noise Abatement Plan Measures



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Martin State NAP Caveats

Noise abatement procedures are voluntary.

- MTN NAP is formulated to minimize noise disturbance to neighboring communities while maintaining safe and efficient MTN Airport operations. MAA Division of MTN Airport Operations is responsible for the overall administration of MTN.
- Aircraft may not follow noise abatement procedures if deemed necessary by Air Traffic Control (ATC) or flight crews to maintain operational safety.



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Noise Abatement Plan (NAP)

VFR and IFR Departure Traffic Patterns

- **VFR Piston-engine Aircraft**
 - Runway 15/33 – Unless otherwise instructed by Air Traffic Control (ATC), aircraft fly runway heading to 1000' Mean Sea Level (MSL) prior to turning to the ATC approved on-course heading or crosswind leg of the traffic pattern.
- **VFR Turbine Powered Aircraft**
 - Runway 15/33 – Unless otherwise instructed by ATC, aircraft shall fly runway heading to 1,500' MSL prior to turning to the ATC approved, on-course heading or crosswind leg of the traffic pattern.
- **VFR Helicopter Departures**
 - Unless operating under a Letter of Agreement (LOA) with MTN ATC specifying otherwise, helicopters shall climb to 500' AGL on initial departure heading before turning on-course.
- **All IFR Departures**
 - IFR departures shall be accomplished in accordance with ATC direction or clearance.

Note: IFR departures will be accomplished in accordance with Air Traffic Control (ATC) direction or clearance.



Noise Abatement Plan (NAP)

VFR and IFR Arrivals and Traffic Patterns

VFR and IFR aircraft approach should, to the maximum extent feasible, maintain the highest practical altitude, commensurate with flight and ATC procedures in order to minimize aircraft noise exposure to communities underlying the final approach courses.



Noise Abatement Plan (NAP)

Closed Traffic Patterns

A left-hand traffic pattern shall be used at MTN unless otherwise directed by ATC. Piston fixed-wing aircraft should fly runway heading until reaching 1,000' MSL prior to turning to the crosswind leg of the traffic pattern. Turbine aircraft should fly runway heading until reaching 1,500' MSL prior to turning to the crosswind leg of the traffic pattern.

Traffic pattern altitudes are:

Fixed Wing	Piston engine	1,000 ft MSL
	Civil turbine and military turboprop	1,500 ft MSL
	Military Jet	2,000 ft MSL
Rotary Wing		500 ft MSL



Noise Abatement Plan (NAP)

Touch-and-Go or Practice Approaches

No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance staff.

FAA Weight Class	Description	Weight	Limitation
Small	Small Single Engine/Twin Engine Aircraft, Helicopters, and Transient Military (e.g. Cessna 172, Piper Cherokee)	12,500 lbs. or less	No restrictions
Medium	Medium Aircraft and Transient Military* (e.g. military fighter jets, Learjet 35, Bombardier CRJ- 200LR)	Between 12,500 and 41,000 lbs	Limit of two practice approaches
Large	Large Jet/Large Commuter/757/Heavy Aircraft	More than 41,000 lbs.	Practice approaches and landings are not authorized without prior permission from MTN Operations and Maintenance staff.

* Military aircraft shall be limited to two practice landings/take-offs or approaches unless additional operations are approved by MTN Operations and Maintenance staff.
FAA Aircraft Weight Class - https://aspm.faa.gov/aspmhelp/index/Weight_Class.html



Noise Abatement Plan (NAP)

Aircraft Maintenance Engine Run-Up Areas

Aircraft maintenance engine run-ups are to be accomplished only in areas designated by the Chief, MTN Operations & Maintenance in accordance with MTN Tenant Directive 200.2.



Noise Abatement Plan (NAP)

Other Elements

- Noise Concerns can be reported via telephone hotline and WebTrak
- Zoning Permit and Appeal Procedure
 - MAA regulates land use within the Airport Noise Zone.
 - Anyone desiring to construct or modify a structure or land use is required to obtain an Airport Zoning Permit.
- MDANG Noise Barriers
 - MDANG erected two noise barriers, both located between the MDANG's engine maintenance area and the homes northeast of the Airport.



Additional Initiatives

- Airfield signage
- Wall posters in Hangar 4 hallway
- Flyers and Posterboards Visuals
- Additional NAP training along with airfield driving training



Noise Abatement Plan

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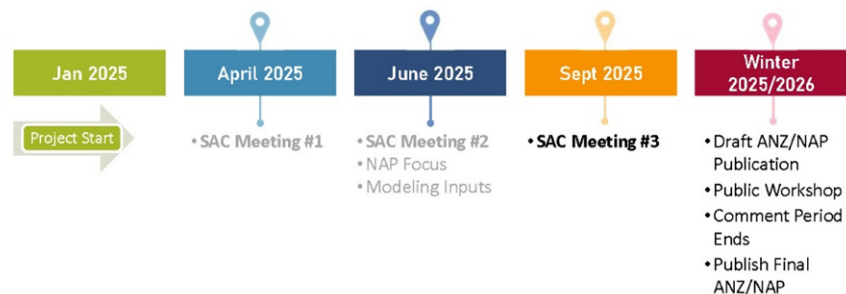


Schedule and Resources

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Proposed Project Schedule



Schedule and Resources

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Certifying the ANZ

- Current MTN ANZ
 - Certified in 2021
 - Referenced in COMAR Section 11.03.02.10
 - Incorporated by reference in COMAR Section 11.03.01.01-1(B)(5)
- Final 2025 MTN ANZ will be updated in COMAR
- Updating COMAR requires a regulatory process governed by the Maryland Administrative Procedure Act (APA)
- The Maryland Aviation Commission (MAC) is required to approve regulations prior to their adoption by the Executive Director of MAA.



Schedule and Resources

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Project Contacts

Project Primary Contact

Email: MDOT-MAA-ANZ@assedollc.com

Phone: (240) 200-5176

MAA Project Manager

Bruce Rineer, Manager, Office of Environmental Compliance and Sustainability,
Noise Section BRineer@bwiairport.com

ANZ Project Managers

Tyler White, Principal Consultant, twhite@hmmh.com

Rhea Hanrahan, Director, AES, rhanrahan@hmmh.com



Schedule and Resources

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Additional Resources

2020 Martin State ANZ

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>

WebTrak

<https://webtrak.emsbk.com/bwi3>



Schedule and Resources

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Wrap Up

- SAC member questions, comments, and discussion
- Public workshop
 - Winter 2025/2026



Schedule and Resources

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Thank You.

Martin State Airport



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Dear MTN SAC Member,



Thank you for attending the third **Stakeholder Advisory Committee (SAC) meeting for the 2025 Airport Noise Zone (ANZ) Update for Martin State Airport** on September 25, 2025.

The Maryland Aviation Administration (MAA) appreciates your input and participation as a stakeholder on this important committee. Materials from the SAC meetings are available on the website: [Martin State Airport Noise Zone - Maryland Aviation Administration](https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/). The most recent Noise Abatement Plan (NAP) can be viewed here: [Noise Abatement - Martin State Airport](#).

Details concerning the upcoming Public Information Workshop followed by the Open Comment Period anticipated to occur in early 2026, are forthcoming

If you have questions about the ANZ process, please email Bruce Rineer at BRineer@bwiairport.com. If you have questions or concerns related to the upcoming meetings, please contact the MAA Outreach Team at 240-200-5176 or MDOT-MAA-ANZ@assedollc.com.

Regards,

BWI Marshall and Martin State Airport Noise Zone Outreach Team

Phone: 240-200-5176

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>



**Martin State Airport
Airport Noise Zone (ANZ) Update
Stakeholder Advisory Committee (SAC) Meeting #3**

MEETING MINUTES

Thursday, September 25, 2025, 6:00 p.m. – 8:00 p.m.

Martin State Airport, Hangar 4
701 Wilson Point Rd
Baltimore, MD 21220

Discussion Item	Notes	Presenter
Safety Briefing	Mr. Bruce Rineer opened the meeting with a brief safety overview, specifically of Hangar 4 meeting space at Martin State Airport (MTN). He identified the location of the Automated External Defibrillator (AED), and the locations of fire extinguishers. Mr. Rineer instructed attendees to exit the building promptly and proceed directly to the designated accountability area, located in front of the hangar.	Bruce Rineer
Welcome and Introductions	Following the safety briefing, Mr. Rineer welcomed participants to the third Stakeholder Advisory Committee (SAC) meeting for MTN Airport Noise Zone (ANZ) Update. He briefly reviewed the evening's agenda, noting that the meeting would cover a short summary of the second SAC meeting, a presentation of the latest noise contour modeling and land use analysis, a discussion of the Noise Abatement Plan (NAP), and an overview of certification and next steps. He recognized Ms. Rhea Hanrahan with HMMH as the meeting facilitator. Mr. Rineer then invited introductions from attendees around the room. The SAC included representatives from MAA, including leadership and staff from the Noise Program, HMMH and Assedo Consulting members, airline industry representatives, MTN airport tenants, the Chief of Airport Operations and Maintenance for MTN, community association representatives, and more.	Bruce Rineer
SAC Meeting #2 Recap	Mr. Rineer provided a brief recap of SAC Meeting #2, emphasizing that the purpose of the ongoing update is to comply with the Code of Maryland Regulations (COMAR), requiring two parts: the development of updated the ANZ contours and the NAP. He reminded members that the modeling process tracks flights for 12 months and is processed	Bruce Rineer

through the FAA's Aviation Environmental Design Tool (AEDT) model, which generates the noise contours. These contours are developed for a base year (2025), a five-year forecast year (2030), and a 10-year forecast year (2035). The inputs that go into these calculations include operation counts, the fleet mix, runway use, flight tracks, run-ups, and weather and terrain conditions. He described this as a process required by state law, but also as something that MAA and MTN desire to complete.

With this context established, Mr. Rineer transitioned to the next agenda item, handing the discussion to Mr. Tyler White of HMMH to present the ANZ contours and land use analysis.

ANZ Contours
and Land Use

Mr. White, Principal Consultant with HMMH, presented the updated ANZ contours and accompanying land-use analysis. He began by reminding the group that ANZ is defined in COMAR and serves as the regulatory framework for managing and preventing incompatible land use around the airport.

Tyler
White

Mr. White displayed and described the 2025 base year contour. It represents approximately 89,000 annual operations and the 65-decibel (dB) DNL contour remains largely on airport property, with a small percentage extending off the property due to A-10 operations and maintenance run-ups. The portion of the contour that exceeds airport property covers a parking lot northeast of the airport, and no residential areas are within the contour.

Mr. Andrew Dewitt from Maryland Air National Guard (MDANG) added that the A-10 operations are no longer a factor, as they have stopped. Mr. White provided clarification that this knowledge is reflected in the future contours. The A-10 operations are modeled for the 2025 base year only.

Mr. White continued by displaying and describing the 2030 five-year contour. The 2030 65 dB contour would be smaller than the base year due to the absence of the A-10. Approximately 93,000 annual operations are represented, and no residential properties are anticipated to be impacted by noise levels at 65 DNL or higher.

Moving to the 2035 ten-year contour, Mr. White shared that the 2035 contour is slightly larger than the 2030 contour, with annual operations increasing to 96,000 and no residential properties affected.

When the outer boundaries of the three scenarios were combined, they form the 2025 ANZ composite contour, encompassing a total of 3,802 acres. No residential areas lie within the composite contour. This composite contour forms the official ANZ boundary that will be incorporated into COMAR.

He then compared the 2025 ANZ with the previous 2020 ANZ, highlighting a 31% decrease in the overall area of the contour, with the major changes happening at the end of the runway. The reduction is largely due to modeling fewer A-10 operations than were modeled in the 2020 ANZ update and modifying arrival procedures in collaboration with the MDANG.

Ms. Hanrahan paused to invite attendees to ask any questions before proceeding with a review of the NAP. There were no questions.

Noise
Abatement Plan
(NAP)

Mr. Rineer resumed the presentation to review the NAP, explaining that MTN has maintained a robust set of noise abatement measures since the 1980s. The NAP was originally adopted in 1984, updated in 1987, reviewed in 2012, and then updated again in 2020.

Bruce
Rineer

He reminded the committee that the goal of the NAP is to reduce incompatible land use inside the noise zone to the greatest extent possible while maintaining safe and efficient airport operations. He shared that at MTN, a NAP is not required by COMAR because the ANZ contours do not extend far beyond the airport property, resulting in no incompatible development. MAA and MTN acknowledge the strategic importance of a NAP and have therefore continued to maintain one. He emphasized that the NAP guidelines are voluntary, but that it is good practice to follow them. He shared that the NAP includes procedures for Visual Flight Rules (VFR), Instrumental Flight Rules (IFR), departures, arrivals, closed traffic patterns, taxiing aircraft, touch-and-go's, and aircraft maintenance run-ups.

He then began describing the operational measures in detail.

VFR and IFR Departure Traffic Patterns guidelines are as follows:

- VFR Piston-engine aircraft shall fly runway heading 1000 feet mean sea level (MSL) before turning.
- VFR Turbine Powered Aircraft shall fly runway heading to 1,500 feet MSL before turning.
- VFR Helicopter Departures shall climb to 500 feet above ground level (AGL) on initial departure heading before turning on-course, unless operating under a Letter of Agreement (LOA).
- All IFR departures shall adhere to Air Traffic Control (ATC) clearance.

Mr. Jim Merritt requested an opportunity to review several of the shared operational guidelines. He reminded attendees that Mr. Nikolaus Wagenfeiler, representing ATC, had addressed airport operations during the first SAC meeting. Mr. Merritt reiterated the recommendation to direct all pilots to taxi to the end of Runway 15

prior to departing, thereby ensuring that aircraft reach an altitude of 1,000 feet before entering the Long Beach residential area.

He emphasized that community concerns are not solely driven by the volume of operations, but rather by the altitude of aircraft as they traverse the Long Beach neighborhood. Furthermore, he noted that Mr. Wagenfeiler had proposed a potential modification to existing flight paths—suggesting that, instead of maintaining a straight trajectory, aircraft could turn over the water and ascend to 1,000 feet above Frog Mortar Creek and Middle River, thereby minimizing overflight of residential zones.

Mr. Merritt inquired whether these considerations would be reflected in the forthcoming update to the NAP.

Mr. Rineer responded by noting that the determination is contingent upon both the type of aircraft and prevailing traffic patterns. He reiterated that the current guidelines emphasize that piston aircraft should climb to 1,000 feet AGL before initiating any turns. In contrast to previous procedures, which were often confusing, the updated guidelines included in the 2025 NAP are intended to provide greater clarity and ensure that aircraft consistently reach the prescribed altitude before maneuvering. He further explained that variations in aircraft performance, particularly differences in turn radius, will naturally result in some operational variability. Mr. Merritt responded by sharing that community members typically do not have issues with the jets.

Mr. Harold Fowler, Chief of Airport Operations and Maintenance, mentioned that there had been a discussion about changing the traffic pattern guidelines. He explained that the guidelines that Mr. Merritt is requesting are under the domain of ATC and therefore would not appear in the NAP. The NAP provides guidelines for pilots, which are separate from the guidelines and procedures of traffic and ATC.

In response, Mr. Merritt requested a dedicated meeting to review ATC guidelines in greater detail, emphasizing the importance of ensuring that community members are informed about what constitutes compliance versus deviation. He noted that without transparency and access to these guidelines, residents would be unable to distinguish between acceptable operations and those that fall outside established parameters. He shared that he expected to see guidelines related to traffic patterns reflected in the NAP guidelines. Mr. Fowler agreed to talk with Mr. Wagenfeiler to gather more details about the feasibility of Mr. Merritt's request changes.

Mr. Jim Hock inquired about an update regarding a proposed extension of Taxiway F (Foxtrot), noting that such a change would prevent aircraft

from departing from a mid-runway position and instead require them to start from the full length of Runway 15.

Mr. Fowler stated that the extension of Taxiway F falls outside the scope of the NAP. However, he noted that if Taxiway F is extended, it will reach the edge of Runway 15. He clarified that, if directed by ATC, aircraft may still have the option to begin takeoff from a point other than the full runway length. The current airport configuration includes taxi lanes, which can offer a more practical route for smaller aircraft under certain conditions.

Mr. Merritt emphasized that the aircraft most associated with community concerns are smaller planes, which flight schools frequently operate. This dual association, where instructors work closely with new pilot trainees, takes longer to progress through higher training levels and results in a compounded impact on nearby residents. He noted that this dynamic is a significant source of frustration for the surrounding neighborhoods.

Mr. Fowler noted that the extension of the taxiway is not anticipated within the next three years.

Mr. Dewitt acknowledged that while not a major contributing factor, the departure of A-10 aircraft has reduced some noise activity. However, transient military aircraft, such as the C-17, are still expected to operate periodically, and they are known to generate significant noise.

Mr. Rineer reminded stakeholders that military operations were included in the modeling process. Mr. Merritt added that while residents often enjoy photographing unique or high-profile airplanes, their enthusiasm may wane if such visits become more frequent.

Mr. Fowler clarified that the frequency of these operations is approximately two to three times per month, with a modest increase during the summer season. Mr. Dewitt further noted that fewer than 100 such operations occurred over the past year.

Mr. Rineer concluded by acknowledging that military operations data can be challenging to gather but emphasized that coordination efforts were made to ensure its inclusion in the forecast. Mr. Rineer continued to share the operational measures of the NAP.

- VFR and IFR Arrival Traffic Patterns should maintain the highest practical altitude to minimize aircraft noise exposure.
- During Closed Traffic Patterns, a left-hand traffic pattern shall be used unless otherwise directed by ATC. Piston fixed-wing

aircraft should fly runway heading until reaching 1,000' MSL before turning to the crosswind leg of the traffic pattern. Turbine aircraft should fly runway heading until reaching 1,500' MSL before turning to the crosswind leg of the traffic pattern. He shared that these have not changed at MTN and are generally standard around the country.

- There are no restrictions for small aircraft touch-and-go's. However, medium-sized aircraft are limited to two practice approaches and large jets require prior permission from Mr. Fowler before all practice approaches and landings.
- Aircraft maintenance run-ups are to be accomplished only in areas designated by Mr. Fowler, Chief of Airport Operations and Maintenance, in accordance with MTN's Tenant Directive. Mr. Rineer mentioned that run-ups are rare at MTN. A previous tenant who is no longer at MTN often performed run-ups.

Mr. Rineer shared that noise concerns can be submitted to MAA or the Chief of Airport Operations and Maintenance at MTN. There is a zoning permit and appeal procedure that regulates land use within the ANZ, requiring an Airport Zoning Permit to be acquired by anyone wishing to construct or modify a structure or engage in new land use. MAA grants these permits. Mr. Rineer also shared that the MDANG has a noise barrier located between the MDANG's engine maintenance area and the homes northeast of the airport. He confirmed with Mr. Dewitt that these barriers are still there.

Mr. Rineer continued by sharing additional initiatives, outside of the NAP, that would aid in its implementation.

In addition to the formal NAP, several implementation strategies were discussed to enhance pilot awareness and compliance. Mr. Rineer introduced these ideas, beginning with the installation of airfield signage to alert pilots that NAP guidelines are in effect, and shared examples of potential designs.

Mr. Merritt confirmed that these initiatives are still in the proposal stage and have not yet been implemented but represent promising steps forward. Mr. Rineer confirmed that these initiatives are new, and the purpose is to remind pilots of the NAP.

Mr. Rineer further suggested placing wall posters in hangars outlining the NAP guidelines, as well as distributing informational flyers. He also recommended that Mr. Fowler incorporate the NAP training component into the airfield driving certification training.

Mr. Hock inquired whether these training schools follow a standardized set of regulations during training. Mr. Rineer confirmed that the FAA provides guidelines. Mr. Hock then asked whether a review of the NAP

could be integrated into the beginning of the flight training curriculum. Mr. Rineer responded that while such inclusion cannot be mandated, efforts are underway to make it as accessible and straightforward as possible for schools to adopt.

Mr. Merritt asked whether flight school pilots are required to complete the airfield driver training. Mr. Fowler clarified that while pilots are not required to do so, any instructor operating a vehicle on the ramp must complete this training. He reiterated that there is consideration being given to requiring all airfield drivers to undergo this NAP training.

Mr. Dewitt noted that much of the enforcement of the NAP falls under the purview of ATC, rather than individual pilots or ground personnel. Mr. Rineer agreed but emphasized that pilots and instructors should still be familiar with key guidelines, such as the requirement to climb to 1,000 feet AGL before turning. He added that efforts are being made to provide Mr. Fowler with the compliance performance data through the MAA Noise and Operations Management System (NOMS) to help assess compliance with the NAP, noting that Mr. Royce Bassarab has recently compiled this information.

Mr. Bassarab reported that he had analyzed data from touch-and-go operations to the north (i.e. on Runway 33) during August and found that approximately 90% of aircraft reached or exceeded the 1,000-foot altitude threshold. However, a small number of flight patterns were observed at around 800 feet. Mr. Merritt confirmed that 800 feet falls outside the established guidelines, and Mr. Bassarab concurred.

Mr. Merritt reiterated that community frustration often stems from a small number of aircraft that fail to adhere to these procedures.

Mr. Rineer emphasized that the outreach strategy focuses on ensuring pilots are aware of the NAP guidelines and know where to access them, thereby embedding these procedures into routine operations. The previous NAP is currently available on MTN website, and the updated NAP will also be available on the website.

Mr. Merritt noted that flight schools are generally encouraged to begin operations at 6:00 a.m. During the winter months, they typically delay until 7 a.m. due to limited daylight, but in the summer, they resume the earlier start. He asked whether it would be possible to request a 6:30 a.m. start time instead, citing concerns about early morning noise. He inquired whether such a change would fall under ATC jurisdiction or be addressed within the NAP framework.

Mr. Fowler responded that if such a modification were deemed appropriate, it could be incorporated into the NAP. Mr. Merritt stated that flight patterns, which begin at 6 a.m. during summer months,

occur while many residents are still asleep, contributing to community dissatisfaction.

Mr. Rineer reminded attendees that the NAP serves as a set of voluntary guidelines and cannot be enforced as a mandatory policy. Mr. Merritt acknowledged this but expressed interest in formally documenting the recommendation, noting that written guidelines enhance accountability and transparency. Mr. Rineer added that only a few early morning operations had been recorded.

Mr. Merritt responded that even a small number of disruptive flights can leave a lasting negative impression on the community. Mr. Fowler added that, in relation to proposed signage about the NAP, there are ongoing discussions about including key procedural details directly on the sign. He also noted that the NAP at MTN is in effect 24 hours a day. Mr. Merritt concluded by offering to personally fund the installation of the signs.

Mr. Merritt then asked whether MTN is unique in being surrounded by residential neighborhoods. Mr. Rineer responded that it is not, citing College Park and Montgomery County airports as examples of facilities located in similarly congested and densely populated areas. Mr. Fowler added that during his time at flight school in Salisbury, Maryland, he observed comparable NAP signage posted near the runways. Ms. Hanrahan further contributed that numerous airports in Florida are bordered entirely by residential communities, with no adjacent water bodies available for aircraft to turn over, highlighting that such conditions are common nationwide.

From a military perspective, Mr. Dewitt shared that efforts are ongoing to secure a new aircraft for future operations. He noted that the proposed aircraft would likely be a next-generation fighter jet, which is expected to produce significant noise. He anticipates continued advocacy for its deployment at the airport.

Mr. Rineer added that if such a development were to occur, it would trigger additional environmental assessments, including a noise impact analysis. He emphasized that the MAA would be required to conduct a comprehensive review that considers the introduction of the new aircraft.

Mr. Merritt revisited the point that 8,000 feet of runway is required for the safe operation of an F-35 aircraft. He noted, however, that the airport currently has only 7,000 feet of usable runway available for civilian use.

Mr. Dewitt clarified that the remaining 1,000 feet currently exist but are presently designated for military takeoff operations only. Mr.

Fowler added that while there is an approved plan to extend the usable runway length to 7,400 feet, efforts are underway to further increase that to 8,000 feet.

Mr. Merritt inquired whether there would be opportunities for community input during this process. In response, Mr. Dewitt explained that although the full 8,000 feet of runway physically exists, the portion available for civilian aircraft remains limited. Without additional real estate, that limitation is unlikely to change.

Mr. Bassarab outlined the two-step process required for major airport improvements of this nature. The first step involves updating the airport layout plan, which must be approved by the FAA. That approval may be either conditional or unconditional. A conditional approval would trigger an environmental assessment process, which includes public outreach and community engagement meetings.

Mr. Rineer emphasized that such a process typically spans several years and reminded attendees that no formal agreement had been made at this time. However, he noted that community members may begin to hear discussions about the proposal.

Schedule and
Resources

Mr. Rineer outlined the next steps in the process of updating the ANZ. This includes compiling all relevant information, drafting an initial version of the revised ANZ, and securing approval from the Executive Director of the MAA. Once approved, the draft will be submitted to the Maryland Aviation Commission (MAC). A public meeting will be scheduled for January to solicit additional feedback, after which the proposal will be returned to the MAC for final approval and will proceed through the certification process.

Bruce
Rineer

Mr. Merritt confirmed that, as of now, no substantive changes are anticipated. Mr. Rineer agreed, noting that only a few lines within COMAR would be updated, primarily to reflect the transition to the 2025 regulatory framework, including revised dates and numerical references.

Mr. Rineer then encouraged members of the SAC to reach out to him, Assedo Consulting, or Mr. Fowler with any questions or input they may have. He also noted that the current ANZ documentation is publicly available on both the MAA and MTN websites. Mr. Rineer added that they plan to attend two upcoming Commission meetings, with the first scheduled for November.

Mr. Bassarab clarified that any regulatory update must be presented to the MAC on two separate occasions. The initial presentation is scheduled for November, after which the proposed update must be published in the Maryland Register. This publication serves as the

formal announcement, initiating the timeline for public outreach and engagement. Following this, the regulation will be returned to the MAC for final review, which is tentatively expected to occur in March 2026.

Mr. Fowler noted that MAC meetings are open to the public. In response, Mr. Merritt requested that this information be communicated to members of the SAC.

Mr. Bassarab confirmed that the first MAC meeting will take place on November 12, 2025, while the March 2026 meeting has not yet been scheduled. He reiterated that the timing of the public informational meeting will be determined by the date that the update is published in the Maryland Register.

Ms. Hanrahan assured attendees that all individuals invited to participate in SAC meetings will receive updates regarding the publication of the draft, the public comment period, and other key milestones.

Mr. Merritt requested that the presentation slides be shared with the group. Ms. Hanrahan confirmed that the presentation materials will be posted on the MTN website for public access.

Q&A and Open
Discussion

As the discussion concluded, Mr. Rineer then opened the floor for any final comments. Mr. Merritt reiterated his interest in further discussing the distinctions between NAP and ATC guidelines. He expressed a desire to explore the ATC guidelines in a separate setting, noting that many community members mistakenly believe that the NAP is the only set of operational rules.

Bruce
Rineer

Mr. Fowler clarified that while the NAP exists and can be supported through materials posted on the website, ATC guidelines are entirely separate and governed by different protocols.

Mr. Hock raised the topic of data collection related to NAP compliance, suggesting that individuals who consistently fail to follow the guidelines could be flagged or formally documented based on the available data. Mr. Rineer responded that this concept is still under consideration, acknowledging the significant administrative effort it would require. He noted that discussions are ongoing with Mr. Fowler to determine a practical approach.

Mr. Hock remarked that this was his first time learning about the data report and expressed enthusiasm about its potential as a tool for accountability. Mr. Merritt added that many of the issues may stem from a single pilot trainee emphasizing that human factors play a role in guideline adherence.

Mr. Fowler noted that most of the challenges arise from student pilots. He explained that when a student is struggling with basic flight control,

such as maintaining a straight path, the instructor's focus may not be on ensuring a rapid climb to 1,000 feet.

Mr. Hock concluded by emphasizing that instructors still bear responsibility for enforcing the guidelines and should actively communicate them to student pilots.

Adjournment

Mr. Rineer thanks the committee members for their attendance and participation. With no further questions or comments, the meeting was adjourned a little before 7:00 p.m.

Bruce
Rineer

Appendix D. Maryland Aviation Commission Materials

MAA staff presented a Decision Paper to the Maryland Aviation Commission in November 2025. The November 2025 Decision Paper discussed the update of the Airport Noise Zone (ANZ) and Noise Abatement Plan (NAP). At that meeting, the Maryland Aviation Commission approved the MAA to proceed with the update to the ANZ and NAP.

At the Maryland Aviation Commission meeting in June 2026, MAA staff presented a second Decision Paper, which discussed the results of the ANZ update and summarized the public hearing and the comments received on the ANZ. The Decision Paper recommended approving the adoption of regulations establishing the updated ANZ and revising the NAP. The Maryland Aviation Commission approved the MTN ANZ and NAP as proposed.

Materials presented at the Maryland Aviation Commission meetings are provided in this appendix.

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MARYLAND AVIATION ADMINISTRATION
Decision Paper

Airport Noise Zone and Noise Abatement Plan Update
Martin State Airport

1. SUBJECT/ISSUE

The Maryland Department of Transportation Maryland Aviation Administration (MAA) proposes to update the Code of Maryland Regulations (COMAR) to reflect an updated Airport Noise Zone (ANZ) and Noise Abatement Plan (NAP) for Martin State Airport (MTN). The MAA develops and certifies the MTN ANZ pursuant to the *Maryland Environmental Noise Act of 1974* (See Transportation Article, §§5-805, 5-806, and 5-819, Annotated Code of Maryland). The current ANZ for MTN, certified in 2021, is referenced in COMAR Section 11.03.02.10 - *Certified Martin State Airport (MTN) Noise Zone* and incorporated by reference in COMAR Section 11.03.01.01-1(B)(6).

In accordance with the Annotated Code of Maryland, Transportation §5-201 (b)(2), the Maryland Aviation Commission is required to approve MAA regulations prior to their adoption by the Executive Director.

2. DISCUSSION

Maryland law requires that an assessment of the noise environment created by the operation and projected future use of the airport be regularly undertaken, which includes the delineation of an ANZ and identification of any impacted land use area. An ANZ and NAP were first established for MTN in 1977 and was updated in 1984, 1988, 1996, 2001, 2012 and 2020. The ANZ represents the boundaries for determining incompatible activities or land uses under Maryland law and is used to restrict noise-sensitive development that would be incompatible with the cumulative noise exposure level acceptable for an area.

Airport Noise Zone

The ANZ contour is determined by a composite of three Day Night Average Sound Level (DNL) contours: a base year contour, a 5-year forecast contour (2030), and a 10-year forecast contour (2035). The largest of the three contours in any area around the Airport determines the ANZ. The MTN 2025 ANZ is shown on **Attachment 1**.

The 2025 ANZ encompasses 286 acres, a 30% decrease from the 411 acres contained within the previous ANZ. The 2025 ANZ remains over either the airport (95%) or other compatible land uses (5%), and there are no noise-sensitive land uses within the ANZ. The decrease in size is primarily associated with the deactivation of the Maryland Air National Guard A-10 aircraft. A comparison of the previous and proposed ANZ contours is shown on **Attachment 2**.

Review of NAP for MTN

MAA is required to implement a NAP at MTN if an impacted land use area exists within the ANZ. The MTN NAP prescribes measures to monitor and reduce or eliminate impacted land use areas around MTN to the extent feasible, while maintaining safe and efficient airport operations. The NAP is designed to minimize the noise of aircraft operations within the constraints of the Federal Air Traffic Control System and ensure aircraft safety.

Currently, there are no impacted land use areas within the ANZ for MTN, however, MAA has reviewed the status of the NAP to ensure the existing measures address potential noise concerns. While no changes were made to the NAP, MAA has identified a series of strategies to increase awareness of and compliance with the voluntary measures prescribed in the NAP.

Public Participation

The 2025 MTN ANZ Update includes opportunities for public involvement and participation. A Stakeholder Advisory Committee (SAC) was convened at the onset of the study, which included representatives of stakeholder groups such as tenants, local planning and zoning officials, and representation from communities most affected by airport noise. The SAC was convened three times during the ANZ update process, in April, June, and September 2025 to solicit input, review materials, and provide a means to disseminate study findings. A public meeting and hearing offering the opportunity to provide comment will be held prior to the certification of the 2025 ANZ by the Executive Director.

Review of Potential Need for Noise Assistance Programs

As indicated above, there are no incompatible land uses within the 2025 MTN ANZ. Therefore, a Federal Aviation Administration Part 150 Study is not warranted, as there is no need to pursue federal funding for noise assistance programs.

3. CONCLUSION

MAA has completed the technical work associated with updating the 2025 ANZ and NAP for MTN. The MAA proposes to proceed with the update of the ANZ and NAP for MTN in COMAR. MAA will publish both the proposed ANZ and NAP as a proposed action in the Maryland Register and will hold a public hearing on the proposed action. The public will be able to comment on the proposed action at the public hearing. Maryland Aviation Commission approval will be sought prior to the final adoption of regulations establishing the updated ANZ and NAP for MTN.

4. RECOMMENDATION

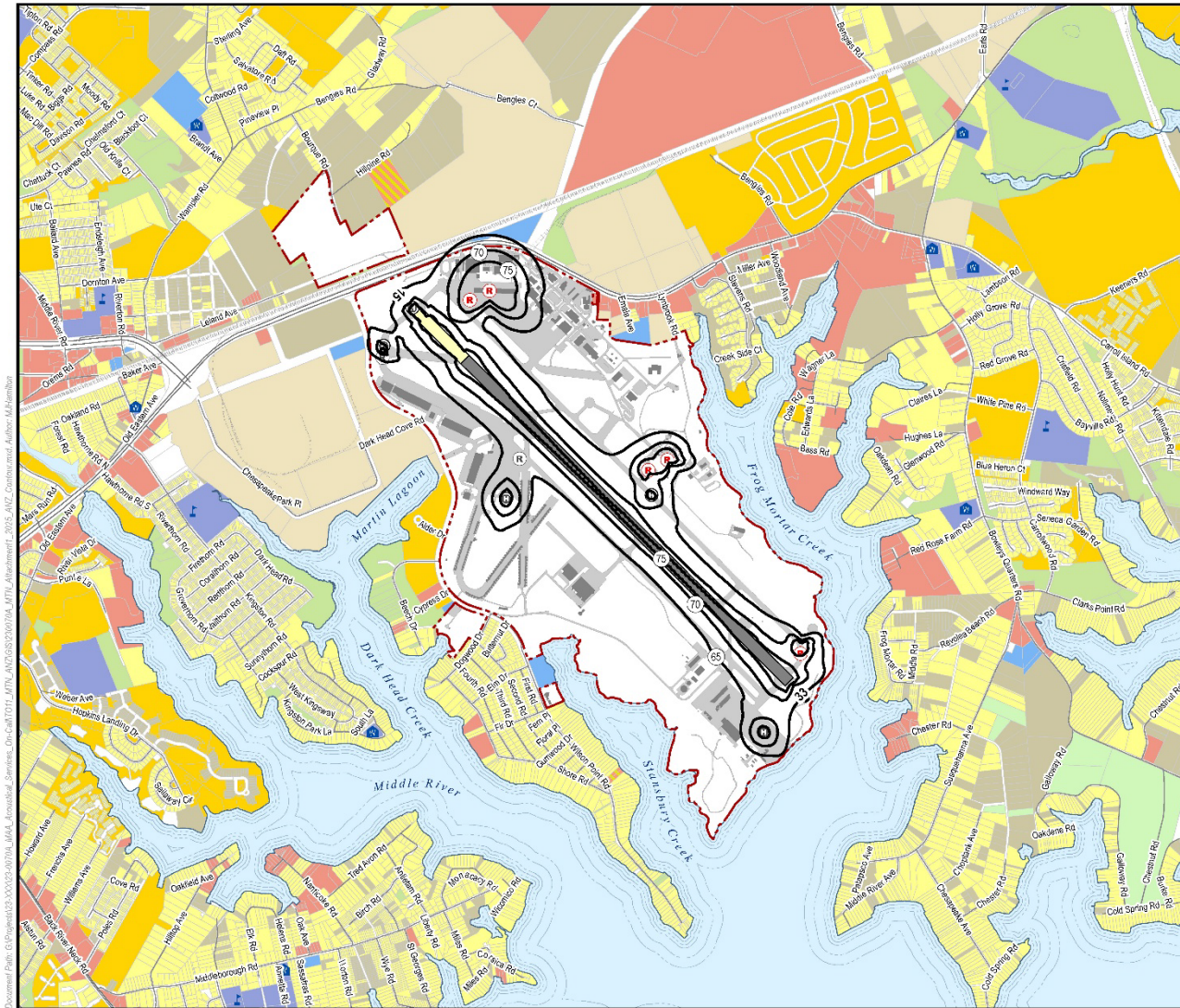
MAA recommends that the Maryland Aviation Commission approve the revised and proposed updated ANZ and NAP for MTN as to be provided for in amendments to COMAR 11.03.02.10 *Certified Martin State Airport (MTN) Noise Zone* and COMAR 11.03.01.01-1 *Incorporation by Reference*.

Approved  Disapproved _____ Date 11/12/2025



Airport Noise Zone Update

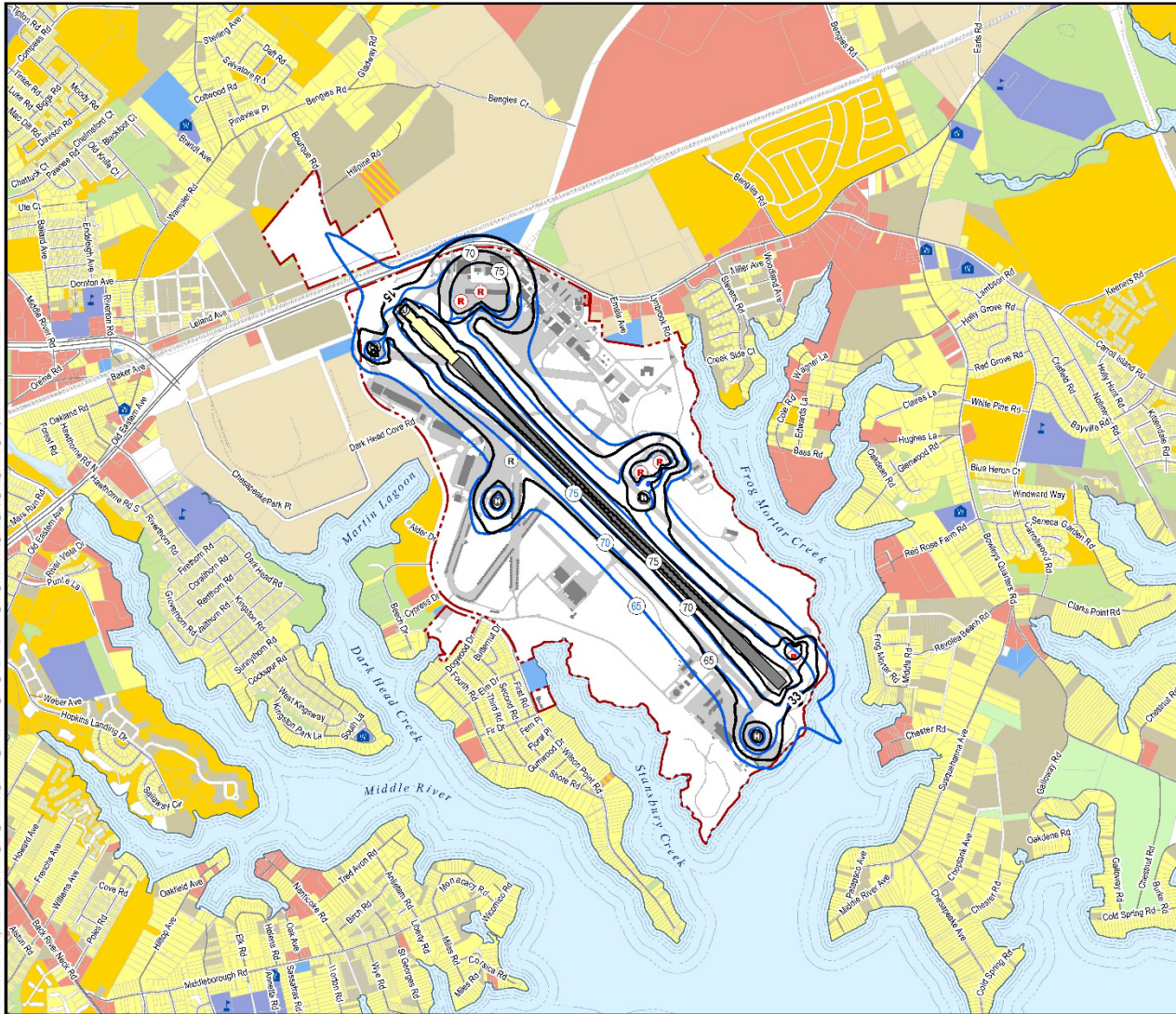
Attachment 1 2025 ANZ DNL Contour



- 2025 ANZ DNL Contour (65-75 dB)
- Helicopter Operation Area
- Civilian Runup Locations
- Civilian Runway
- Airport Buildings
- Taxiway / Apron
- Airport Boundary
- Roads
- Railroad
- Stream / Creek
- Military Runup Location
- Additional Runway Available for Military Operations
- Residential Use
- Multi-Family Residential Use
- Mixed Use
- Public Use (Non-Compatible)
- Public Use (Compatible)
- Agriculture
- Recreational / Open Space
- Commercial Use
- Manufacturing / Production
- Vacant / Undeveloped
- Transportation / Utility
- Water
- School
- Place of Worship
- Library
- Hospital / Health Care

Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HMMH





Airport Noise Zone Update

Attachment 2
2025 and 2020 ANZ DNL Contour Comparison

- 2025 ANZ DNL Contour (65-75 dB)
- 2020 ANZ DNL Contour (65-75 dB)
- Helicopter Operation Area
- Civilian Runup Locations
- Civilian Runway
- Airport Buildings
- Taxiway / Apron
- Airport Boundary
- Roads
- Railroad
- Stream / Creek
- Military Runup Location
- Additional Runway Available for Military Operations
- Residential Use
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Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HMMH





Airport Noise Zone Update Martin State Proposed Action

Maryland Aviation Commission
November 12, 2025



Key Points/Overview

- The Maryland Environmental Noise Act of 1974 requires an “assessment of the noise environment”, delineation of a “noise zone”, and development of a noise abatement plan every five years*
- The Code of Maryland Regulations prescribes the noise metric, methodology, compatible land uses, consideration for noise abatement plan elements, and the permit process for construction within the Noise Zone
- The most recent Airport Noise Zone (ANZ) for MTN, certified in 2021, is referenced in COMAR Section 11.03.02.10 and incorporated by reference in COMAR Section 11.03.01.01-1(B)(6)
- MAA initiated an update to the ANZ at MTN in January 2025, and has completed the technical work
- MAA proposes to update the references in COMAR to reflect an updated ANZ for MTN
- The Maryland Aviation Commission is charged with the approval of regulations prior to their adoption by the MAA Executive Director



*Transportation Article, §§5-805, 5-806, and 5-819, Annotated Code of Maryland

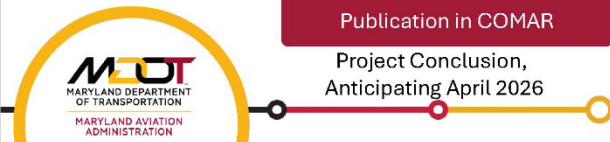
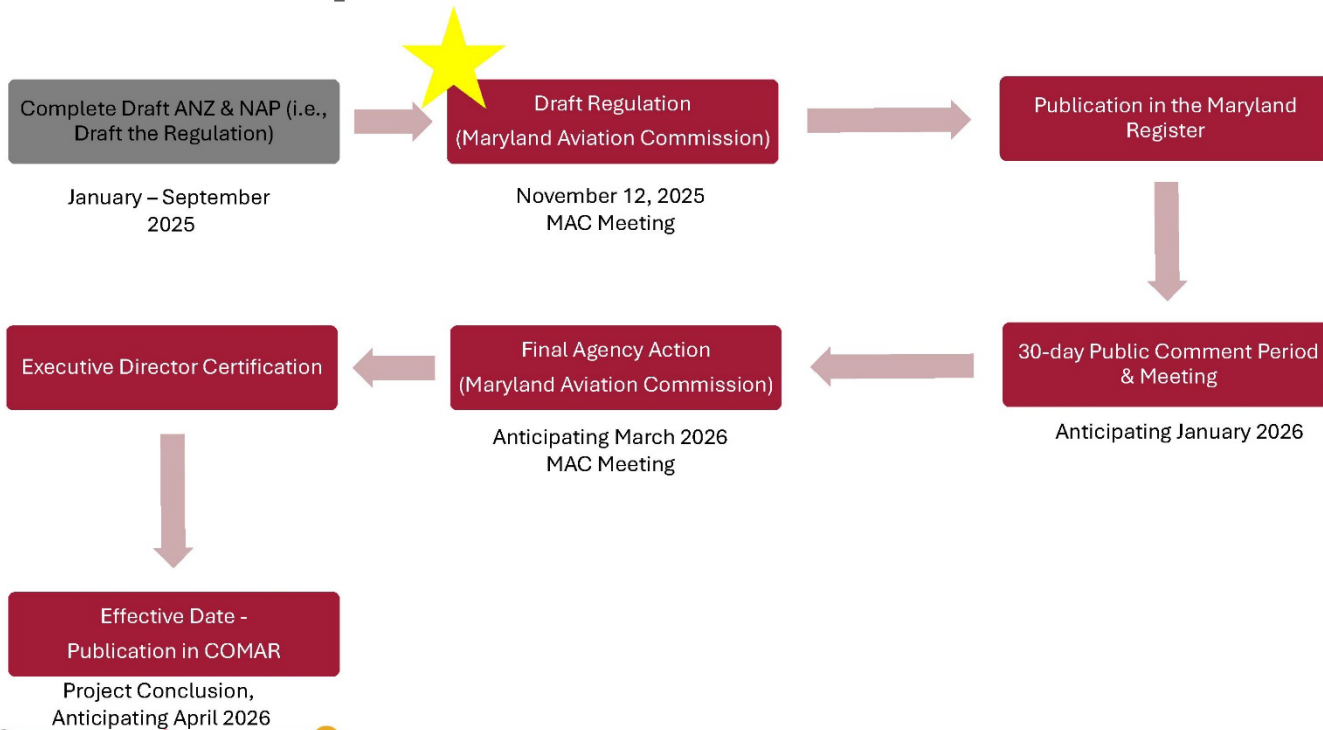
ANZ Scope & Process

- Establish Stakeholder Advisory Committee (SAC)
- Prepare base year, 5-year, 10-year forecast contours
- Compile composite Airport Noise Zone (ANZ)
- Prepare inventory of existing land use
- Update the Noise Abatement Plan (NAP)
- **Obtain approval from MAC to circulate proposed ANZ Update** ★
- Conduct public workshop/hearing
- Obtain approval from MAC to submit Certified ANZ Update for incorporation into COMAR

**Completed, January
2025 – September 2025**



Schedule to Update COMAR



Stakeholder Advisory Committee (SAC)

MTN Stakeholder Advisory Committee

- County Gov't (Baltimore County Office of Planning)
- Community Associations (Bowley's Quarters Improvement Assoc, Wilson Point Community Assoc, others)
- Airport Stakeholders (FAA, Maryland State Police, Maryland Air National Guard, Baltimore City Police Department, Trident Jet Aviation, Brett Aviation, others)



Invited SAC Membership

Name	Organization
Melissa Torres	Advanced Aviation Group, LLC
	ATP Flight School
Lt. George Hauf; Matthew Cloud	Baltimore City Police Department – Helicopter Unit
Steve Lafferty	Baltimore County Department of Planning
Sgt. Brandon Branham	Baltimore County Police Department -Aviation Unit
Allen Robertson	Bowley's Quarters Community Association
Mary Muth	Bowley's Quarters Improvement Association (BQIA)
Helen Frado; James Hardwick	Brett Aviation
John Henderson	Civil Air Patrol
Jim Merritt	Bowley's Quarters Community Association
Josh Sines	Essex Middle River Civic Council, Inc.
Jonathan Stitzinger	FIRST CLASS FLIGHT ACADEMY, LLC
Ashley Zayas	Greenleigh Community
Brig. Gen. Richard Hunt	Maryland Air National Guard

Name	Organization
W. Ernie Jenkins	Maryland State Police
Nikolaus Wagenfeiler	Midwest Air Traffic Control
Judith Davies	Nottingham Improvement Association, Inc.
President Carol Sue Hart	Oliver Beach Improvement Association
Sharon Pinkerton	The Hawthorne Civic Association, Inc.
Napoleon Martinez	Trident Jet Aviation
President Robert Bendler	Wilson Point Civic Improvement Association
President William Kammer	Windlass Run Improvement Association, Inc.
Jim Hock	Bowley's Quarters Improvement Association
Marsha Ayres	Bowley's Quarters Improvement Association
Kim Fry	Bowley's Quarters Improvement Association
Joseph Ireton	Maryland State Police Aviation Command
Jeff Kyger	Wilson Point Civic Improvement Association
Pat Hook; Emily Martishius	The Hawthorne Civic Association

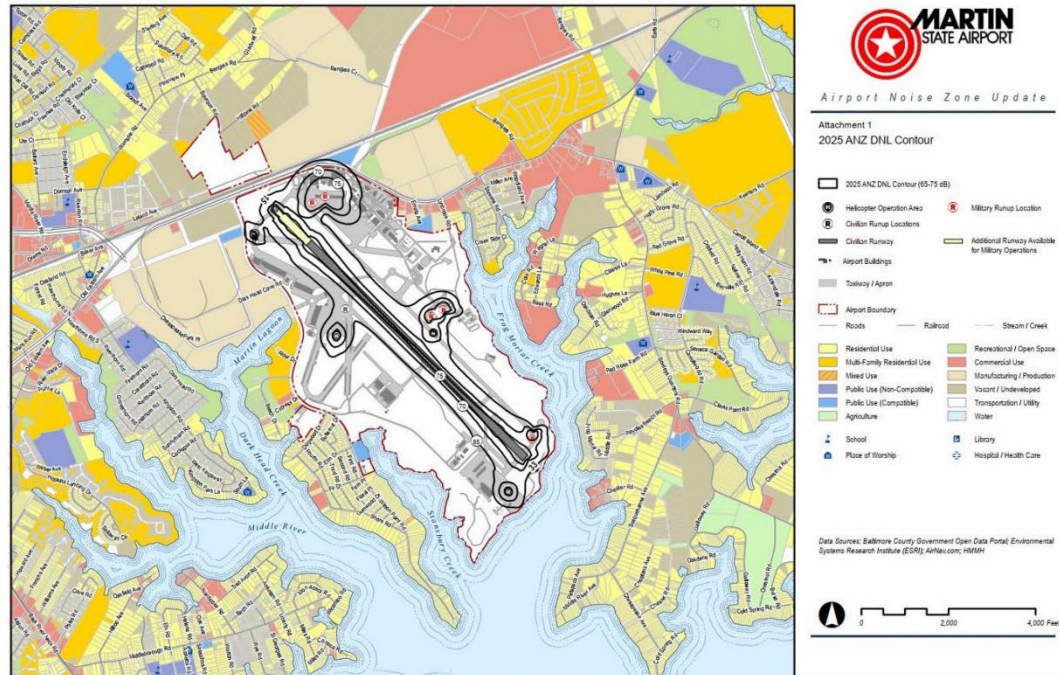


MTN ANZ Contours

- Noise contours are developed for existing (2025), a five-year forecast (2030) and a ten-year forecast (2035)
- Operations are based on the FAA's Terminal Area Forecast
- FAA's Aviation Environmental Design Tool (AEDT) is used to develop noise contours
- MTN Marshall Highlights
 - 245 average daily operations in 2025, increasing to 262 by 2035
 - Future forecast includes relocation of Runway 15/33 ends for civilian aircraft – from 6,997 to 7,430 ft.
 - Forecast removes A-10 operations, but retains some military aircraft activity



- Total area: 286 acres
- 95% remains on-airport; 5% off airport but over compatible land uses
- No residential population or housing units affected



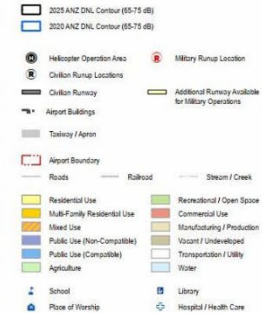
2025 ANZ vs 2020 ANZ – Martin State

- 2025 ANZ decreases in total area by 125 acres (30 percent)
- Smaller contours are a result of:
 - Changes in how A-10 operations are modeled; reduced level of A-10 activity in 2025 and no future Guard flying mission



Airport Noise Zone Update

Attachment 2
2025 and 2020 ANZ DNL Contour Comparison



Data Sources: Baltimore County Government Open Data Portal, Environmental Systems Research Institute (ESRI), AirNav.com, NAD83



Noise Abatement Plan

- The NAP was developed with the cooperation of airport users, the aviation industry, FAA, communities, and local governments
- The NAP has two general categories:
 - Noise Abatement Elements – Industry, FAA, and MAA
 - Strategies intended to reduce noise impacts for communities around the airport
 - Voluntary operational procedures such as control of ground-based noise sources, arrival and departure flight procedures
 - Land Use Elements – MAA
 - Summarizes the means of controlling and mitigating noise-sensitive development within the ANZ (Airport Zoning Permit approval or denial, appeals process)
- Martin State Measures
 - No incompatible land uses within the ANZ, no changes to existing procedures
 - Identified additional strategies to increase awareness of Noise Abatement Plan



Public Notice & Review

- Proposed Action (updating COMAR) will be published in advance in the Maryland Register. Public notice will be provided via posting in:
 - Dundalk Eagle, East County Times, Baltimore Sun, The Avenue News
 - SAC members and Maryland State and Local elected officials will be notified directly
- Document will be available for public review at the following locations:
 - Electronically at MAA website
 - Baltimore County Library, 1110 Eastern Blvd
 - Baltimore County Library, 1716 Merritt Blvd
- Public Workshop and Hearing



MARYLAND AVIATION ADMINISTRATION
Decision Paper

Airport Noise Zone and Noise Abatement Plan Update
Martin State Airport
COMAR Final Action

June 17th, 2026

1. SUBJECT/ISSUE

The Maryland Department of Transportation Maryland Aviation Administration (MAA) proposes to update the Code of Maryland Regulations (COMAR) to reflect an updated Airport Noise Zone (ANZ) and Noise Abatement Plan (NAP) for Martin State Airport (MTN). The MAA develops and certifies the MTN ANZ pursuant to the Maryland Environmental Noise Act of 1974 (See Transportation Article, §§5-805, 5-806, and 5-819, Annotated Code of Maryland). MAA proposes to establish the updated ANZ and NAP for MTN by amending Regulation .10 under COMAR 11.03.02 and incorporated by reference in COMAR Section 11.03.01.01-1 B(6).

In accordance with the Annotated Code of Maryland, Transportation §5-201 (b)(2), the Maryland Aviation Commission (Commission) is required to approve regulations prior to their adoption by the Executive Director of MAA.

2. DISCUSSION

The Maryland Environmental Noise Act of 1974 provided for the protection of citizens from the impact of transportation related noise. The aviation portion of the Act requires the MAA to adopt an ANZ and NAP to control incompatible land development around MTN and to reduce or eliminate impacted land uses around the Airport. The ANZ is determined by a composite of three noise contours: a base year contour, a five-year forecast contour and a ten-year forecast contour. The largest of the three contours in any area around MTN determines the ANZ. For this ANZ update, the study process considered existing conditions for the base year of 2025 and the forecast conditions in 2030 and 2035.

Previous Maryland Aviation Commission Action

MAA presented the proposed 2025 ANZ to the Commission on November 12th, 2025. The presentation provided an overview of MAA's requirements to prepare an update to the ANZ, reviewed the scope, process, and Stakeholder Advisory Committee (SAC), presented the Draft 2025 MTN ANZ noise contours, provided an overview of the NAP, and highlighted the public notice and review process.

The Decision Paper from the November 12th, 2025 Maryland Aviation Commission meeting is included as **Attachment 1**. The Commission authorized MAA to proceed with

updating both the ANZ and NAP and to publish the proposed amendment to the regulations in the Maryland Register.

MAA has subsequently completed and published the Draft ANZ document, held a public workshop and hearing, reviewed and prepared responses to submitted public comments, and prepared the final MTN 2025 ANZ document.

Public Workshop and Public Hearing

Following the Commission's approval to move forward, MAA completed the Draft ANZ and made the draft document available on January 20th, 2026 on the MAA website. A public workshop and hearing was planned for Wednesday, March 18th, 2026, and public notice was provided via the following means:

- Legal notice was published in the Baltimore Sun (March 8th), the Avenue News (March 12th), and the Dundalk Eagle (March 12th).
- Subscribers to MAA's eNews Express were notified directly via email.
- Elected and public officials were notified directly via email
- Email notifications were sent directly to members of the Stakeholder Advisory Committee.
- Hard copies were placed at the Baltimore County Library, 1110 Eastern Blvd, Essex, MD 21221, and White Marsh Branch Library, 8133 Sandpiper Cir, Nottingham, MD 21236.
- The Notice of Proposed Action, including the proposed changes to COMAR, was published in the Maryland Register, Volume 53, Issue 6, March 20th, 2026.

On Wednesday, March 18th, 2026, from 6:00 p.m. to 8:00 p.m., MAA hosted an in-person public workshop and hearing at Martin State Airport. There were twenty-six (26) people in attendance. Following the public workshop, which included a presentation, question and answer period, and display boards staffed by MAA, the public hearing commenced.

Two comments were received during the public hearing portion of the meeting, and an additional 24 individuals submitted comments following the workshop and hearing. The comments primarily focused on encouraging the MAA to adopt a formal "Fly Friendly" program similar to other airports around the country; to encourage flight school participation in noise abatement meetings, to reduce the occurrences of intersection departures, and to modify flight paths to maximize noise abatement. The comments and MAA's responses are included in the Final ANZ and are summarized below.

Commentors requested that the Noise Abatement Plan be modified to add that MAA strongly encourages aircraft to depart from the furthest end of the runway to facilitate higher altitudes, consistent with the existing NAP.

MAA Response: In some cases, aircraft at MTN may begin its takeoff roll from a taxiway/runway intersection somewhere down the runway rather than use the full

runway length from the threshold. MAA reviewed this request with the MTN ATCT who also concurred. The NAP has been updated to include the following language as *Measure F*: “Aircraft departing Runway 15 are discouraged from utilizing intersection departures from Taxiway Juliet.”

Many commentors raised concerns related to flight training activity, and encourage MAA to pursue productive working relationships with flight schools, including participation in the ANZ study.

MAA Response: Flight training activity represents a significant number of air traffic operations at MTN. MTN hosts multiple flight schools, including a number of private pilots who fly recreationally, and has facilities, such as an instrument approach, which attract pilots looking to maintain proficiency. While MAA cannot limit the number of operations, MAA will continue to proactively engage with MTN tenants on issues related to compliance with the noise abatement plan.

A commentor suggested that MAA evaluate flight patterns and consider making neighbor-friendly changes that might include increasing altitude, lowering volume and repetition, delaying or modifying turns and throttling, and adopting new patterns that do not have the flights going over the same properties repeatedly.

MAA Response: MAA notes the suggestions regarding operational measures that may help reduce community noise exposure. MTN already has an established voluntary noise abatement program that encourages pilots to operate in a safe and noise-conscious manner to the extent practicable and consistent with FAA requirements, aircraft performance, weather conditions, and air traffic considerations.

Aircraft operating in the traffic pattern, including touch-and-go operations, generally follow standard FAA-recommended traffic pattern procedures and altitudes applicable to the aircraft type and operation. In addition, flight tracks associated with pilot training activities naturally vary based on aircraft performance, wind conditions, air traffic instructions, pilot experience levels, and the dynamic nature of airport operations, resulting in dispersion rather than repetitive overflight of a single property or area.

The airport will continue to coordinate with airport users, FAA, and local stakeholders to evaluate operational practices and identify reasonable opportunities to promote noise-sensitive flying procedures, including pilot education related to pattern operations, altitude, and repetitive flight activity where feasible.

A commentor suggested the aircraft owners ensure that aircraft engines are properly tuned and maintained to minimize engine noise.

MAA Response: MAA does not have the authority to regulate aircraft engine design, certification, or maintenance practices for aircraft using the airport, as those responsibilities fall to the FAA. 14 CFR 91.409 dictates that civil aircraft must have an

annual inspection, and further notes that aircraft used for hire flight instruction must undergo a comprehensive inspection every 100 hours of flight time. Inspections include the engine, airframe, control surfaces, landing gear, and avionics.

Engine maintenance and tuning has a minimal impact on noise generated by piston aircraft. How the aircraft is operated, including the speed during climb, RPM, aircraft altitude, aircraft weight, atmospheric conditions, and the location and dispersion of flight tracks, generally have a greater impact on the noise experienced on the ground.

A commentor suggested that air traffic controllers should consider mixing up the flight patterns (as much as possible) so as to spread out and/or alternate the noise impact.

MAA Response: This is an existing practice. MAA and the Air Traffic Control Tower at MTN have collaborated on the practice of alternating runways and patterns each week to the extent that wind and weather conditions allow.

Commentors suggested that MAA has the ability and responsibility to enter into lease terms with their tenants that serve the public interest, including to minimize noise issues affecting the community. Another commentor suggested that the flight schools have attendance and participation in community improvement meetings as a condition of their rental agreement with the airport.

MAA Response: As the airport sponsor and operator, MAA establishes lease terms, operating standards, and airport rules consistent with applicable federal obligations, safety requirements, and the airport's role as a public-use aviation facility.

As MTN is the recipient of federal funds, MAA cannot compel participation in airport or community improvement meetings through lease agreements only applicable to specific users. However, MAA currently encourages airport tenants and users, including flight schools, to operate in a safe and noise-conscious manner consistent with the airport's voluntary noise abatement practices. MAA also recognizes the value of continued communication between airport users and the surrounding community and will continue to evaluate opportunities to promote stakeholder engagement, education, and participation in community discussions related to airport operations and noise concerns, where appropriate and practicable.

Many commentors submitted similar comments that suggested MAA adopt a Fly Friendly program, and highlighted the program at John Wayne Airport as an example.

MAA Response: Most "Fly Friendly" programs are voluntary noise abatement initiatives intended to encourage pilots and airport users to follow operational practices that help reduce noise impacts on surrounding communities while maintaining safe aircraft operations. Typical measures may include recommended

flight tracks, preferred runway use, guidance on minimizing low-altitude overflights of residential areas where feasible, limitations on engine run-up locations, and outreach to pilots and tenants regarding noise-sensitive areas surrounding the airport. Because aircraft operations are regulated by the FAA, participation in Fly Friendly procedures is generally voluntary unless otherwise authorized through applicable FAA processes.

Fly Friendly programs vary widely by airport and are typically tailored to specific operational and community contexts. For example, John Wayne Airport serves a substantially higher volume of commercial service and business jet activity—handling over 11 million passengers annually—alongside a large general aviation population. Its Fly Friendly Program is a voluntary, data-driven program that evaluates and scores operators based on their use of quieter procedures, avoidance of sensitive hours, participation in noise abatement efforts, and broader environmental stewardship. Top-performing general aviation jet operators are publicly recognized through a tiered awards system.

MAA first established the MTN NAP in the 1970s. The NAP includes a comprehensive set of procedures designed to reduce aviation noise impacts on the surrounding communities. These procedures include maintaining runway heading until reaching an altitude, maintaining the highest practical altitude on approach, standard traffic pattern altitudes, and limitations on touch and go operations between 10:00 p.m. and 6:00 a.m. (Refer to Section 5, Noise Abatement Plan, for the complete list of measures.)

In addition to the established NAP, MAA has implemented and continues to advance a series of initiatives to enhance awareness and effectiveness of existing noise abatement practices, including:

- **Alternating Touch-and-Go Patterns:** When operationally feasible, closed traffic patterns are alternated on a weekly basis to distribute overflights between surrounding communities (e.g., Bowley’s Quarters and Wilson Point), helping to avoid concentrating noise impacts in a single area.
- **Limiting Aircraft in the Pattern:** The MTN Air Traffic Control Tower limits the number of aircraft operating in the traffic pattern at any given time to maintain safety and reduce the frequency of overflights.
- **Noise Monitoring and Reporting:** Through the Airport Noise and Operations Monitoring System (ANOMS), MAA is developing reports to track compliance with voluntary noise abatement procedures, including operational timing, turn initiation altitudes, and traffic pattern altitudes.
- **Airfield Signage:** MAA is exploring installation of airfield signage to direct pilots to the MAA website containing the Noise Abatement Plan and relevant portions of the Aeronautical Information Manual.

- **Terminal Outreach Materials:** Posters and informational materials are being installed in terminals and hangars to increase pilot awareness of voluntary noise abatement procedures.
- **Amend the Airport Facility Directory:** MAA is initiating an update to the FAA's Airport Facility Directory to publicize the existence of noise abatement procedures.
- **Pilot Education Initiatives:** MAA is developing pilot training and informational resources to further reinforce noise-sensitive operating practices.

MAA believes these measures will continue to improve awareness of and compliance with MTN's voluntary noise abatement procedures. At this time, MAA does not plan to implement an operator ranking or rating system. Such programs can be resource-intensive, require specialized monitoring infrastructure, and may not be well-suited to the diverse operational environment at MTN. MAA's approach emphasizes collaboration, education, and consistency with FAA guidance rather than comparative or enforcement-based frameworks.

A commentor suggested that MAA put limits on flight school activity.

MAA Response: MAA does not have the authority to place limits on the number of operations undertaken by any individual tenant at MTN, including flight schools.

A commentor suggested noise barriers to reduce the transmission of noise across water.

MAA Response: Noise barriers (such as walls or earthen berms) may have the potential to reduce ground-based or line-of-sight noise sources in some contexts, but are generally not feasible or effective for aircraft operation once airborne. Further, there are siting challenges associated with locating a noise barrier that could provide meaningful noise reduction.

A commentor noted that aircraft noise often begins early in the day and ends late at night.

MAA Response: MTN supports a range of aviation activities, including general aviation, military, business, and other aircraft operations, which may occur during both daytime and nighttime hours, and varies by season, weather conditions, and the needs of airport users. The FAA regulates aircraft operations and the use of navigable airspace. As a public-use airport, MTN is generally required to remain available to accommodate aviation activity and MAA does not have authority to mandatorily restrict the hours during which aircraft may operate. However, the MTN NAP addresses the times of touch and go operations by including language that states "No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance

staff." Note that the NAP is voluntary, and MAA review of the time of operations shows minimal activity prior to 6:00 a.m. or after 10:00 p.m.

A commentor stated that aircraft take off way too low and loud.

MAA Response: Aircraft departure procedures and minimum safe operating altitudes are regulated by the FAA and are designed to ensure the safe and efficient operation of aircraft within the national airspace system. Pilots must comply with FAA regulations, air traffic control instructions, published departure procedures, and aircraft performance requirements during takeoff and climb operations.

Residents may notice variability in the altitudes of individual departing aircraft (aircraft climb performance), which can be caused by a number of factors, including the aircraft type, weight, weather conditions, and ATC instructions. Any concerns related to the unsafe operation of an aircraft should be reported to the local FAA Flight Standards District Office, which has the ability to investigate potential violations of federal aviation regulations. Individuals who observe aircraft operations they believe may be unsafe are encouraged to document relevant details, such as the date, time, location, aircraft description or registration number (if visible), and the nature of the concern, and report the information to the appropriate FAA Flight Standards District Office (FSDO) for review.

3. CONCLUSION

The proposed MTN Airport Noise Zone and Noise Abatement Plan should be adopted as proposed.

4. RECOMMENDATION

MAA recommends that the Maryland Aviation Commission approve the proposed amendment to Regulation .10 under COMAR 11.03.02 Martin State Airport and 01-1 under COMAR 11.03.01.

Approved  _____ Disapproved _____ Date 6/17/2026 _____



Airport Noise Zone Update BWI Marshall & Martin State Airports Proposed Actions

Maryland Aviation Commission

June 17, 2026



Key Points/Overview

- The Maryland Environmental Noise Act of 1974 requires an “assessment of the noise environment”, delineation of a “noise zone”, and development of a noise abatement plan every five years*
- The Code of Maryland Regulations prescribes the noise metric, methodology, compatible land uses, consideration for noise abatement plan elements, and the permit process for construction within the Noise Zone
- The most recent ANZ for BWI Marshall, certified in 2021, is referenced in COMAR Section 11.03.01.12 and incorporated by reference in COMAR Section 11.03.01.01-1(B)(5)
- The most recent Airport Noise Zone (ANZ) for MTN, certified in 2021, is referenced in COMAR Section 11.03.02.10 and incorporated by reference in COMAR Section 11.03.01.01-1(B)(6)
- MAA initiated an update to the ANZs for BWI and MTN in January 2025, presented to the Commission in November 2026, and held a public workshop and hearing in March 2026.
- MAA proposes to update the references in COMAR to reflect an updated Airport Noise Zone (ANZ) and Noise Abatement Plan (NAP) for BWI and MTN
- The Maryland Aviation Commission is charged with the approval of regulations prior to their adoption by the MAA Executive Director

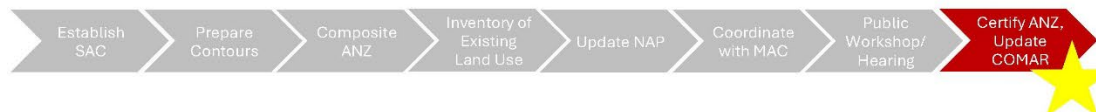


*Transportation Article, §§5-805, 5-806, and 5-819, Annotated Code of Maryland

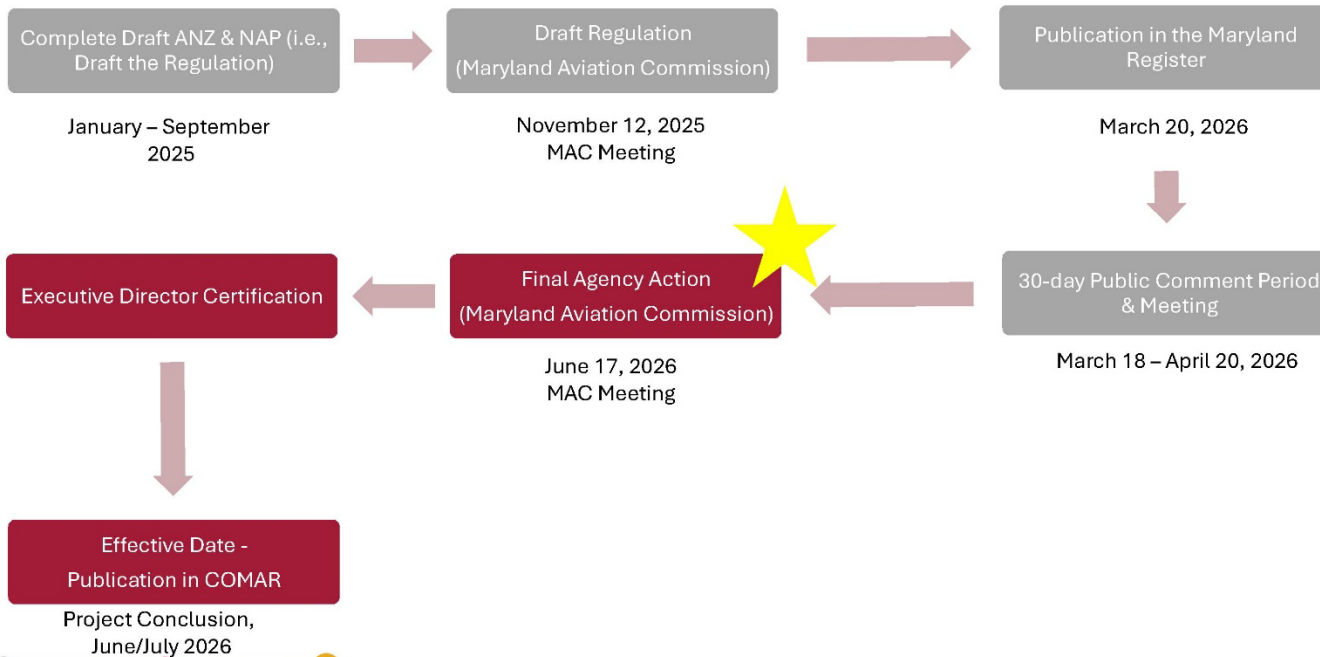
ANZ Scope & Process

- Establish Stakeholder Advisory Committee (SAC)
- Prepare base year, 5-year, 10-year forecast contours
- Compile composite Airport Noise Zone (ANZ)
- Prepare inventory of existing land use
- Update the Noise Abatement Plan (NAP)
- Obtain approval from MAC to circulate proposed ANZ Update
- Conduct public workshop/hearing
- **Obtain approval from MAC to submit Certified ANZ Update for incorporation into COMAR**

**Completed, January
2025 – April 2026**

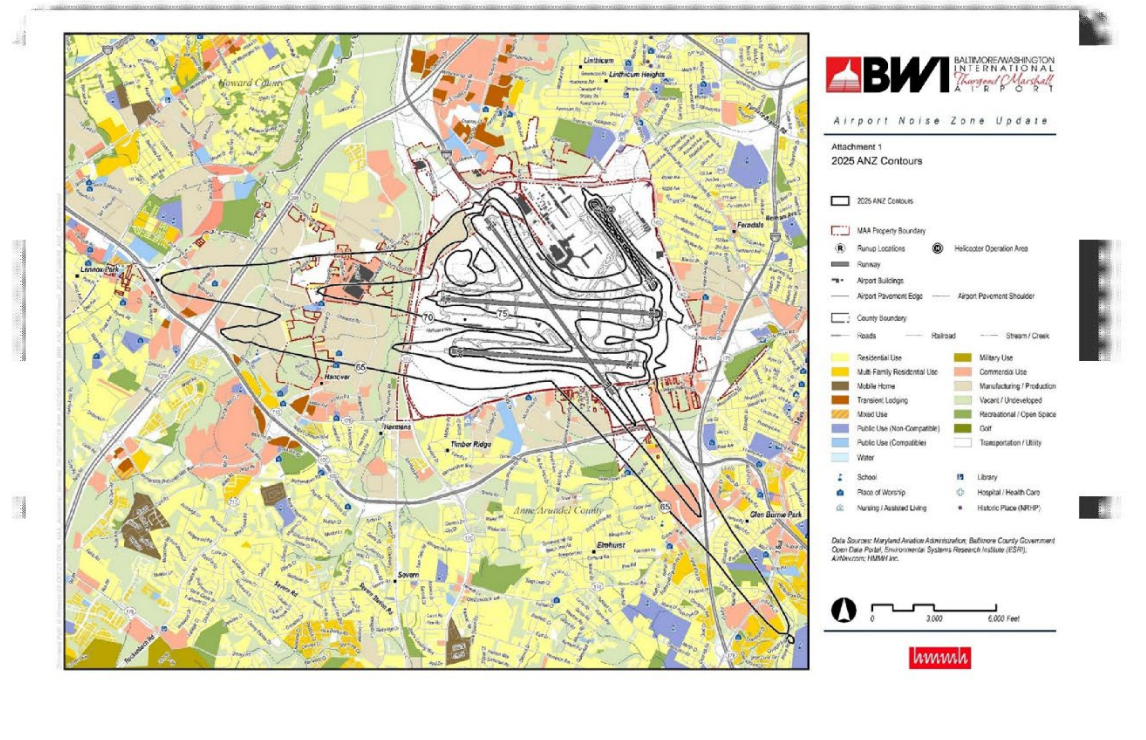


Schedule to Update COMAR



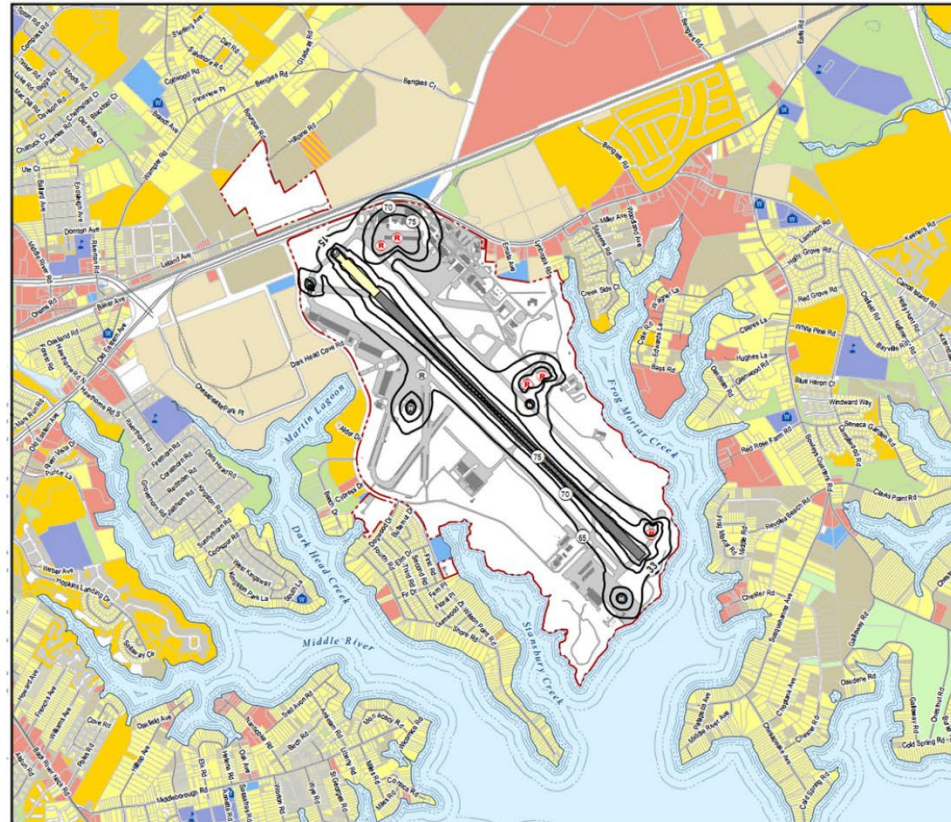
2025 ANZ – BWI Marshall

- Noise contours are developed for existing (2025), a five-year forecast (2030) and a ten-year forecast (2035), based on FAA's TAF
- 652 average daily operations in 2025, increasing to 796 by 2035
- 10-Year forecast includes Rwy 15R/33L extension and parallel Rwy 10/28 construction
- Includes estimated population of 1,704 in 636 housing units.



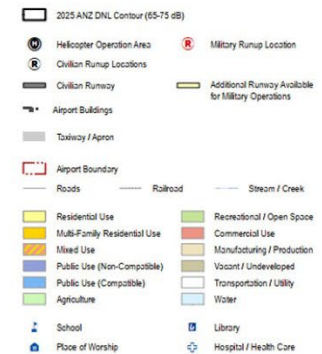
MTN 2025 ANZ

- Largest extent of existing (2025), a five-year forecast (2030) and a ten-year forecast (2035), noise contours, including forecast operations
- 245 average daily operations in 2025, increasing to 262 by 2035
- Future forecast includes relocation of Runway 15/33 ends for civilian aircraft – from 6,997 to 7,430 ft.
- Comprises 286 acres, 95% remains on-airport
- No residential population or housing units affected



Airport Noise Zone Update

Attachment 1 2025 ANZ DNL Contour



Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HMMH



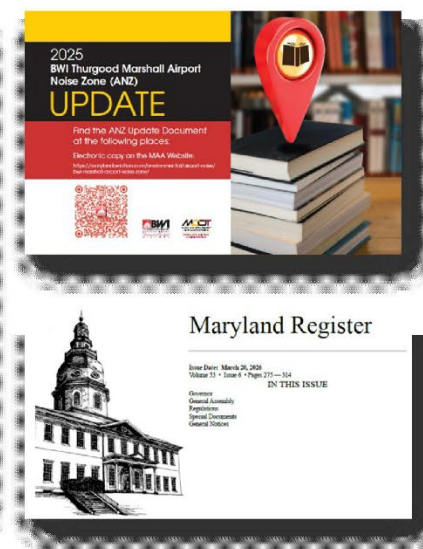
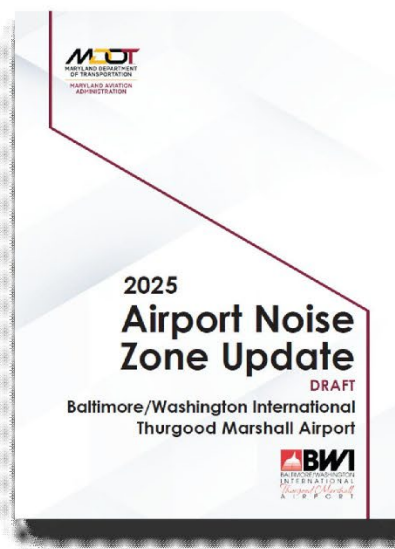
Noise Abatement Plans (NAP)

- Each NAP was developed with the cooperation of airport users, the aviation industry, FAA, communities, and local governments.
- Two general categories:
 - Noise Abatement Elements – Industry, FAA, and MAA
 - Strategies intended to **reduce** noise impacts for communities around the airport
 - Voluntary operational procedures such as control of ground-based noise sources, arrival and departure flight procedures, and a preferential runway use system
 - Land Use Elements – MAA
 - Summarizes the means of **controlling and mitigating** noise-sensitive development within the ANZ (Airport Zoning Permit approval or denial, appeals process, Residential Sound Insulation Program)
- 2025 Updates (BWI)
 - Removal of Interstate Visual procedure, update to available engine run-up locations
 - Otherwise, review only; updates will be considered as part of the 14 CFR Part 150 process
- 2025 Updates (MTN)
 - One new measure (*Measure F, Minimize Intersection Departures*)
 - Identified additional strategies to increase awareness of Noise Abatement Plan



Public Outreach for Workshops & Hearings

- Draft documents were made available for public review on January 20th, 2026 on the MAA website.
- Public notice provided via posting in Baltimore Sun (BWI, MTN), The Capital (BWI), The Avenue News (MTN) and the Dundalk Eagle (MTN).
- SAC members and Maryland State and Local elected officials notified directly via email.
- Hard copies were placed at 16 local libraries in Baltimore City and County, Anne Arundel County and Howard County.
- Proposed Action (updating COMAR) published in the Maryland Register.



BWI Public Workshop, Hearing and Comments

MAA hosted a public workshop & hearing on March 19, 2026, from 3:00 to 5:00 p.m. and 6:00 to 8:00 p.m. at MAA facilities at 991 Corporate Blvd.

Meeting was attended by 26 residents; 19 comments were received from 16 individuals.

Commentors noted the concentration of aircraft departures from Runway 15R over the Severn community (a recent FAA procedure change which MAA is attempting to remedy with the FAA); that their property should be included in Anne Arundel County's property tax credit program or MAA's voluntary residential sound insulation program; dissatisfaction with the Day Night Average Sound Level (DNL) metric; and dissatisfaction with ground noise from aircraft operations.

Detailed responses provided in Decision Paper.

MAA considered all comments, none affected the technical results of the ANZ.



The 2025 BWI Airport Noise Zone (ANZ) Update

What is the BWI ANZ?

- The ANZ shows the largest possible extent of current and predicted noise exposure contours for the ten years following its development.
- As specific types of land use are limited within the ANZ, it is used to help control development that is incompatible with noise levels above 65 DNL.



BWI
AIRPORT
PROJECT

What we are doing

The BWI ANZ team is currently completing the 2025 ANZ update in accordance with Maryland regulations.

This includes:

- an update to the ANZ map to reflect changes to flight paths and aircraft fleets
- a review of the existing Noise Abatement Plan

Why it matters to you

- Your input can help shape noise abatement plans and measures.
- If you live within certain parts of the ANZ, you may qualify for the Residential Sound Insulation Program.

Additional Resources

Find the ANZ Document at the following places:

- Electronic copy on the BWI ANZ Project Website
 - <https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>
- Printed copies at selected Anne Arundel, Howard, Baltimore County and Baltimore City library branches

How to Comment:

Email Bruce Rineer: BRineer@bwiairport.com

Speak to the Public Hearing Officer at this meeting

Please provide
comments by
April 6, 2023

BWI ANZ
Project Website



BWI
AIRPORT
PROJECT

MTN Public Workshop, Hearing and Comments

- MAA hosted a public workshop & hearing on March 18, 2026, from 6:00 to 8:00 p.m. at Martin State.
- Meeting was attended by 26 residents; 26 individuals submitted comments.
- Comments primarily focused on encouraging the MAA to adopt a formal “Fly Friendly” program similar to other airports around the country; to encourage flight school participation, to reduce the occurrences of intersection departures, and to modify flight paths.
- Detailed responses provided in Decision Paper.
- MAA updated the NAP to include one new measure and is pursuing strategies to increase awareness and compliance with noise abatement procedures.



Appendix E. Public Workshop and Hearing Materials

Appendix E includes information related to the Public Workshop and Hearing, including invitations, documentation of public notices, attendance information, presentation materials, and the hearing transcript.

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E.1 Newspaper Ads

- A. — B. (text unchanged)
- C. An organization billing on behalf of trauma physicians or trauma health care practitioners eligible for uncompensated care payments shall:
- (1) Designate a trauma service by appropriate coding of the [CPT Modifier] *U1 Modifier, or any successor modifier that includes that same data*, on the electronic ANSI 837 transaction or paper CMS 1500 claim in accordance with claims submission requirements; and
- (2) (text unchanged)
- D. Diagnosis Code.
- [1] Except as provided in §D(2) of this regulation, a diagnosis code shall fall between 800.00 — 959.9.
- (2) If a diagnosis code does not fall between 800.0 — 959.9, a supplementary classification of external causes of injury and poisoning (E800 — E999) shall appear as a secondary diagnosis code.]
- (1) *Coding shall be consistent with CMS ICD-10 CM guidelines, or any successor guidelines.*
- (2) *A diagnosis code shall fall between ICD-10 CM S00 - T88 range, or successor codes indicating trauma related diagnosis.*
- (3) *External Cause Codes.*
- (a) *A diagnosis code may also be accompanied by a secondary code or codes indicating external cause of injury, denoted by ICD-10 CM V, W, X, Y, or Z codes, or successor codes indicating external cause of injury.*
- (b) *External cause codes may not be sequenced as the first-listed or principal diagnosis.*
- E.—K. (text unchanged)

MARCIA BOYLE
Acting Chair
Maryland Health Care Commission

Title 11 DEPARTMENT OF TRANSPORTATION Subtitle 03 MARYLAND AVIATION ADMINISTRATION

Notice of Proposed Action [26-008-P-1]

The Executive Director of the Maryland Aviation Administration proposes to amend:

- (1) Regulations .01-1 and .12 under **COMAR 11.03.01 Baltimore/Washington International Thurgood Marshall Airport**; and
- (2) Regulation .10 under **COMAR 11.03.02 Martin State Airport**.

This action was considered the Maryland Aviation Commission in an open meeting on November 12, 2025, notice of which was given, pursuant to General Provisions Article, §3-302, Annotated Code of Maryland.

Statement of Purpose

The purpose of this action is to incorporate by reference the new certified Baltimore/Washington International Thurgood Marshall Airport (BWI) Noise Zone reflecting the noise contours for the new base year of 2025 and new future years of 2030 and 2035, as well as the new certified Martin State Airport (MTN) Noise Zone reflecting the noise contours for the new base year of 2025 and new future years of 2030 and 2035.

Estimate of Economic Impact

The proposed action has no economic impact.

Economic Impact on Small Businesses

The proposed action has minimal or no economic impact on small businesses.

Impact on Individuals with Disabilities

The proposed action has no impact on individuals with disabilities.

Opportunity for Public Comment

Comments may be sent to Stacey Hicks-Johnson, Regulations Coordinator, MAA, P.O. Box 8766, BWI Airport, MD 21240, or call 410-859-7351, or email to shicks-johnson@bwiairport.com. Comments will be accepted through April 20, 2026. A public hearing will be held on For Martin State Airport (MTN) Noise Zone, the hearing will be held on Wednesday, March 18th from 6:00-8:00pm at Martin State Airport, 701 Wilson Point Road, Middle River, MD 21220, Hanger 4. For Baltimore/Washington International Thurgood Marshall Airport (BWI) Noise Zone, the hearing will be held on Thursday, March 19th from 3:00-5:00pm then from 6:00-8:00pm at Maryland Aviation Administration located at 991 Corporate Drive, Linthicum, MD 21090, Assembly Room A/B.

11.03.01 Baltimore/Washington International Thurgood Marshall Airport

Authority: Transportation Article, §§5-202.1, 5-204, 5-208, 5-805, 5-806, and 5-819, Annotated Code of Maryland

.01-1 Incorporation by Reference.

A. (text unchanged)

B. Documents Incorporated.

(1)—(4) (text unchanged)

(5) The certified Baltimore/Washington International Thurgood Marshall Airport (BWI) Noise Zone, consisting of the 65, 70, and 75 L_{dn} contours overprinted on county tax maps as indicated below:

(a)—(b) (text unchanged)

(c) Anne Arundel County Tax Maps 3, 4, [7], 8, 9, and 15;

[(d) Howard County Tax Map 44.]

(6)—(8) (text unchanged)

C. (text unchanged)

.12 Certified Baltimore/Washington International Thurgood Marshall Airport (BWI) Noise Zone.

A. (text unchanged)

B. BWI Noise Zone.

(1)—(2) (text unchanged)

- (3) The certified Baltimore/Washington International Thurgood Marshall Airport (BWI) Noise Zone consists of the 65, 70, and 75 L_{dn} contours overprinted on county tax maps as indicated as follows:
- (a)—(b) (text unchanged)
 - (c) Anne Arundel County Tax Maps 3, 4, [7], 8, 9, and 15;
 - [(d) Howard County Tax Map 44.]
- (4) The noise zone is a composite of the 65, 70, and 75 L_{dn} noise contours for the base year of [2020] 2025 and future years of [2025] 2030 and [2030] 2035.
- (5) (text unchanged)
- C. (text unchanged)

11.03.02 Martin State Airport

Authority: Transportation Article, §§5-202.1, 5-204, 5-208, 5-426, 5-805, 5-806, and 5-819, Annotated Code of Maryland

.10 Certified Martin State Airport (MTN) Noise Zone.

- A. (text unchanged)
- B. MTN Airport Noise Zone.
 - (1)—(3) (text unchanged)
 - (4) The noise zone is a composite of the 65, 70, and 75 L_{dn} noise contours for the base year of [2019] 2025 and future years of [2025] 2030 and [2030] 2035.
 - (5) (text unchanged)
- C. (text unchanged)

SHANNETTA R. GRIFFIN
Director/CEO

Title 13A STATE BOARD OF EDUCATION

Subtitle 01 STATE SCHOOL ADMINISTRATION

13A.01.05 Appeals to the State Board of Education

Authority: Education Article, §§2-205, 4-205, 6-202, and 7-305; State Government Article, §§10-122 and 10-201 et seq., Annotated Code of Maryland

Notice of Proposed Action

[26-018-F]

The State Board of Education proposes to amend Regulation .12 and adopt new Regulation .13 under COMAR 13A.01.05 Appeals to the State Board of Education. The original proposal as published in 52:17 Md.R. 889 (August 22, 2025) is being withdrawn. This action was considered by the State Board at its January 27, 2026 meeting.

Statement of Purpose

The purpose of this action is to add a process for request of interim relief during the period in between an individual's submission of a request for the State Board to issue charges for removal of a local member of a board of education and when the State Board issues a final decision on the removal request.

Estimate of Economic Impact

The proposed action has no economic impact.

Economic Impact on Small Businesses

The proposed action has minimal or no economic impact on small businesses.

Impact on Individuals with Disabilities

The proposed action has no impact on individuals with disabilities.

Opportunity for Public Comment

Comments may be sent to Hannah Oakley, Deputy Director, State Board of Education, Maryland State Department of Education, 200 West Baltimore Street, Baltimore, MD 21201, or call 443-386-7990, or email to hannah.oakley@maryland.gov. Comments will be accepted through April 20, 2026. A public hearing has not been scheduled.

Open Meeting

Final action on the proposal will be considered by the State Board of Education during a public meeting to be held on May 28, 2026 at 9:00 am, at 200 West Baltimore Street, Baltimore, MD 21201.

.12 Procedures Applicable to Requests to Remove a Local Board Member.

A. Request to Issue Charges – *Public Request*. A request to issue charges against a local board member may be filed with the State Board by the local board, [or by] a resident of the county in which the school system is located, *an employee of the local school system, or a parent or guardian of a student enrolled in the local school system* if removal by the State Board is permitted by the statute governing removal of members of that local board.

B.—C. (text unchanged)

D. Time of Submission. From the date the first request to issue charges was filed, [the record] a *consolidation period of 15 calendar days* shall remain open to file additional requests [for 30 calendar days]. The [record] *consolidation period* shall close at the end of the [30-day] *15-day period*, unless the State Board extends that time period.

E. *Response*. The State Board shall notify the local board member of the filing of the request(s) for consistency to issue charges and provide the local board member 30 days after the close of the consolidation period to respond to the request or requests.

F. *The State Board may, at its discretion, shorten or extend the time requirements of §§D and E of this regulation.*

[E.] G. Factual and Legal Sufficiency of the Request.

(1) (text unchanged)

[(2) In doing so, it shall notify the local board member of the request and may provide the local board member an opportunity to respond to the request to issue charges.]

[(3)] (2)—[(5)] (4) (text unchanged)

(5) *Additional Evidence*. The State Board may consider additional evidence furnished by the State Superintendent of Schools, the Office of the Inspector General for Education, or other public agencies concerning the issues in a request to issue charges provided:

- (1) *The materiality of such evidence is demonstrated to the State Board's satisfaction; and*
- (2) *The local board member has been provided 7 days to respond to the additional evidence.*

MTN ANZ E-News Express Notification

From: BWI eNews Express <maabwienewsexpress-mdot.state.md.us@shared1.ccsend.com>

Sent: Thursday, January 29, 2026 8:24 AM

To: Mailing List

Subject: Save the Date - BWI Marshall and Martin State Airport Public Workshops/Hearings

Updated Public Workshop/Hearing Save the Date

BWI Marshall & Martin State Airport Noise Zone - Updated Studies and Public Workshop/Hearing Notice

MAA is updating the Airport Noise Zone (ANZ) and Noise Abatement Plan (NAP) for both Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) and Martin State Airport (MTN).

MAA will conduct a Public Workshop and Public Hearing for each study pursuant to the Annotated Code of Maryland Transportation Article Section 5-806(b) on the proposed ANZs. The purpose of each Public Workshop and Public Hearing is to afford all interested persons the opportunity to learn, ask questions, and comment on the ANZ.

The Public Workshop and Public Hearing on the **MTN ANZ** is scheduled for **March 18, 2026 from 6:00 p.m. to 8:00 p.m.**

The Public Workshop and Public Hearing on the **BWI Marshall ANZ** is scheduled for **March 19, 2026 from 3:00 p.m. to 5:00 p.m. and 6:00 p.m. to 8:00 p.m.**

The Draft documents for each study are available on the Maryland Aviation website at www.marylandaviation.com/noise.

BWI NOISE HOTLINE
410-859-7021

VISIT US AT
marylandaviation.com

Office of Environmental Compliance and Sustainability | Noise Program

BWI Thurgood Marshall Airport | P.O. Box 8766 | BWI Airport, MD 21240 US

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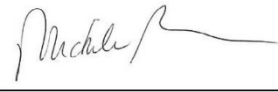
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PUBLIC NOTICE

**Maryland Department of Transportation Maryland
Aviation Administration**

The Maryland Aviation Administration (MAA) will conduct a **Public Workshop and Public Hearing** in accordance with the Annotated Code of Maryland, Transportation Article, Section 5-806 (b), regarding the proposed Airport Noise Zone (ANZ) Update for **Martin State Airport (MTN)**.

Wednesday, March 18, 2026

6:00 p.m. to 8:00 p.m.

Martin State Airport, Hangar 4

701 Wilson Point Rd, Middle River, MD 21220

The purpose of the **Public Workshop and Public Hearing** is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR).

The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Afterwards, attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

Written statements, in lieu of or in addition to oral or recorded comments at the hearing, may be submitted until April 20, 2026, to BRineer@bwiairport.com. The MTN ANZ document is available on the MAA website: <https://marylandaviation.com/environmental/airport-noise/>. Members of the public who cannot access the document online can find it at select local libraries or contact the Outreach Team (see below) to request accommodations.

ADA and Limited English Proficiency Compliance Notice:

Individuals planning to attend the Public Workshop and Public Hearing who require auxiliary aids, services, or other accommodations, or who have limited ability to speak or understand English and wish to receive interpretation or translation services, are encouraged to contact the Outreach Team at least 48 hours in advance of the meeting. The Outreach Team may be reached by phone at 240-200-5176 or by email at MDOT-MAA-ANZ@assedollc.com.

Baltimore Sun

March 8, 2026

39719

company's technology initiatives & projects. Work w/ business stakeholders, project teams & tech staff to translate reqs into models, applications & tools. Req. Masters in CS, M.S. in Eng. w/ Python, Java, C++, exp. w/ AUMI, Frameworks (e.g. TensorFlow, PyTorch), statistical and knowledge of data engineering concepts. APIs and cloud based AUMI platforms (AWS, Azure, Hybrid) work. Location: Send resume to: traversetech@comcast.net, 10000 N. 10th St., Suite 100, Overland Park, KS 66150.

Medical Assistant
Perform administrative and clinical duties under the direction of a physician. Schedule appointments, maintain medical records, taking and coding information for insurance purposes. Recent visit signs and medical history prepare patients for visit and administer medication as directed by physician. Salary \$43,144. Perceived exp. 1-2 yrs. No exp. offered. Resumes to: Personnel@CSC.com, 6095 Marshfield Drive, Suite 130, Elmhurst, MD 21027.

Financial Manager
Preparing financial activity reports, financial statements & forecasts for the company. Managing company finances & enforcing regulatory compliance. Bachelor's degree in accounting (U.S. Business Administration or Foreign equivalent) OR 48 months of experience as a Financial Manager or related occupation. Wage: \$192,544/yr. M-F 40hrs/wk. Mail resume to: STONE ACTION LLC, Attn: 9050 Maier Rd, Ste 112, Laurel, MD, 20723.

developers to design, develop, test, deploy & maintain cloud (virtual assistant). Req's: BS/eq equiv. 3 yrs. exp. Salary: \$140,700-\$179,800 per annum. Employees may also receive benefits package including a 401(k) company matched retirement savings plan, health plans, paid time off & holiday pay. Company is an equal opportunity employer & will consider all applications without regard to race, gender, ethnicity, sex, age, color, religion, national origin, veteran status, disability or any other characteristic protected by law. To view the EEO is the law poster click here: <http://www.eoc.gov/eoc/cpl/eo12958.pdf>. Applicants w/ disabilities that require an accommodation or assistance a position, email employment@stoneaction.com. This is a dedicated line designed exclusively to assist job seekers whose disability prevents them from being able to apply online. Messages left for other purposes will not receive a response. Submit resume w/ ref to Reg & L241414 to: resumes@stoneaction.com.

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LEGAL NOTICE
PUBLIC NOTICE
Maryland Department of Transportation
Maryland Aviation Administration
The Maryland Aviation Administration (MAA) will conduct a Public Workshop and Public Hearing in accordance with Section 5-106 (b) of the Annotated Code of Maryland Transportation Article, regarding the proposed Airport Noise Zone (ANZ) Update for Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall).
Thursday, March 18, 2016
8:30 a.m. to 5:00 p.m. and 6:00 p.m. to 8:00 p.m.
Maryland Aviation Administration Building 901 Corporate Blvd.,
Linthicum Heights, MD 21090
The purpose of the Public Workshop and Public Hearing is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The BWI Marshall ANZ will be incorporated into the Code of Maryland Regulations (COMAR). The workshop and hearing will be held in two identical sessions: 8:30-5:00 p.m. and 6:00-8:00 p.m. to accommodate the public's schedules. The sessions will feature same content regarding the existing and proposed boundaries of the BWI Marshall ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with informational display boards.
MAA representatives will be available to answer questions and discuss points of interest throughout the session. Attendees will have the opportunity to submit formal comments throughout the event, which will be recorded by a hearing officer.
Written statements, in lieu of or in addition to oral or recorded comments at the hearing, may be submitted until April 30, 2016, to: blu@maadep.state.md.us. The BWI Marshall ANZ draft document is available on the MAA website: <http://www.marylandaviation.com/environmental/airport-noise/>. Members of the public who cannot access the document online can find it at selected local libraries or contact the Outreach Team (see below) to request accommodations.
ADA and United English Proficiency Compliance Notice:
Individuals planning to attend the Public Workshop and Public Hearing who require auxiliary aids, services, or other accommodations, or who have limited ability to speak or understand English and wish to receive interpretation or translation services, are encouraged to contact the Outreach Team at least 48 hours in advance of the meeting. The Outreach Team may be reached by phone at 240-299-5176 or by email at 30522-MAA-ANZ@state.md.us.
Baltimore Sun March 8, 2016 10P07

PUBLIC NOTICE
Maryland Department of Transportation
Maryland Aviation Administration
The Maryland Aviation Administration (MAA) will conduct a Public Workshop and Public Hearing in accordance with the Annotated Code of Maryland, Transportation Article, Section 5-106 (b), regarding the proposed Airport Noise Zone (ANZ) Update for Martin State Airport (MTN).
Wednesday, March 16, 2016
6:00 p.m. to 8:00 p.m.
Martin State Airport, Runway 6
701 White Point Rd, Middle River, MD 21220
The purpose of the Public Workshop and Public Hearing is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR). The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.
Written statements, in lieu of or in addition to oral or recorded comments at the hearing, may be submitted until April 30, 2016, to: blu@maadep.state.md.us. The MTN ANZ document is available on the MAA website: <http://www.marylandaviation.com/environmental/airport-noise/>. Members of the public who cannot access the document online can find it at selected local libraries or contact the Outreach Team (see below) to request accommodations.
ADA and United English Proficiency Compliance Notice:
Individuals planning to attend the Public Workshop and Public Hearing who require auxiliary aids, services, or other accommodations, or who have limited ability to speak or understand English and wish to receive interpretation or translation services, are encouraged to contact the Outreach Team at least 48 hours in advance of the meeting. The Outreach Team may be reached by phone at 240-299-5176 or by email at 30522-MAA-ANZ@state.md.us.
Baltimore Sun March 8, 2016 10P09

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This is to certify that the annexed legal advertisement has been published in the publications and insertions listed below. "Project MTN Workshop 3/18/2026..." was published in the:

The Avenue News 03/12/26
The Dundalk Eagle 03/12/26



Orestes Baez
President & Publisher

PUBLIC NOTICE
Maryland Department of Transportation
Maryland Aviation

The Maryland Aviation Administration (MAA) will conduct a Public Workshop and Public Hearing in accordance with the Annotated Code of Maryland, Transportation Article, Section 5-806 (b), regarding the proposed Airport Noise Zone (ANZ) Update for Martin State Airport (MTN).

Wednesday, March 18, 2026
6:00 p.m. to 8:00 p.m.
Martin State Airport, Hangar 4
701 Wilson Point Rd. Middle River, MD 21220

The purpose of the **Public Workshop and Public Hearing** is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR).

The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Afterwards, attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

Written statements, in lieu of or in addition to oral or recorded comments at the hearing, may be submitted until April 20, 2026, to OBaez@bwaairport.com. The MTN ANZ document is available on the MAA website: <https://mar.vlandaviation.com/cnvironmental/airport-noise/>. Members of the public who cannot access the document online can find it at select local libraries or contact the Outreach Team (see below) to request accommodations.

ADA and Limited English Proficiency Compliance Notice:
Individuals planning to attend the Public Workshop and Public Hearing who require auxiliary aids, services, or other accommodations, or who have limited ability to speak or understand English and wish to receive interpretation or translation services, are encouraged to contact the Outreach Team at least 48 hours in advance of the meeting. The Outreach Team may be reached by phone at 240-200-5176 or by email at MDOT-MAA-ANZ@bassedollie.com.

3100259 AVE/DE 3/12/2026

E.2 Public Notices



Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Kathryn Thomson
Acting Secretary
Shannetta R. Griffin, P.E.
Executive Director/CEO

MTN Distribution List for Notice of Public Workshop/Hearing

Senator Angela D. Alsobrooks
100 South Charles Street., Suite 1710
Baltimore, MD 21201

Senator Christopher Van Hollen
1040 Park Avenue., Suite 120
Baltimore, MD 21201

Representative Johnny Olszewski Jr.
Baltimore County
110 West Road Suite 420 Building B
Towson, MD 21204

State Senator J. B. Jennings
Baltimore County/Harford County
11 Bladen St., Room 322
Annapolis, MD 21401

Delegate Ryan M. Nawrocki
Baltimore County
11 Bladen St., Room 322
Annapolis, MD 21401

Delegate Kathy Szeliga
Baltimore County
6 Bladen St., Room 322
Annapolis, MD 21401

PO Box 8766, BWI Airport, Maryland 21240-0766 | 410.859.7100 | 800.435.9294 | Maryland Relay TTY 410.859.7727 | marylandaviation.com

Archived: Thursday, April 23, 2026 10:55:14 AM

From: "George III. Robinson"

Mail received time: Fri, 13 Mar 2026 18:07:49 +0000

Subject: 2026 BWI Marshall / Martin State Airport Noise Zone (ANZ) Update

Attachments:

989183e5-53e2-43b0-bbd9-52a71fde65ac.png 

Hello Mr. Sloan and Yojinde,

I hope all is well.

I wanted to reach out to ensure that you and the Senator's team are aware of an upcoming action that will impact constituents: we are updating the Airport Noise Zones (ANZ) and Noise Abatement Plans (NAP) for both Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) and Martin State Airport (MTN). This email serves as a notification of the upcoming Public Workshops and Public Hearings.

Martin State Airport (MTN)

- **Date:** Wednesday, March 18, 2026
- **Time:** 6:00 p.m. ? 8:00 p.m.
- **Location:** Hangar 4, 701 Wilson Point Rd, Middle River, MD 21220

BWI Marshall

- **Date:** Thursday, March 19, 2026
- **Time:** Two identical sessions: 3:00 p.m. ? 5:00 p.m. and 6:00 p.m. ? 8:00 p.m.
- **Location:** MAA Offices, 991 Corporate Blvd, Linthicum Heights, MD 21090

The purpose of the workshops and hearings is to allow all interested individuals to learn about the ANZ updates, review contour maps illustrating the existing and proposed ANZ boundaries, ask questions, and submit formal comments. Materials at MTN will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. At BWI Marshall, materials will be presented in an open-house gallery format with display boards and a subtitled informational video shown continuously. MAA representatives will be available at both locations to answer questions and discuss points of interest, and attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

Draft ANZ documents for both airports are available on the MAA website:
<https://marylandaviation.com/environmental/airport-noise/>.

Sincerely,
George



George R. Robinson III
Legislative Affairs Manager
Maryland Aviation Administration (MAA)
Mobile | 667.967.8097
Email | Grobinson1@bwiairport.com

MAA - BWI AIRPORT Terminal Building: Upper Level

Archived: Thursday, April 23, 2026 10:55:18 AM

From: "George III. Robinson"

Mail received time: Fri, 13 Mar 2026 18:11:08 +0000

Subject: 2026 BWI Marshall / Martin State Airport Noise Zone (ANZ) Update

Attachments:

989183e5-53e2-43b0-bbd9-52a71fde65ac.png 

Hello, Deb and Jessica:

I hope you both are well.

I wanted to reach out to ensure that you and the Senator's team are aware of an upcoming action that will impact constituents: we are updating the Airport Noise Zones (ANZ) and Noise Abatement Plans (NAP) for both Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) and Martin State Airport (MTN). This email serves as a notification of the upcoming Public Workshops and Public Hearings.

Martin State Airport (MTN)

- **Date:** Wednesday, March 18, 2026
- **Time:** 6:00 p.m. ? 8:00 p.m.
- **Location:** Hangar 4, 701 Wilson Point Rd, Middle River, MD 21220

BWI Marshall

- **Date:** Thursday, March 19, 2026
- **Time:** Two identical sessions: 3:00 p.m. ? 5:00 p.m. and 6:00 p.m. ? 8:00 p.m.
- **Location:** MAA Offices, 991 Corporate Blvd, Linthicum Heights, MD 21090

The purpose of the workshops and hearings is to allow all interested individuals to learn about the ANZ updates, review contour maps illustrating the existing and proposed ANZ boundaries, ask questions, and submit formal comments. Materials at MTN will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. At BWI Marshall, materials will be presented in an open-house gallery format with display boards and a subtitled informational video shown continuously. MAA representatives will be available at both locations to answer questions and discuss points of interest, and attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

Draft ANZ documents for both airports are available on the MAA website:

<https://marylandaviation.com/environmental/airport-noise/>.

Sincerely,
George



George R. Robinson III
Legislative Affairs Manager
Maryland Aviation Administration (MAA)
Mobile | 667.967.8097
Email | Grobinson1@bwiairport.com

Archived: Thursday, April 23, 2026 11:45:58 AM
From: "George III. Robinson"
Mail received time: Fri, 13 Mar 2026 18:16:51 +0000
Subject: 2026 Martin State Airport Noise Zone (ANZ) Update
Attachments:
[989183e5-53e2-43b0-bbd9-52a71fde65ac.png](#)

Hello, Chris:

I hope all is well.

I wanted to reach out to ensure that you and the Congressman's team are aware of an upcoming action that will impact your constituents: we are updating the Airport Noise Zones (ANZ) and Noise Abatement Plans (NAP) at Martin State Airport (MTN). This email serves as a notification of the upcoming Public Workshops and Public Hearings.

Public Workshop and Public Hearing Information

Wednesday, March 18, 2026
6:00 p.m. to 8:00 p.m.
Martin State Airport, Hangar 4
701 Wilson Point Rd, Middle River, MD 21220

The purpose of the Public Workshop and Public Hearing is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR).

The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Afterwards, attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

The MTN ANZ document is available on the MAA website: <https://marylandaviation.com/environmental/airport-noise/>.

Sincerely,
George



Easy come, easy go.



George R. Robinson III

Legislative Affairs Manager
Maryland Aviation Administration (MAA)
Mobile | 667.967.8097
Email | Grobinson1@bwairport.com

MAA - BWI AIRPORT Terminal Building: Upper Level
P.O. Box 8766, BWI Airport, MD 21240-0766
www.marylandaviation.com

Archived: Thursday, April 23, 2026 10:55:12 AM
From: "George III. Robinson"
Mail received time: Fri, 13 Mar 2026 17:42:48 +0000
Subject: 2026 Martin State Airport Noise Zone (ANZ) Update
Attachments:
[989183e5-53e2-43b0-bbd9-52a71fde65ac.png](#)

EMAIL NOTIFICATION: Senator J.B. Jennings

Dear Senator Jennings,

The Maryland Aviation Administration (MAA) will conduct a Public Workshop and Public Hearing in accordance with the Annotated Code of Maryland, Transportation Article, Section 5-806 (b), regarding the proposed Airport Noise Zone (ANZ) Update for Martin State Airport (MTN). We previously delivered this notification to your Annapolis office on February 25th. This email serves as a friendly reminder.

Public Workshop and Public Hearing Information

Wednesday, March 18, 2026
6:00 p.m. to 8:00 p.m.
Martin State Airport, Hangar 4
701 Wilson Point Rd, Middle River, MD 21220

The purpose of the Public Workshop and Public Hearing is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR).

The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Afterwards, attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

Written statements, in lieu of or in addition to oral or recorded comments at the hearing, may be submitted until April 20, 2026, to BRineer@bwiairport.com. The MTN ANZ document is available on the MAA website: <https://marylandaviation.com/environmental/airport-noise/>. Members of the public who cannot access the document online can find it at select local libraries or contact the Outreach Team (see below) to request accommodations.

ADA and Limited English Proficiency Compliance Notice:

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Sincerely,
George



George R. Robinson III
Legislative Affairs Manager
Maryland Aviation Administration (MAA)
Mobile | 667.967.8097
Email | Grobinson1@bwiairport.com

Archived: Thursday, April 23, 2026 10:55:07 AM
From: "George III. Robinson"
Mail received time: Fri, 13 Mar 2026 17:48:09 +0000
Subject: 2026 Martin State Airport Noise Zone (ANZ) Update
Attachments:
[989183e5-53e2-43b0-bbd9-52a71fde65ac.png](#)

EMAIL NOTIFICATION: Delegate Ryan Nawrocki

Dear Delegate Nawrocki,

The Maryland Aviation Administration (MAA) will conduct a Public Workshop and Public Hearing in accordance with the Annotated Code of Maryland, Transportation Article, Section 5-806 (b), regarding the proposed Airport Noise Zone (ANZ) Update for Martin State Airport (MTN). We previously delivered this notification to your Annapolis office on February 25th. This email serves as a friendly reminder.

Public Workshop and Public Hearing Information

Wednesday, March 18, 2026
6:00 p.m. to 8:00 p.m.
Martin State Airport, Hangar 4
701 Wilson Point Rd, Middle River, MD 21220

The purpose of the Public Workshop and Public Hearing is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR).

The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Afterwards, attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

Written statements, in lieu of or in addition to oral or recorded comments at the hearing, may be submitted until April 20, 2026, to BRineer@bwairport.com. The MTN ANZ document is available on the MAA website: <https://marylandaviation.com/environmental/airport-noise/>. Members of the public who cannot access the document online can find it at select local libraries or contact the Outreach Team (see below) to request accommodations.

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Sincerely,
George



George R. Robinson III
Legislative Affairs Manager
Maryland Aviation Administration (MAA)
Mobile | 667.967.8097
Email | Grobinson1@bwairport.com

Archived: Thursday, April 23, 2026 10:55:09 AM
From: "George III. Robinson"
Mail received time: Fri, 13 Mar 2026 17:46:28 +0000
Subject: 2026 Martin State Airport Noise Zone (ANZ) Update
Attachments:
[989183e5-53e2-43b0-bbd9-52a71fde65ac.png](#)

EMAIL NOTIFICATION: Delegate Kathy Szeliga

Dear Delegate Szeliga,

The Maryland Aviation Administration (MAA) will conduct a Public Workshop and Public Hearing in accordance with the Annotated Code of Maryland, Transportation Article, Section 5-806 (b), regarding the proposed Airport Noise Zone (ANZ) Update for Martin State Airport (MTN). We previously delivered this notification to your Annapolis office on February 25th. This email serves as a friendly reminder.

Public Workshop and Public Hearing Information

Wednesday, March 18, 2026
6:00 p.m. to 8:00 p.m.
Martin State Airport, Hangar 4
701 Wilson Point Rd, Middle River, MD 21220

The purpose of the Public Workshop and Public Hearing is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR).

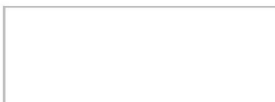
The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Afterwards, attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

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Sincerely,
George



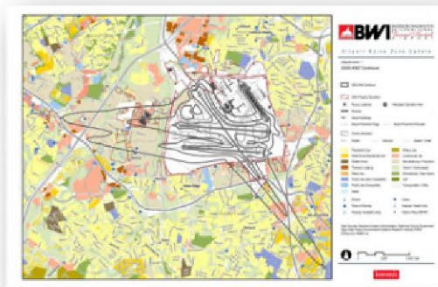
George R. Robinson III
Legislative Affairs Manager
Maryland Aviation Administration (MAA)
Mobile | 667.967.8097

Airport Noise Zone Update Studies

BWI Marshall and Martin State Airports

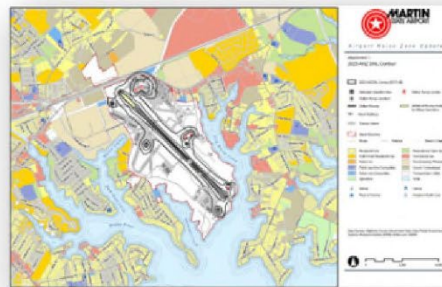
The **Maryland Aviation Administration** is updating the **Airport Noise Zone (ANZ)** and **Noise Abatement Plan (NAP)** for BWI Marshall Airport and Martin State Airports. The ANZ provides the means to identify and control incompatible land development around each Airport, and is a composite of the farthest extents of the annual Day-Night Average (DNL) contours for each of three study years (2025 base, 2030 forecast and 2035 forecast).

MAA will host a **public workshop and hearing** for each study in March – interested parties are encouraged to review the study and attend the workshop and hearing.



BWI Marshall Airport

Thursday, March 19th
3:00 – 5:00 or 6:00 – 8:00 p.m.
991 Corporate Blvd
Linthicum Heights, MD 21090



Martin State Airport

Wednesday, March 18th
6:00 – 8:00 p.m.
Martin State Airport, Hangar 4
701 Wilson Point Rd,
Middle River, MD 21220

For
more
Information:



BWI



MTN

E.3 SAC Notifications

From: MDOT-MAA-ANZ@assedollc.com

Sent: 12/18/26

To: Bruce Rineer

Subject: Save The Date: MAA Martin State Airport Public Information Meeting and Hearing



**MARTIN STATE AIRPORT
PUBLIC INFORMATION
MEETING AND HEARING**



Tuesday, February 10, 2026

6-8 pm

Martin State Airport, Hangar 4

701 Wilson Point Rd, Middle River, MD 21220

Thank you,

BWI Marshall and Martin State Airport Noise Zone

Outreach Team

Phone: 240-200-5176

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>



From: MDOT-MAA-ANZ@assedollc.com

Sent: 12/19/2025

To: Bruce Rineer

Subject: Save The Date Clarification: MAA Martin State Airport Public Information Meeting and Hearing

We apologize for the confusion regarding the meeting month in our previous email. The correct month is February.



Tuesday, February 10, 2026

6-8 pm

Martin State Airport, Hangar 4

701 Wilson Point Rd, Middle River, MD 21220

More details to come!

Thank you,

BWI Marshall and Martin State Airport Noise Zone

Outreach Team

Phone: 240-200-5176

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>



From: MDOT-MAA-ANZ@assedollc.com

Sent: 01/29/2026

To: Bruce Rineer

Subject: Change of Date: Martin State Airport Public Workshop/Hearing

Dear MTN SAC member,

Please note that the date for the previously announced **Public Workshop and Public Hearing** has changed.

New Date: March 18, 2026

Time: 6:00 – 8:00 p.m.

Location: Martin State Airport, Hangar 4



All other details remain the same. We apologize for any inconvenience this change may cause and appreciate your understanding.

The ANZ draft document is available for review on the Maryland Aviation website

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>

Thank you for your continued interest and participation.

Sincerely,

BWI Marshall and Martin State Airport Noise Zone

Outreach Team

Phone: 240-200-5176

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>



From: MDOT-MAA-ANZ@assedollc.com

Sent: 03/09/2026

To: Bruce Rineer

Subject: Martin State Airport Public Workshop/Hearing Invitation

Attachments: 2026_03-09 BWI Workshop SAC email Invite fin.pdf

Dear SAC Member

The Maryland Aviation Administration (MAA) is updating the **2025 Airport Noise Zone (ANZ)** for **Martin State Airport**, and we are seeking input from key stakeholders like you!

Your participation is essential to this process, and we appreciate your engagement. *Please note that this will be the last meeting for this process.* Please find attached the invitation with details about the upcoming **Public Workshop and Public Hearing**.

Date: March 18, 2026

Time: 6:00 – 8:00 p.m.

Location: Martin State Airport, Hangar 4

Thank you,

BWI Marshall and Martin State Airport Noise Zone

Outreach Team

Phone: 240-200-5176

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>

<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>





Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Kathryn Thomson
Acting Secretary
Shannetta R. Griffin, P.E.
Executive Director/CEO

March 09, 2026

Dear SAC Member,

The Maryland Aviation Administration (MAA) will conduct a **Public Workshop and Public Hearing** in accordance with the Annotated Code of Maryland, Transportation Article, Section 5-806 (b), regarding the proposed Airport Noise Zone (ANZ) Update for **Martin State Airport (MTN)**.

Wednesday, March 18, 2026

6:00 p.m. to 8:00 p.m.

Martin State Airport, Hangar 4

701 Wilson Point Rd, Middle River, MD 21220

The purpose of the **Public Workshop and Public Hearing** is to allow interested individuals the opportunity to learn about the ANZ, ask questions, and submit formal comments. The MTN ANZ will be incorporated into the Code of Maryland Regulations (COMAR).

The session will feature contour maps illustrating the existing and proposed boundaries of the MTN ANZ, along with an overview of the ANZ update process. The material will be presented in an open-house format with display boards, followed by a live informational presentation at 6:30 p.m. MAA representatives will be available to answer questions and discuss points of interest throughout the session. Afterwards, attendees will have the opportunity to submit formal comments, which will be recorded by a hearing officer.

Written statements, in lieu of or in addition to oral or recorded comments at the hearing, may be submitted until April 20, 2026, to BRineer@bwiairport.com. The MTN ANZ draft document is available on the MAA website: <https://marylandaviation.com/environmental/airport-noise/>. Members of the public who cannot access the document online can find it at selected local libraries or contact the Outreach Team (see below) to request accommodations.

If you have any questions or would like to discuss the meeting or accommodations in more detail, please contact the Outreach Team at 240-200-5176 or by email at MDOT-MAA-ANZ@assedollc.com. We look forward to seeing you there.

Sincerely,

Bruce Rineer, Manager
Noise Program Section
Office of Environmental Compliance and Sustainability

701 Wilson Point Road Box 1, Baltimore, MD 21220 | 410.682.8800 | fax 410.682.8822 | MD Relay ITY 410.859.7727 | martinstateairport.com

From: MDOT-MAA-ANZ@assedollc.com
Sent: 03/17/2026
To: Bruce Rineer
Subject: Reminder: Martin State Airport Public Workshop/Hearing

Good afternoon,

This is a friendly reminder about this week's **Public Workshop and Public Hearing** to discuss the **Martin State Airport Noise Zone (ANZ) Update**. Community members are encouraged to attend and share their comments. This meeting is open to all.

Meeting Details:

Wednesday, March 18, 2026, from 6:00 p.m. – 8:00 p.m.
at Martin State Airport, Hangar 4 – 701 Wilson Point Rd Middle River, MD 21220

If you have any questions, please contact our Outreach Team at 240-200-5176 or MDOT-MAA-ANZ@assedollc.com.

We look forward to your participation!

Regards,

Bruce Rineer
Manager, Noise Section
Maryland Aviation Administration
Office of Environmental Compliance and Sustainability
Division of Planning & Engineering

<https://marylandaviation.com/environmental/airport-noise/bwi-marshall-airport-noise-zone/>
<https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>



E.4 Distribution to Libraries



Wes Moore
Governor

Aruna Miller
Lieutenant Governor

Kathryn Thomson
Acting Secretary

Shannetta R. Griffin, P.E.
Executive Director/CEO

MARYLAND AVIATION ADMINISTRATION 2026 AIRPORT NOISE ZONE UPDATE

February 2026

I acknowledge receipt of the following documents:

- 4. Notice Document
- 5. ANZ Update Document
- 6. ANZ Map Set

Location

Spivey River

Print Name

[Signature]

Signature

2/17/26

Date of Signature

701 Wilson Point Road Box 1, Baltimore, MD 21220 | 410.682.8800 | fax 410.682.8822 | MD Relay TTY 410.859.7727 | martinstateairport.com



Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Kathryn Thomson
Acting Secretary
Shannetta R. Griffin, P.E.
Executive Director/CEO

**MARYLAND AVIATION ADMINISTRATION
2026 AIRPORT NOISE ZONE UPDATE**

February 2026

I acknowledge receipt of the following documents:

1. Library Notice Document
2. ANZ Update Document
3. ANZ Map Set

Essex Branch

Library Location

Michael Jackson

Print Name

Michael Jackson

Signature

2/17/26

Date of Signature

701 Wilson Point Road Box 1, Baltimore, MD 21220 | 410.682.8800 | fax 410.682.8822 | MD Relay TTY 410.859.7727 | martinstateairport.com



Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Kathryn Thomson
Acting Secretary
Shannetta R. Griffin, P.E.
Executive Director/CEO

**MARYLAND AVIATION ADMINISTRATION
2026 AIRPORT NOISE ZONE UPDATE**

February 2026

I acknowledge receipt of the following documents:

- 4. Notice Document
- 5. ANZ Update Document
- 6. ANZ Map Set

FBO / KMTN

Location

Scott Bliss

Print Name



Signature

2/17/24

Date of Signature

701 Wilson Point Road Box 1, Baltimore, MD 21220 | 410.682.8800 | fax 410.682.8822 | MD Relay TTY 410.859.7727 | martinstateairport.com





Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Kathryn Thomson
Acting Secretary
Shannetta R. Griffin, P.E.
Executive Director/CEO

**MARYLAND AVIATION ADMINISTRATION
2026 AIRPORT NOISE ZONE UPDATE**

February 2026

I acknowledge receipt of the following documents:

1. Library Notice Document
2. ANZ Update Document
3. ANZ Map Set

White Marsh Branch Library

Library Location

Jazmin Ortiz-Sepulveda

Print Name

Jazmin Ortiz-Sepulveda

Signature

2/17/2026

Date of Signature

701 Wilson Point Road Box 1, Baltimore, MD 21220 | 410.682.8800 | fax 410.682.8822 | MD Relay TTY 410.859.7727 | martinstateairport.com

E.5 Public Workshop Materials

The 2025 MTN Airport Noise Zone (ANZ) Update

What is the MTN ANZ?

The ANZ shows the largest possible extent of current and predicted noise exposure contours for the ten years following its development.

As specific types of land use are limited within the ANZ, it is used to help control development that is incompatible with Day-Night Average Sound Levels (DNL) above 65 decibels.



What we are doing

The MTN ANZ team is currently completing the 2025 ANZ update in accordance with Maryland regulations.

This includes:

- An update to the ANZ map to reflect changes to flight paths and aircraft fleets.
- A review of the existing Noise Abatement Plan.
- A public meeting to review the ANZ and collect feedback and comments.

Why it matters to you

Your input can help shape noise abatement plans and measures.

The ANZ helps control incompatible land use development around the airport.



Maryland Airport Noise Zone (ANZ) Regulations

Maryland Environmental Noise Act of 1974

- “Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems.”
- Maryland law requires MAA to complete an ANZ update approximately every 5 years.
- The certified ANZ consists of Day-Night Average Sound Level (DNL) contours at 65, 70, and 75 decibels.

Code of Maryland Regulations (COMAR)

Chapter 11.03.03

- Defines the prediction method to be used to develop noise contours of equal noise exposure.

Section 11.03.03.05

- Provides a process for permits for construction within the noise zone surrounding a state-owned airport.

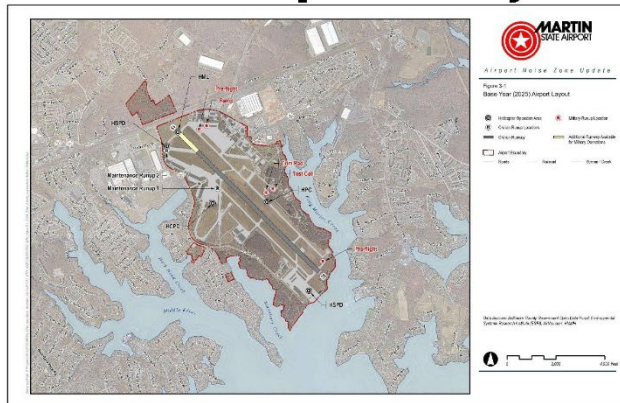


Airport Noise Zone (ANZ) Update Scope and Process

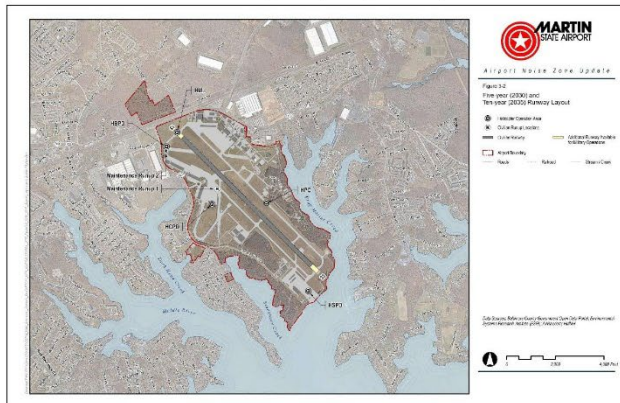
- Form and engage with Stakeholder Advisory Committee (SAC)
- Prepare base year, 5-year, and 10-year forecast noise contours
- Compile ANZ (composite of the three contour sets)
- Conduct land use inventory within ANZ
- Review existing Noise Abatement Plan (NAP)
- **Conduct public hearing/workshop**
- Update Code of Maryland Regulations (COMAR)



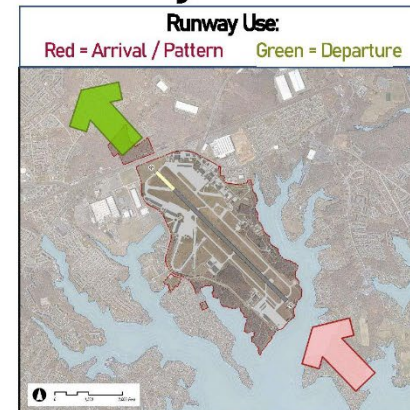
Airport Layout and Runway Use



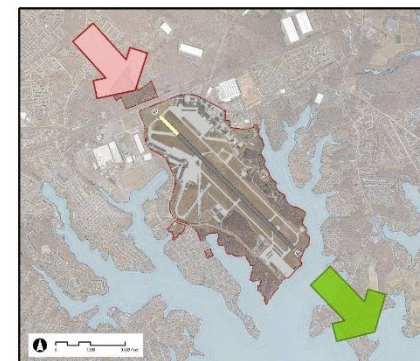
Base Year (2025) Airport Layout



Future Years (2030 & 2035) Airport Layout



West Flow
(Runway 33)
Use: 54%



East Flow
(Runway 15)
Use: 46%



Annual Flight Operations

Scenario Year	Itinerant Operations				Local Operations		Total	Average Annual Day Operations
	Air Carrier	Air Taxi	General Aviation	Military	General Aviation	Military		
2025	5	2,772	40,005	1,283	44,934	490	89,489	245.18
2030	5	3,202	42,505	459	46,617	0	92,788	254.21
2035	5	3,632	43,242	459	48,362	0	95,700	262.19

Source: FAA TAF issued January 2025

- Itinerant operations begin or end at Martin State and travel to/from a different airport.
- Local operations start and end at Martin State and are referred to as "circuits."



Air Carrier Example
(Embraer ERJ-175)



Air Taxi Example
(Cessna 680-A)



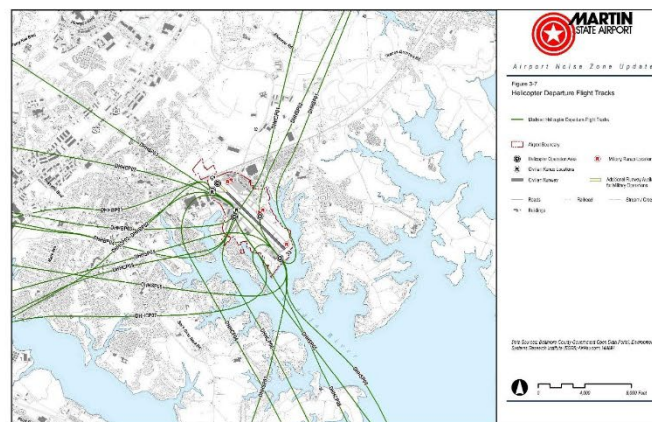
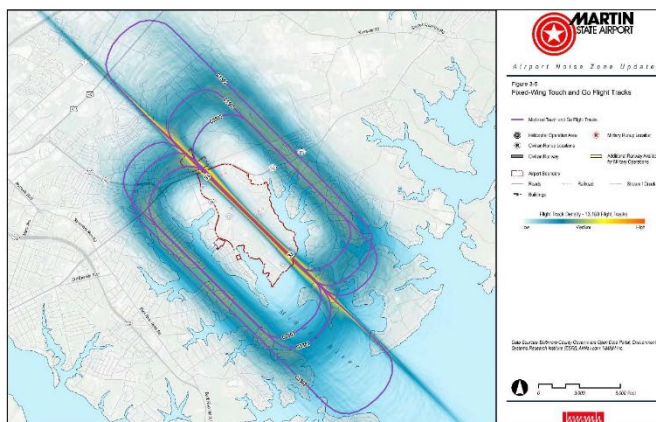
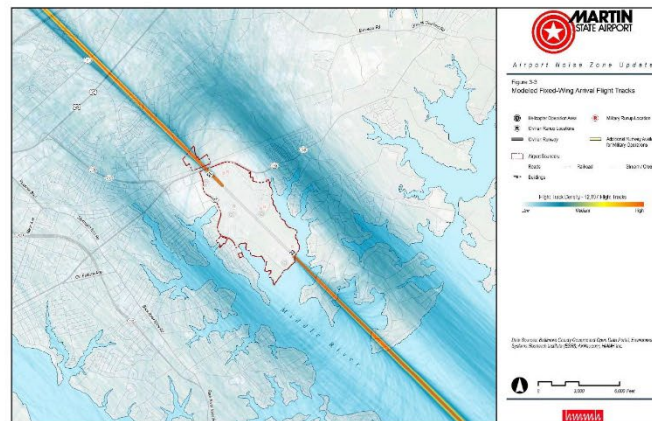
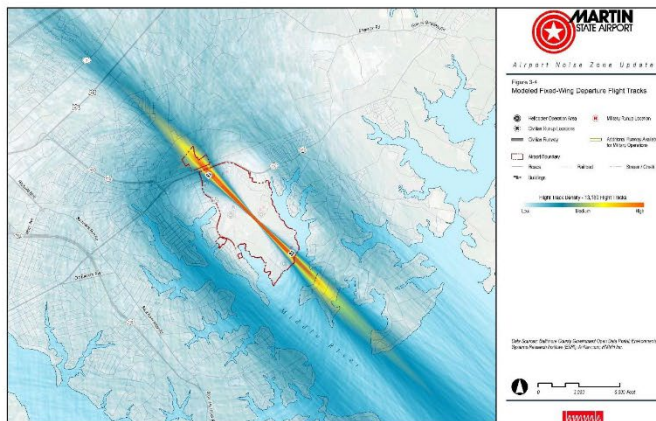
General Aviation Example
(Cessna 172)



Military Example
(Fairchild Republic
A-10C)



Civilian Fixed-Wing Flight Tracks



2025 Martin State Airport Noise Zone



The Airport Noise Zone is a composite of the farthest extents of the DNL contours for each of the study years.



Airport Noise Zone Update

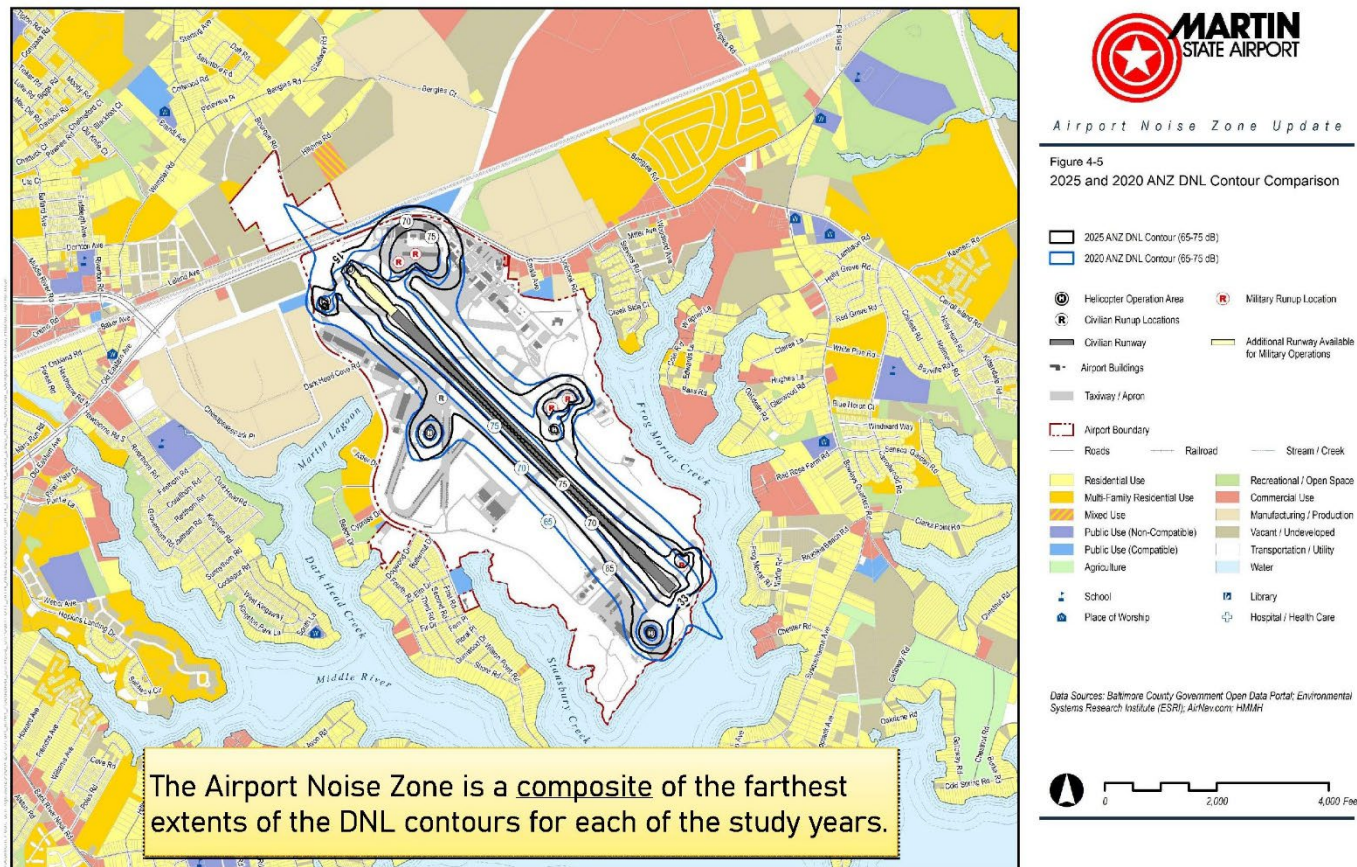
Figure ES-1
2025 ANZ DNL Contour

- 2025 ANZ DNL Contour (65-75 dB)
- Helicopter Operation Area
- Civilian Runup Locations
- Civilian Runway
- Airport Buildings
- Taxiway / Apron
- Airport Boundary
- Roads
- Railroad
- Stream / Creek
- Residential Use
- Multi-Family Residential Use
- Mixed Use
- Public Use (Non-Compatible)
- Public Use (Compatible)
- Agriculture
- School
- Places of Worship
- Military Runup Location
- Additional Runway Available for Military Operations
- Recreational / Open Space
- Commercial Use
- Manufacturing / Production
- Vacant / Undeveloped
- Transportation / Utility
- Water
- Library
- Hospital / Health Care

Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HAMM



2020 & 2025 Airport Noise Zone Comparison



Noise Abatement Plan Measures

Noise Abatement Measures

Departure Procedures

VFR Piston-Engine Aircraft

Runway 15/33 – Unless otherwise instructed by Air Traffic Control (ATC), aircraft fly runway heading to 1000' Mean Sea Level (MSL) prior to turning to the ATC approved on-course heading or crosswind leg of the traffic pattern.

VFR Turbine Powered Aircraft

Runway 15/33 – Unless otherwise instructed by ATC, aircraft shall fly runway heading to 1,500' MSL prior to turning to the ATC approved, on-course heading or crosswind leg of the traffic pattern.

VFR Helicopter Departures

Unless operating under a Letter of Agreement (LOA) with MTN ATC specifying otherwise, helicopters shall climb to 500' AGL on initial departure heading before turning on-course.

All IFR Departures

IFR departures shall be accomplished in accordance with ATC direction or clearance.

Closed Traffic Patterns

A left-hand traffic pattern shall be used at MTN unless otherwise directed by ATC. Piston fixed-wing aircraft should fly runway heading until reaching 1,000' MSL prior to turning to the crosswind leg of the traffic pattern. Turbine aircraft should fly runway heading until reaching 1,500' MSL prior to turning to the crosswind leg of the traffic pattern.

Touch-and-Go or Practice Approaches

No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance staff.

Arrival Procedures

VFR and IFR aircraft approach should, to the maximum extent feasible, maintain the highest practical altitude, commensurate with flight and ATC procedures in order to minimize aircraft noise exposure to communities underlying the final approach courses.

Aircraft Maintenance Engine Run-up Areas

Aircraft maintenance engine run-ups are to be accomplished only in areas designated by the Chief, MTN Operations & Maintenance, in accordance with MTN Tenant Directive 200.2.

Land Use Measures

Control of Incompatible Development

Includes the ANZ program, BAZA, and Noise Zone Notification in Real Estate transactions

Noise Assistance Programs

For residents and schools in the ANZ, to reduce number of affected properties and noise impacts

Programmatic Measures

Continued Monitoring and Annual Review

Efforts to monitor the overall noise abatement program



Additional Resources

Find the ANZ Document at the following places:

- Electronic Copy on ANZ Project Website
 - <https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>
- Hard Copies at the Following Libraries
 - Baltimore County Library, 1110 Eastern Blvd, Essex, MD 21221
 - White Marsh Branch Library, 8133 Sandpiper Cir, Nottingham, MD 21236

How to Comment:

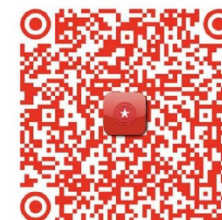
Email Bruce Rineer: BRineer@bwiairport.com

Speak to the Public Hearing Officer at **this meeting**



Please provide
comments by
April 20, 2026

MTN ANZ Project
Website



Existing MTN
Noise Abatement
Plan





2025 Martin State Airport Noise Zone Update

Public Workshop
Martin State Airport

March 18, 2026
6:30 PM – 7:00 PM

1

Welcome to Martin State

Safety Briefing

- » Follow emergency exits
- » Call 911
- » Assist those who need assistance
- » Be sure to take a head count during the emergency event
- » Nearest AED –#4 (Hangar 5)
- » Nearest Fire Extinguisher – Room 527 (Hangar 5)
- » Accountability Site: Parking lot outside of Hangar 4
- » Always report any hazards in the meeting room



Agenda

- » Welcome and Introductions
- » Airport Noise Zone (ANZ) Overview
- » Noise Model Inputs
- » Noise Contours and Land Use
- » Noise Abatement Plan (NAP)
- » Questions

Introductions

- » MAA Representatives
- » Consultant Team
- » Opening Remarks



Airport Noise Zone (ANZ) Regulations

The 2025 MTN Airport Noise Zone (ANZ) Update

What is the MTN ANZ?

- » Furthest possible extent of current and 10-year predicted noise exposure contours.
- » Helps control development that is incompatible with Day-Night Average Sound Levels (DNL) above 65 decibels.



The 2025 MTN Airport Noise Zone (ANZ) Update

What we are doing

- » Updating ANZ map to reflect changes to flight paths and aircraft fleets.
- » Reviewing the existing Noise Abatement Plan.
- » Holding a public meeting to review the ANZ and collect feedback and comments.



The 2025 MTN Airport Noise Zone (ANZ) Update

Why it matters to you

- » Your input can help shape noise abatement plans and measures.
- » The ANZ helps control incompatible land use development around the airport.



Maryland Airport Noise Zone (ANZ) Regulations

- » Maryland law requires MAA to complete an ANZ update approximately every 5 years.
- » The certified ANZ consists of Day-Night Average Sound Level (DNL) contours at 65, 70, and 75 decibels printed on Tax Maps.
- » Maryland Environmental Noise Act of 1974:
 - *“Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems.”*



State Law and Regulations

Transportation Code	Code of Maryland Regulations (COMAR)
<u>Noise Zone Regulations; Part I</u> The purpose of this subtitle is to: ➤ Provide a positive basis for abatement of existing noise problems in communities near airports and to prevent new noise problems; and ➤ Protect the health and general welfare of the occupants of land near airports.	<u>Chapter 11.03.03</u> ➤ Defines the prediction method to be used to develop 'noise contours of equal noise exposure.' ➤ Provides direction for development of contours, including 5 and 10 year, plus cumulative condition, provides methods for determination of impacted land use areas, and direction on noise abatement plans.
<u>Noise Zone Regulations; Part II</u> ➤ Requires assessment of the noise environment, existing projected future use, following procedures the Executive Director establishes, delineates a "noise zone", requires development of a noise abatement plan - every five years.	<u>Section 11.03.03.05</u> ➤ Provides a process for permits for construction within the Noise Zone Surrounding a State-Owned Airport.



Expectations

The ANZ provides a means to:

- » Understand existing and future noise exposure around Martin State
- » Assist local land use jurisdictions in the control of potentially incompatible development
- » Identifies potential strategies to mitigate noise, including voluntary noise abatement procedures

The ANZ cannot:

- » Restrict the hours of operations
- » Impose curfews or restrictions
- » Require the FAA to change flight procedures
- » Be used to limit demand or forecast growth

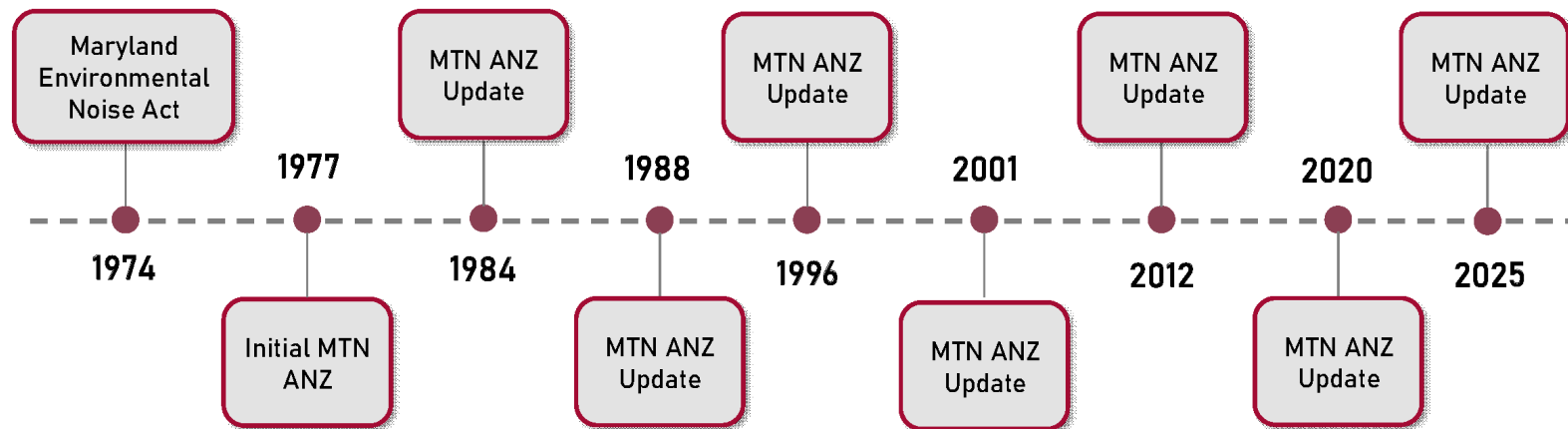


ANZ Update Scope and Process

- » Form and engage with Stakeholder Advisory Committee (SAC)
- » Prepare base year, 5-year, 10-year forecast noise contours
- » Compile ANZ (composite of the three contour sets)
- » Conduct land use inventory within ANZ
- » Review existing Noise Abatement Plan (NAP)
- » Conduct public workshop & hearing
- » Update Code of Maryland Regulations (COMAR)



MTN ANZ History

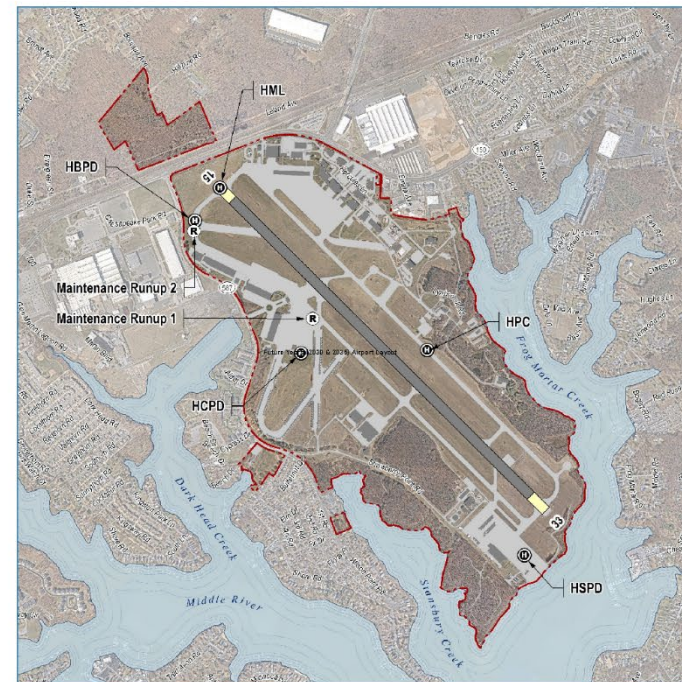


ANZ Noise Model Inputs

Airport Layout



Base Year (2025) Airport Layout



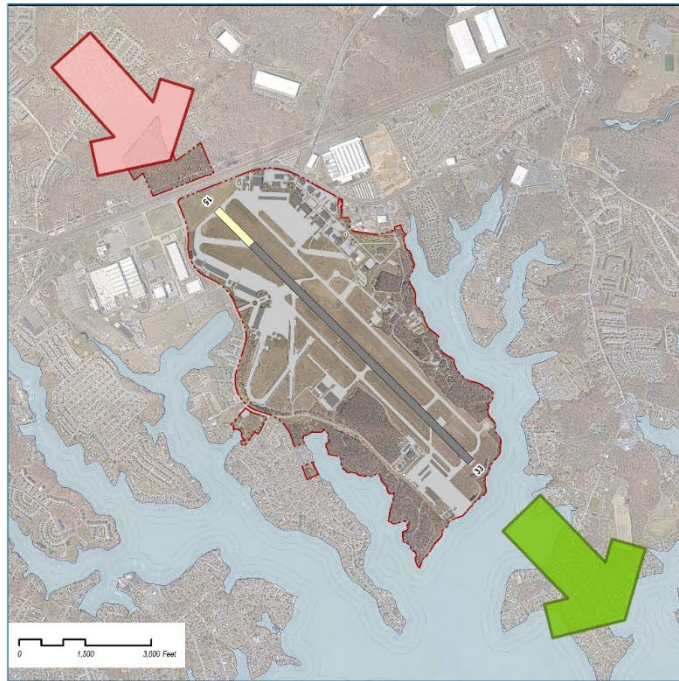
Future Years (2030 & 2035) Airport Layout



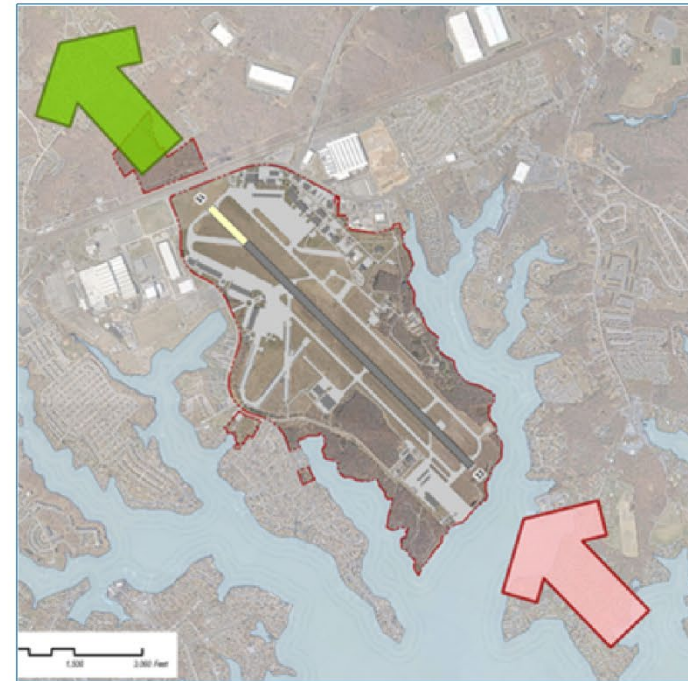
ANZ Noise Model Inputs

15

Runway Use



East Flow (Runway 15) Use: 46%



West Flow (Runway 33) Use: 54%



Annual Flight Operations

Scenario Year	Itinerant Operations				Local Operations		Total	Average Annual Day Operations
	Air Carrier	Air Taxi	General Aviation	Military	General Aviation	Military		
2025	5	2,772	40,005	1,283	44,934	490	89,489	245.18
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Source: FAA TAF issued January 2025

- **Itinerant** operations begin or end at Martin State and travel to/from a different airport.
- **Local** operations start and end at Martin State and are referred to as “circuits.”



Air Carrier Example
(Embraer ERJ-175)



Air Taxi Example
(Cessna 680-A)



General Aviation Example
(Cessna 172)



Military Example
(Fairchild Republic A-10C)



MARTIN
STATE AIRPORT

ANZ Noise Model Inputs

17

Annual Flight Operations – A-10C Divestment

MD ANG A-10C Aircraft Left MTN in September 2025

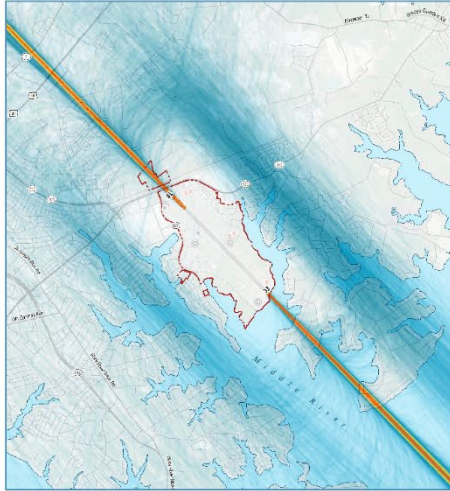
- » Only included in Base Year (2025) modeling.
- » Transient military aircraft are still modeled in all scenarios.



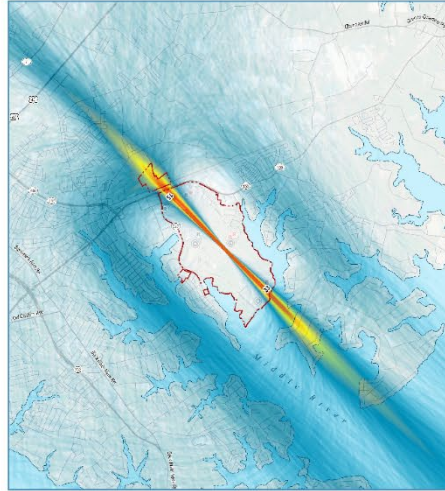
ANZ Noise Model Inputs

18

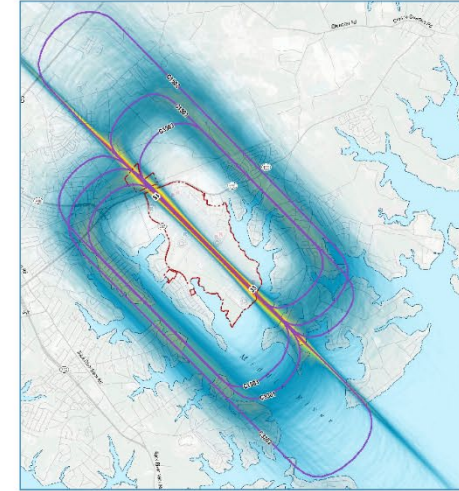
Flight Tracks – Civilian Fixed-Wing Aircraft



Arrivals
12,107 Tracks Shown



Departures
13,180 Tracks Shown



Closed Patterns
13,180 Tracks Shown
Purple lines are modeled
flight tracks

Flight Track Density



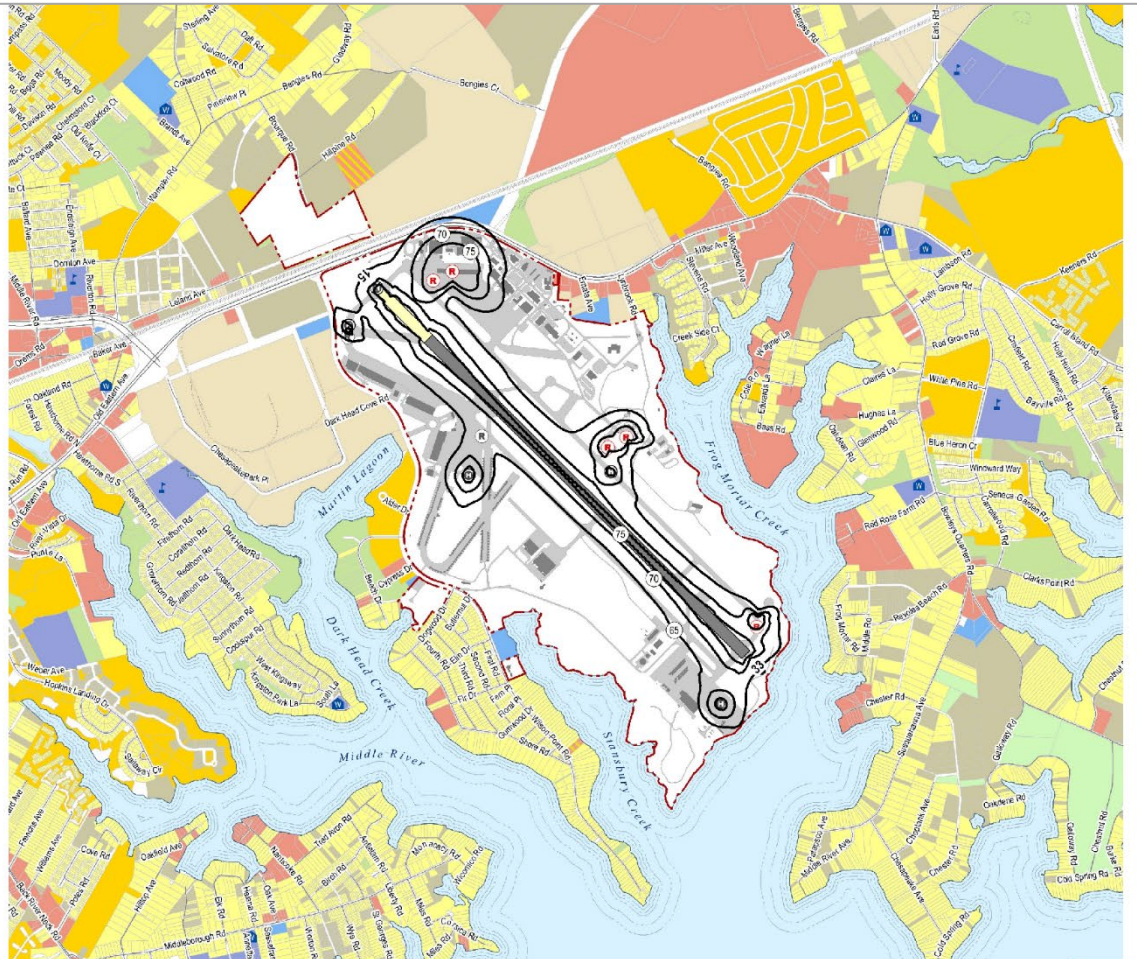
ANZ Noise Model Inputs

19

Noise Contours and Land Use

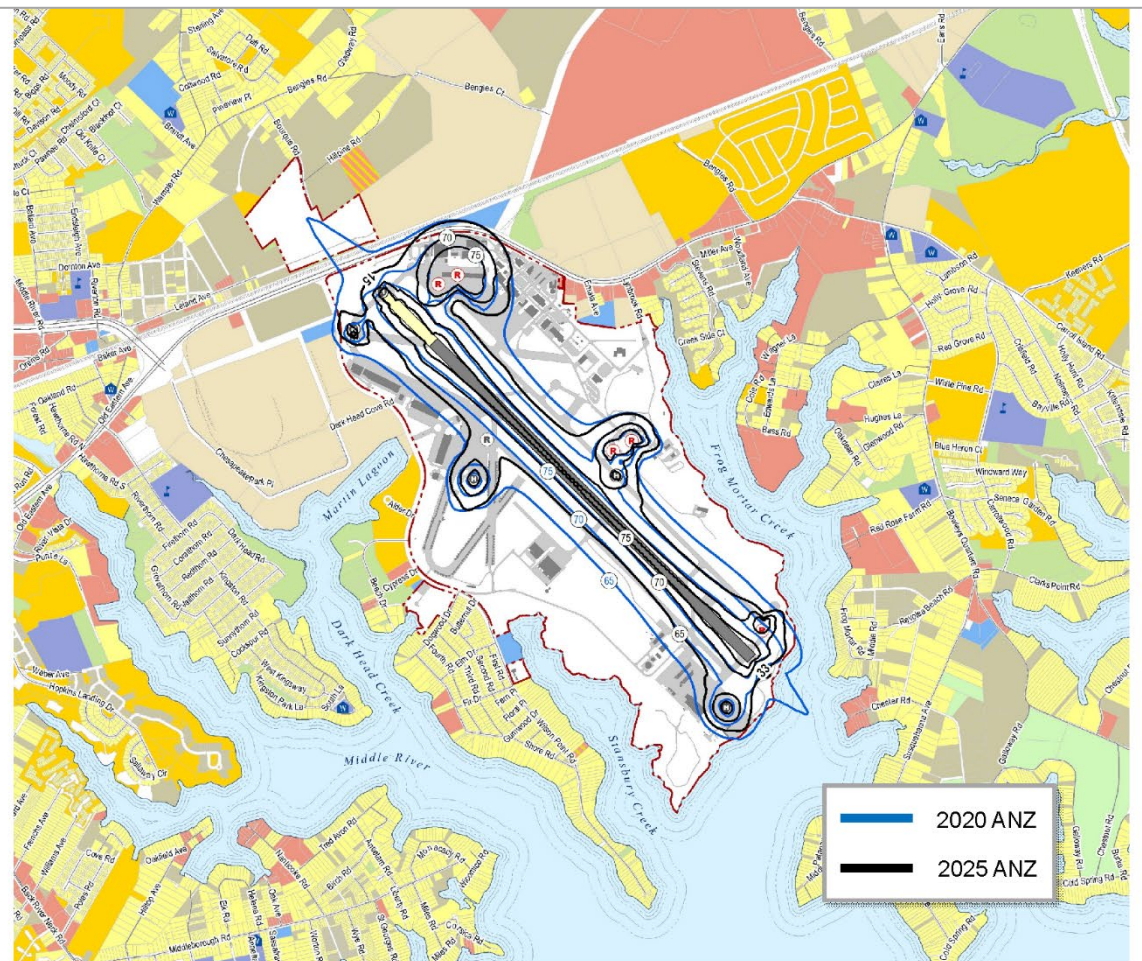
2025 ANZ Contours

- » Total area: 286 acres
 - Only 5 acres (5%) off airport within the 65–70 dB range
 - Higher noise levels (70–75 dB and >75 dB) remain fully on airport property
- » No residential population or housing units affected



2025 ANZ and 2020 ANZ Contours Comparison

- » Total area: Decrease of 31%
 - 76% decrease of off airport within the 65–70 dB range
 - Higher noise levels (70–75 dB and >75 dB) remain fully on airport property and decrease by 52%
- » No residential population or housing units affected



Noise Abatement Plan (NAP) Overview

Martin State NAP Caveats

Noise abatement procedures are voluntary.

- MTN NAP is formulated to minimize noise disturbance to neighboring communities while maintaining safe and efficient MTN Airport operations. MAA Division of MTN Airport Operations is responsible for the overall administration of MTN.
- Aircraft may not follow noise abatement procedures if deemed necessary by Air Traffic Control (ATC) or flight crews to maintain operational safety.



Noise Abatement Plan Measures

Noise Abatement Measures

Departure Procedures:

VFR and IFR Flight Rules

Arrival Procedures:

Attempt to keep arriving aircraft as high as possible and to take advantage of compatible land uses

Closed Traffic Patterns:

A left-hand traffic pattern shall be used at MTN unless otherwise directed by ATC.

Touch-and-Go or Practice Approaches:

No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance staff.

Programmatic Measures

Continued Monitoring and Annual Review:

Efforts to monitor the overall noise abatement program

Land Use Measures

Control of Incompatible Development:

Includes the ANZ program, BAZA, and Noise Zone Notification in Real Estate transactions

Noise Assistance Programs:

For residents and schools in the ANZ, to reduce number of affected properties and noise impacts



Additional Resources

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 - <https://marylandaviation.com/environmental/airport-noise/martin-state-airport-noise-zone/>
- **Hard Copies at the Following Libraries**
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How to Comment:

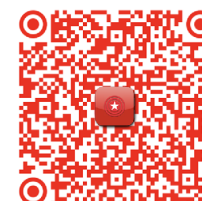
Email Bruce Rineer: BRineer@bwiairport.com

Speak to the Public Hearing Officer at **this meeting**



Please provide
comments by
April 20 , 2026

MTN ANZ Project
Website



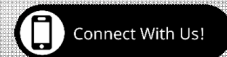
Existing MTN
Noise
Abatement Plan





Thank You.

Martin State Airport



Please Sign In
Martin State Airport (MTN) Airport Noise Zone Update
Public Hearing/Workshop
March 18, 2026



	NAME/TITLE	ORGANIZATION	PHONE	EMAIL	INITIALS
1.	Tiffany Elam / Court Reporter	CRC Solomon	443-341-7874	elamj@aol.com	TE
2.	Nik Wagerfeiler / Air Traffic Manager Martin Tower	Midwest ATC	410-682-8807	mtatc@midwestatc.com	NS
3.	ROBERT WILKINSON		443 551-2286	N/A	RW
4.	Tom Pam Fry	Residents	410-459-2199	tfry@comcast.net	tf
5.	Mike Miller	Resident			
6.	Jeff Kyger	WPCIA	(443) 904-5467	jkyger62@gmail.com	JK
7.	RICK REID	BQIA	410-686-7444	RICKREIDTUNE@HOTMAIL.COM	RR
8.	JOHN BUSKE / JFHQ SLE DO	MD ANG		john.buske.3@us.af.mil	JB
9.	Lili Norcatis	Delegates Szelioga/Nawrocki		district7maryland@gmail.com	
10.	Bill Gilbert	BCo Vol Firefighters Assoc	410 746 7764	BGILBERTBG@aol.com	BG

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Please Sign In
 Martin State Airport (MTN) Airport Noise Zone Update
 Public Hearing/Workshop
 March 18, 2026



	NAME/TITLE	ORGANIZATION	PHONE	EMAIL	INITIALS
1.	Alex Vargo	Fairwinds HOA	717-350-4159	avargo81@gmail	AV
2.	<i>[Signature]</i>		440-594-6089	urbisnu10@gmail.com	<i>[Signature]</i>
3.	Patricia Bygleh	822 Frog Mortar Rd	443 286 9475	pbrylsk@gmail.com	
4.	Edward S. Kramer	Hawthorne - Civic Assoc.	410 365-0857	eakramer82@gmail.com	<i>[Signature]</i>
5.	Ken Goldwell JR		410 830 0579	KLOIDOO@gmail.com	<i>[Signature]</i>
6.	<i>[Signature]</i>	<i>[Signature]</i>	443 865-9932	DanDefer@gmail.com	<i>[Signature]</i>
7.					
8.					
9.					
10.					

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Please Sign In
Martin State Airport (MTN) Airport Noise Zone Update
Public Hearing/Workshop
March 18, 2026



	NAME/TITLE	ORGANIZATION	PHONE	EMAIL	INITIALS
1.	Kim Fry	BQIA	(215) 490-2048	Kimsey-Fry 1 @ Verizon	KF
2.	Brandon Brannan	Balto Co	410 887 0280	Brannan @ BaltimoreCountyMD.GOV	BB
3.	Chris Roussey	Balto. Co	410-887-0280	Croussey@BaltimoreCountyMD.gov	CR
4.	Marsha Ayres	BQIA	410-446-1680		MA
5.	Pat Hook	HAWTHORNE	443-240-7991	pjhook11@aol.com	PH.
6.	Jim McNeill	BQ	443 676 3555	JimMcNeill@Comcast.net	JM
7.	Sam Hook	BQIA	410-977-5698	SamHook@gmail.com	SH
8.	Harold Fowler	MAA	410-682-8826	hfowler2@martinstateairport.com	HF
9.	Nick Brown	PHI	410 382 5279		NB
10.	David Hash	BQIA	410 491 7844	dhash@jhmi.edu	DH

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Please Sign In
 Martin State Airport (MTN) Airport Noise Zone Update
 Public Hearing/Workshop
 March 18, 2026



	NAME/TITLE	ORGANIZATION	PHONE	EMAIL	INITIALS
1.	Josh Sines	EMRCC		Jss2424@gmail.com	TMS
2.	GEORGE DULINA	RESIDENT		GDULINA@COMCAST.NET	GD
3.	ERIC BAUMGART	RESIDENT			
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Page 4 of

**Martin State Airport
Airport Noise Zone (ANZ) Update
Public Workshop
MEETING MINUTES**

Wednesday, March 18, 2026, 6:00 PM – 8:00 PM

Martin State Airport
701 Wilson Point Road, Hangar 5
Baltimore, MD 21220

Discussion Item	Notes	Presenter
Safety Briefing	Bruce Rineer opened the workshop with a brief safety overview for the meeting space. He directed attendees to use the same exits they had entered through if an emergency occurred and instructed everyone to gather in the parking lot outside the hangar after evacuating. He also pointed out the location of the fire extinguishers and encouraged attendees to alert the team immediately if they saw anything unsafe during the meeting so it could be addressed on the spot. Mr. Rineer kept the safety remarks brief and then asked whether anyone had questions. No questions were raised, and the meeting moved directly into opening remarks.	Bruce Rineer
Welcome and Introductions	Following the safety briefing, Mr. Rineer briefly introduced the meeting format and began framing the discussion that would shape much of the evening. Before turning to the formal presentation, he emphasized that noise abatement procedures are voluntary, explaining that this is a Federal Aviation Administration (FAA)-based limitation. He said the airport can establish procedures and strongly encourage pilots to follow them, but pilots remain in command of their aircraft. For example, he explained that a pilot may request an intersection departure rather than use the full runway length. Air traffic control (ATC) may deny that request in some circumstances, but if the operation is safe and the pilot insists, the pilot ultimately has the authority to proceed. Nikolaus Wagenfeiler, ATC Manager at Martin State Airport, then introduced himself. Mr. Wagenfeiler said he would be available throughout the meeting to help explain airport traffic patterns, air traffic operations, and the practical limits of what air traffic control can and cannot require. He presented himself as a resource for operational	Bruce Rineer

questions and made clear that he would remain part of the conversation as residents raised concerns.

Mr. Rineer then explained that Paul Krusell of the consultant team would walk through a short presentation and that attendees would afterward have the opportunity to move around the room, review the display boards, and speak directly with project team members stationed at different areas. He noted that he would remain near the noise abatement materials and joked that both Mr. Wagenfeiler and Harold Fowler would likely be in demand once the floor opened up.

Rhea Hanrahan of the consultant team followed with a few additional remarks. Ms. Hanrahan said the team intended to get through the presentation in about 30 minutes and asked attendees to hold questions until afterward, when they could be directed to the appropriate team members. She explained that the workshop was meant to provide public context for a study that had already been underway for nearly 10 months, and that the team had met multiple times with a Stakeholder Advisory Committee (SAC) composed of members of the public and airport users. She also noted that the full Airport Noise Zone (ANZ) document was available online and in area libraries and reminded attendees that the public comment period would remain open through April 20. She encouraged people to review the document in full if they wished and to let others know they could also submit comments before the deadline.

Airport Noise
Zone (ANZ)
Overview

Paul Krusell then began the formal presentation by reviewing the agenda. He said the team would cover:

Paul
Krusell

- Welcome and introductions
- ANZ overview
- Noise model inputs
- Noise contours and land use
- Noise Abatement Plan (NAP)
- Questions afterward at the stations around the room

Mr. Krusell asked again that attendees hold questions until the end of the presentation so that the meeting could move along smoothly and so people could direct more detailed questions to the right subject matter experts afterward.

He then introduced the ANZ itself. Mr. Krusell explained that the ANZ represents the furthest extent of the 65 Day-Night Average Sound Level (DNL), across three years of analysis:

- **2025**, the base year
- **2030**, the five-year forecast

- **2035**, the ten-year forecast

He said the composite ANZ reflects the full extent of the modeled contours and serves as a planning tool to guide compatible land use around the airport. In practical terms, he explained that the ANZ is used to help prevent new residential or other incompatible development from being introduced into areas subject to higher levels of aircraft noise.

Mr. Krusell explained that the current study updates the previous ANZ map to account for changes since the 2020 update and to incorporate known or reasonably expected changes in aircraft activity and airfield conditions. He noted that the team is also reviewing the existing NAP as part of the update. He stressed that community input matters because it helps the project team better understand where residents are most concerned, what kinds of aircraft activity are drawing attention, and where changes to the NAP may be worth considering.

He then reviewed the regulatory basis for the ANZ update. Mr. Krusell explained that Maryland law requires the update to be completed approximately every five years and that the certified ANZ includes the 65, 70, and 75 DNL contours printed on tax maps. He noted that the broader process dates back to the Maryland Environmental Noise Act of 1974 and briefly referenced the transportation code and Code of Maryland Regulations (COMAR) provisions that govern the work.

He also laid out the basic expectations for what the ANZ can and cannot do. As he explained it, the ANZ can:

- Help the public and local governments understand existing and future noise exposure
- Support local land use planning and help avoid incompatible development
- Identify possible strategies to reduce or mitigate noise impacts, including voluntary noise abatement measures

At the same time, he emphasized that the ANZ cannot:

- Restrict hours of operation
- Impose curfews
- Require the FAA to change flight procedures
- Be used to limit overall airport growth or demand

Mr. Krusell then walked through the broader project timeline. He said the team had spent the past year engaging the SAC, preparing the noise contours, conducting the land use inventory, reviewing future land use information with planners, and evaluating the existing NAP. He explained that the workshop marked the public outreach stage of the

process and that the team would remain in that phase until the close of the public comment period, after which the work would move toward finalizing updates to COMAR.

Noise Model
Inputs

Mr. Krusell next shifted to the technical side of the presentation and began explaining the major inputs used in the noise model.

Paul
Krusell

He started with the airport layout. He explained that Martin State Airport has one runway that operates in either direction depending mostly on wind conditions. He also pointed out the run-up pad locations where aircraft perform engine checks or maintenance run-ups. In describing the base- and future-year scenarios, he noted that in 2025 run-up activity still exists on both sides of the airfield, but in 2030 and 2035, with the departure of the Maryland Air National Guard, much of the run-up activity on the east side is expected to disappear. Mr. Krusell said the result is that future run-up activity would be more concentrated on the west side of the airfield.

He then described runway use, explaining that with only one runway, operations are not especially complicated in terms of directional use. Aircraft generally take off and land into the wind. Based on the modeling inputs, east flow operations account for about 46 percent of use, while west flow operations account for about 54 percent.

Mr. Krusell then reviewed annual operations. He explained that Martin State sees just under 100,000 operations annually, which translates to roughly 245 operations per day. Of those, about 44,000 are local operations, meaning touch-and-goes or circuits, where an aircraft lands and immediately takes off again to practice another approach. He noted that this type of activity is mostly associated with general aviation training aircraft. He also explained that in the 2025 base year, some military touch-and-go operations remain, but they are reduced in the forecast years due to the departure of the Air National Guard's A-10 mission.

Mr. Krusell continued, clarifying that although no military aircraft would remain based at Martin State in future scenarios, transient military aircraft that are not based there could still use the airport.

Mr. Krusell next turned to the flight track information and explained that the maps shown were based on actual radar data. He said the track density displays were color-coded, with red indicating the heaviest

concentrations and blue indicating lighter activity. He noted that the densest concentrations occur near the ends of the runway, which is consistent with how aircraft depart and arrive. He then directed attendees to the model inputs station for any more detailed questions about the radar-based flight track displays.

Noise Contours and Land Use	Mr. Krusell then reviewed the 2025 ANZ contours and the land use implications associated with them. He explained that the 65 DNL contour covers approximately 286 acres and extends off airport property only slightly at the northern end. He said that extension is driven mostly by 2025 A-10 activity and that otherwise, the contour largely remains within airport property. He emphasized several key findings: • Only about 5 acres of the 65 DNL contour extend beyond airport property • The higher contours remain fully on airport property • There is no residential population or housing within the 65 DNL contour Mr. Krusell also compared the 2025 contours to the 2020 ANZ update and explained that the total contour area had decreased by about 31 acres. He said the main differences occur along the runway ends and are tied largely to changes in A-10 operations and how those operations were represented in the model. He concluded that, compared to 2020, off-airport residential effects remain very limited.	Paul Krusell
Noise Abatement Plan (NAP)	Mr. Krusell then transitioned into reviewing the NAP, again reminding attendees that all of the procedures in the plan are voluntary and that safety remains the overriding concern. He explained that if a pilot or ATC determines that a different action is necessary to maintain safety, that decision takes precedence over any preferred abatement measure. He described the NAP as containing several broad categories of measures, including: • Operational measures, such as Visual Flight Rules (VFR) and Instrument Flight Rules (IFR)-related procedures and preferred arrival practices • Programmatic measures, such as monitoring and reviewing how well procedures are being followed	Paul Krusell, Bruce Rineer

- **Land use measures**, which support control of incompatible development around the airport

Ms. Hanrahan noted that Mr. Rineer would remain available after the presentation to answer more detailed questions on the NAP and any of the procedures it contains.

Additional
Resources and
Comment
Process

Mr. Krusell reviewed where attendees could find the ANZ document and how they could submit comments. He explained that the full document was available online through the project website and in hard copy at the listed libraries. Ms. Hanrahan added that the information shown on the screen was also available for anyone who wanted to come closer and take a picture.

Paul
Krusell

Mr. Krusell also pointed out that three hard copies of the ANZ document were available on the central table in the room for attendees to review that evening. He then explained that formal comments could be submitted in several ways, including by speaking with the public hearing officer stationed down the hall or by emailing Mr. Rineer.

At that point, Mr. Rineer added that comments could also be submitted through the Maryland Register process. He explained that if residents reviewed the Maryland Register notice, they would see the designated contact there, but said that if comments were sent to him, he would forward them appropriately. He emphasized that attendees did not have to speak to the court reporter that night if they preferred to submit written comments later and summarized that there were effectively three ways to get comments into the record.

Q&A and Open
Discussion

Once the formal presentation ended, an open discussion ensued.

Paul
Krusell

- **An attendee stated that the community does not want the airport to become bigger or louder and asked whether the departure of the A-10s would actually reduce noise, or if that activity could be replaced.**

Mr. Rineer explained that if any new aircraft or military element were ever proposed, it would require a major study and public process. He noted that there are currently no known plans to introduce a new Air Force element or replacement aircraft.

- **The same attendee asked whether private sector growth could still increase overall activity.**

Mr. Rineer stated that the study includes FAA-developed

growth projections, though specific annual increases were not discussed in detail.

- **An attendee asked whether recent airport construction was done to support future expansion or increased traffic.**

Mr. Rineer clarified that the work was completed to maintain safe and operational infrastructure, not to support expansion. He compared it to routine resurfacing and maintenance work at larger airports.

- **A follow-up question asked whether the construction was intended to prepare for something larger in the future.**

Mr. Rineer responded clearly that it was not.

- **An attendee asked whether helicopter activity, including noise and operating altitude, was included in the analysis.**

Mr. Rineer confirmed that helicopter operations were included. He added that there is no longer an active helicopter training school at the airport, though helicopter activity may continue or change over time. He also noted that if Baltimore City Police aviation relocates, some helicopter activity could decrease.

- **The same attendee asked how community members were selected for earlier stakeholder involvement and whether that information is available.**

Mr. Rineer explained that a broad group of community members was invited to participate, including individuals involved in past discussions, and noted that many of those individuals were likely present at the workshop.

- **Mr. Rineer clarified that while the noise contours are generated based on model inputs and cannot be adjusted, the Noise Abatement Plan is where updates and improvements can be made.**

He noted that previous updates included turn restrictions and that current efforts include limiting intersection departures. He reiterated that federal regulations limit the ability to make these measures mandatory.

- **An attendee asked whether aircraft could be required to use more of the runway rather than departing from shorter intersection points.**

Mr. Rineer explained that some aircraft request shorter departures when they have sufficient runway available. He said the airport is working to limit those departures because

they can result in lower-altitude operations over nearby neighborhoods.

- **Mr. Wagenfeiler provided additional context, explaining that limiting intersection departures can help reduce lower-altitude noise from smaller aircraft, particularly those used for training.**

He noted that some training operations involve steep climbs or short-field techniques, which can affect how noise is experienced on the ground.

- **Jim Merritt (SAC member) asked whether aircraft could always be required to depart from the end of the runway.** Mr. Wagenfeiler explained that while this may occur under certain conditions, pilot authority ultimately governs safe operations, and there are limits to what can be required.

- **Mr. Merritt commented that using more runway would further reduce noise impacts.**

Mr. Wagenfeiler acknowledged the point but reiterated that operational decisions remain with the pilot in command. He also noted that residents can report aircraft that appear to be operating outside expected procedures.

- **An attendee asked whether the taxiway could be extended to support full-length departures.**

Mr. Wagenfeiler responded that such improvements would depend on funding availability.

- **James Hock (SAC member) asked whether the taxiway layout had changed over time.**

Mr. Wagenfeiler explained that older images of the airport are outdated and that several taxiways have since been removed or reconfigured, resulting in a more streamlined layout today.

- **Discussion returned to helicopter operations, with questions about whether different arrival altitudes could reduce impacts.**

Mr. Wagenfeiler explained that helicopter operations are highly variable and often mission-driven, which limits the ability to standardize altitude or approach patterns.

- **Mr. Merritt and other attendees noted concerns about low-flying helicopters, including vibration impacts and noise from military aircraft such as Chinooks.**

Mr. Rineer acknowledged that those aircraft are particularly loud.

- **Mr. Merritt asked about the use of runway signage to improve awareness of noise abatement procedures.**

Mr. Rineer confirmed that enhanced signage, pilot outreach materials, and increased communication with flight schools are being pursued to improve awareness and compliance.

- **Mr. Hock asked whether the airport could facilitate direct engagement between flight schools and the surrounding community.**

Mr. Rineer stated that flight schools have been invited to participate, but attendance cannot be required.

- **An attendee asked whether participation could be required through tenant lease agreements.**

Mr. Fowler explained that the airport cannot impose that type of requirement within lease terms.

- **Further discussion highlighted frustration that many noise abatement measures and engagement efforts remain voluntary.**

Mr. Fowler acknowledged that this is a common limitation across airports nationwide due to federal regulations.

- **Mr. Hock asked how current operations compare to the airport's overall capacity.**

Mr. Fowler explained that there is no fixed maximum number of operations, as activity levels depend on real-time conditions and air traffic management.

- **An attendee noted that residents continue to experience noise daily, while project teams are not subject to the same ongoing impacts.**

Mr. Fowler responded that he understands this concern and shared that he personally lives under a flight path, giving him perspective on similar issues.

- **Mr. Rineer clarified that the ANZ is primarily a land use planning tool.**

He explained that its purpose is to prevent incompatible development near the airport and noted that, at Martin State, most of the noise contours remain on airport property.

- **An attendee asked about the history of the airport.**

Mr. Fowler explained that the airport dates back to the 1920s

and expanded during World War II, with surrounding development occurring afterward.

- **Mr. Hock noted that flight patterns have changed over time.**

Mr. Fowler explained that patterns can shift due to operational needs, environmental conditions, and temporary activities such as aerial surveys.

- **Another question was raised about whether A-10 aircraft could return or be replaced.**

A project team member confirmed that A-10s will not return, and any future mission would require significant study and public review. Mr. Rineer added that introducing a new aircraft type could change the noise contours and potentially trigger additional federal review and mitigation considerations.

- **An attendee asked whether recent construction extended the runway for larger aircraft.**

Mr. Fowler clarified that the work was for pavement rehabilitation and to allow safe use of the existing runway length, not to expand it.

Additional questions confirmed that the runway length has not changed, though the airport is working to remove obstructions to better utilize the full existing pavement.

- **An attendee asked whether aircraft pattern activity is still alternated between different areas near the airport.**

Mr. Fowler confirmed that efforts are made to balance pattern activity where possible, with operations generally remaining close to a 50/50 distribution.

- **Mr. Hock asked whether flight patterns are being directed primarily in one direction.**

Mr. Fowler and Mr. Wagenfeiler explained that operations are influenced primarily by wind and safety considerations, though air traffic control may guide patterns when feasible.

- **Mr. Merritt raised concerns about how different aircraft types impact different communities, particularly regarding low-flying jets and noise during departures.**

He also noted increased concern about nighttime operations.

- **Additional discussion highlighted that sound can be amplified over water and under certain weather conditions.**

Mr. Wagenfeiler confirmed that atmospheric conditions such

as fog and cloud cover can significantly affect how noise is perceived.

- **Mr. Merritt asked whether an additional Instrument Landing System could be installed at the opposite end of the runway.**

Mr. Wagenfeiler explained that such improvements are unlikely to be funded for a general aviation airport.

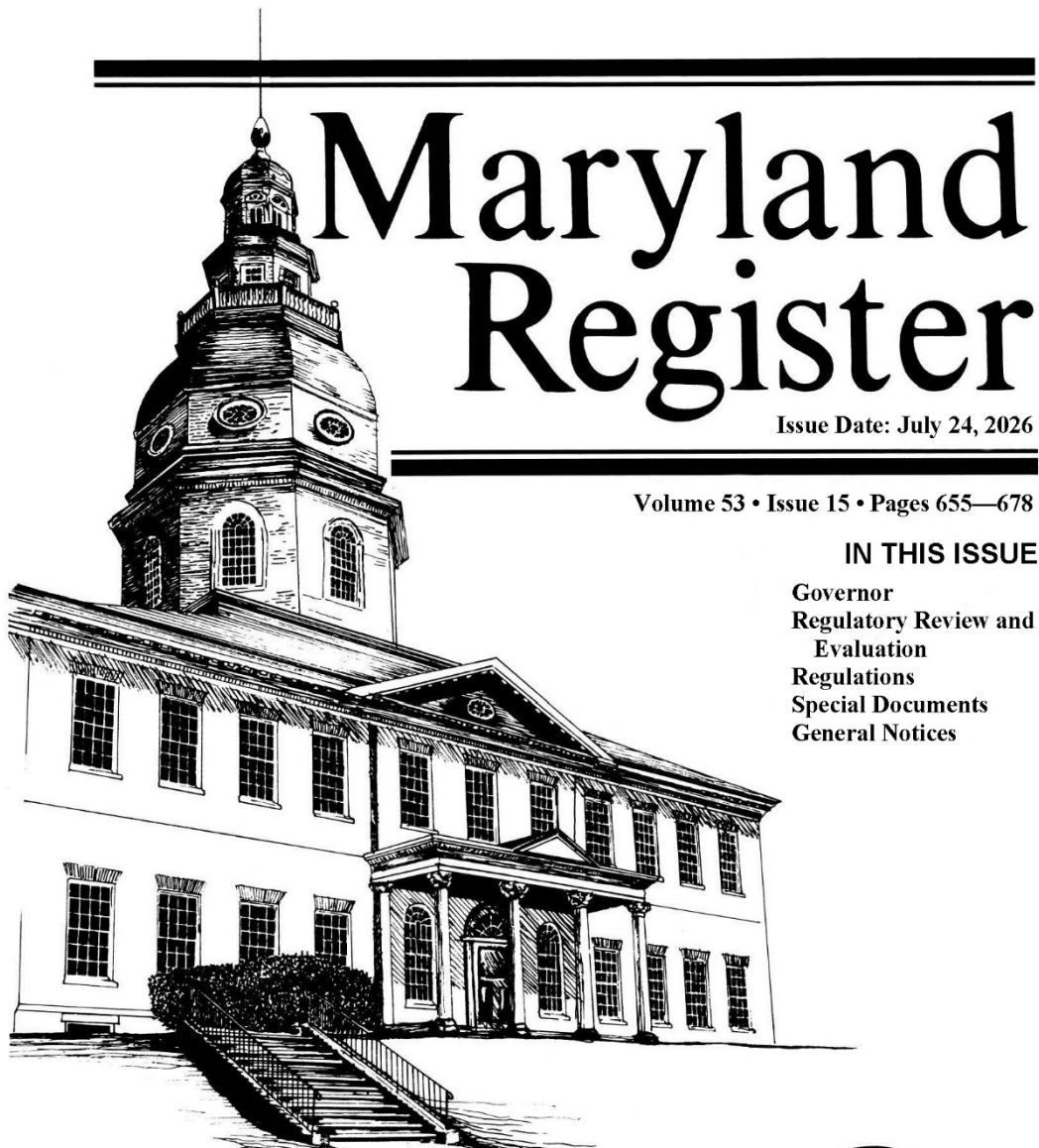
Adjournment

At the conclusion of the group discussion, Mr. Krusell thanked attendees again for participating in the workshop. He reminded everyone that the court reporter was still available for a limited time, that project team members would remain in the room to answer questions, and that formal comments could continue to be submitted through the public comment period ending April 20.

The formal presentation concluded and attendees and project team members viewed display boards around the room.

Paul
Krusell

E.6 Maryland Register



Pursuant to State Government Article, §7-206, Annotated Code of Maryland, this issue contains all previously unpublished documents required to be published, and filed on or before July 6, 2026, 5 p.m.

Pursuant to State Government Article, §7-206, Annotated Code of Maryland, I hereby certify that this issue contains all documents required to be codified as of July 6, 2026.

Gail S. Klakring
Administrator, Division of State Documents
Office of the Secretary of State



Title 11
DEPARTMENT OF
TRANSPORTATION

Subtitle 03 MARYLAND AVIATION
ADMINISTRATION

Notice of Final Action

[26-008-F-1]

On July 13, 2026, the Executive Director of the Maryland Aviation Administration adopted amendments to:

(1) Regulations **.01-1** and **.12** under **COMAR 11.03.01 Baltimore/Washington International Thurgood Marshall Airport**; and
(2) Regulation **.10** under **COMAR 11.03.02 Martin State Airport**.

This action, which was proposed for adoption in 53:6 Md. R. 297—298 (March 20, 2026), has been adopted as proposed.

Effective Date: August 3, 2026.

SHANNETTA R. GRIFFIN
Executive Director

MARYLAND REGISTER, VOLUME 53, ISSUE 15, FRIDAY, JULY 24, 2026

Appendix F. Public Comments

Appendix F contains public comments and responses submitted on the Draft 2025 MTN Airport Noise Zone (ANZ) and Noise Abatement Plan (NAP). MAA received 25 comments during the public comment period. Two comments were provided by spoken testimony to the on-site court reporter during the public meeting, and 23 comments were submitted by email. Several email submissions addressed similar topics, including 12 individuals who submitted an identical comment letter. MAA reviewed and considered all comments received and has provided written responses herein. None of the comments affected the technical results of the MTN ANZ study.

Table F-1 serves as both a summary and an index to the public comments received during the Draft ANZ comment period. Each commenter is assigned a commenter number. In the sections that follow the table, each commenter's full original comment is presented first. Bracketed comment numbers are inserted within each original comment to organize the comment into numbered topics for response purposes. Each number combines the commenter number with a subnumber, such as Comment 1.1. Responses to the numbered topics are provided after the commenter's full original comment.

Table F-1. Summary and Index of Public Comments Received for the Draft 2025 BWI Marshall ANZ

Comment ID	Topic	Commenter
1.1	Runway 15 intersection departures	Jim Merritt
2.1	Flight school community engagement	David Hash
2.2	Touch-and-go flight patterns	David Hash
2.3	Aircraft engine maintenance noise	David Hash
2.4	Alternating traffic patterns	David Hash
2.5	Flight school lease terms	David Hash
3-14.1	"Fly Friendly" Program adoption	Commenters 3–14
15.1	"Fly Friendly" Program review	Joseph Stella
16.1	"Fly Friendly" Program implementation	David Hash
17.1	"Fly Friendly" advocacy	Rick Reid
18.1	"Fly Friendly" consideration	Pat Hook
19.1	Fixed-wing and helicopter "Fly Friendly"	Patrice Brylske
19.2	Flight school meeting participation	Patrice Brylske
20.1	Flight school operational limits	Tony Correlli
20.2	Noise barriers	Tony Correlli
21.1	Runway 15 intersection departures	Kimberly Fry
22.1	Unusually loud aircraft	George Kinsel
23.1	Airport Noise Zone evaluation	Nancy Correlli
24-25.1	"Fly Friendly" Program adoption	Paul Brylske and Carol Bateman
24-25.2	Flight school meeting participation	Paul Brylske and Carol Bateman

COMMENTS AND RESPONSES

Commenter 1: Jim Merritt

Submission Method: Email

Original Comment:

*A few of us have been reviewing and thinking about the abatement plan. **[Comment 1.1]** Since it is more of a guideline than a hard and fast set of rules, then during the upcoming comment period, can we add that its strongly encouraged for planes to take off from the furthest end of the runway in order to meet the altitude requirements laid out in the existing plan?*

I seem to remember in the past that it was mentioned that ATC didn't really want to tell pilots to do that b/c the pilots are going to complain about wasting fuel in the taxiway. However, since the noise abatement plan is a set of guidelines and recommendations, why can't that recommendation be added?

While annoying for the pilots and maybe ATC, doing this will go a long way to helping ensure the planes have the greatest altitude when passing over and thus the least impact on our neighborhoods.

Response to Commenter 1

Response to Comment 1.1:

In some cases, aircraft at MTN may begin their takeoff roll from a taxiway/runway intersection somewhere down the runway rather than use the full runway length from the threshold. MAA reviewed this request with the MTN Air Traffic Control Tower, who also concurred. The NAP has been updated to include the following language as Measure F: "Aircraft departing Runway 15 are discouraged from utilizing intersection departures from Taxiway Juliet."

Commenter 2: David Hash

Submission Method: Email

Original Comment:

Thank you for the Airport Noise Zone Update you and your colleagues presented to community representatives on Wednesday, March 18th, 2026, at Martin State Airport. I appreciate the opportunity to respond to your presentation, and more specifically to the ongoing noise problems that local residents have been trying to address for many years, without much success.

My comments will be totally focused on the noise issues related to the so-called Touch-and-Go operations of the flight schools located at the airport. You have heard from me and many of my neighbors that these flights too often generate very loud and aggravating noise levels as they repeatedly fly over the same

neighborhoods. Their flight paths hardly change at all, resulting in the same houses being overflown over and over, with no relief from the engine noise.

Before offering some ideas for airport leaders to consider, I'd like to underscore that I am very interested in our airport remaining successful and continuing to serve the aviation community. And by the same token, I would like the flight schools to flourish, especially considering the need to address the shortage of trained pilots for commercial carriers. This is a serious national problem, and the flight schools are critical to graduating more candidates to meet this need. But there's something missing.

What's missing is recognition on the part of the flight schools that their operations are not conducted in a vacuum. They fly over their neighbors day in and day out, with little or no appreciation of the noise impacts we are having to live with. The key word here is neighbors. We believe we are due some level of consideration and respect as they constantly use "our" air space for their flights. We simply want them to be aware of the effect their operations have on us, and strive to be better neighbors by taking some steps to address our noise issues.

Here are a few observations and suggestions that I would like to direct to both the airport leadership and the flight schools:

1. **[Comment 2.1]** Acknowledge that the concerns of the local community being affected by the touch-and-go flights should be communicated to the flight schools, in the interest of establishing a working relationship between them and their neighbors.
2. **[Comment 2.2]** Take a look at the flight patterns and consider making neighbor-friendly changes that might include increasing altitude, lowering volume and repetition, delaying or modifying turns and throttling, and adopting new patterns that do not have the flights going over the same properties repeatedly (as depicted in Figure 3-5).
3. **[Comment 2.3]** Ensure that aircraft engines are properly tuned and maintained to minimize engine noise (Note: some planes create very little noise at all, especially as they make their turns...can all the planes meet that standard?)
4. **[Comment 2.4]** Air traffic controllers should consider mixing up the flight patterns (as much as possible) so as to spread out and/or alternate the noise impact.
5. **[Comment 2.5]** And last but not least, the airport (Maryland Aviation Administration/MDOT) is the landlord (or equivalent) to the flight schools, and as such has the ability (and responsibility) to enter into lease terms with their tenants that serve the public interest. In this case, it is clearly in the public interest to have the flight schools be good neighbors and address and minimize the noise issues affecting the community.

Thanks again, Bruce, for providing this opportunity to convey my comments about the recent ANZ Update. I look forward to hearing from you and will remain optimistic that you can facilitate an action plan that is respectful of our long-standing noise concerns.

Responses to Commenter 2

Response to Comment 2.1:

Flight training activity represents a significant number of operations at MTN. MTN hosts multiple flight schools, as well as a number of private pilots who fly recreationally, and has facilities, such as an instrument approach, which attract pilots looking to maintain proficiency. MAA will continue to proactively engage with MTN tenants on issues related to compliance with the noise abatement plan.

Response to Comment 2.2:

MAA notes the suggestions regarding operational measures that may help reduce community noise exposure. MTN already has an established voluntary noise abatement program that encourages pilots to operate in a safe and noise-conscious manner to the extent practicable and consistent with FAA requirements, aircraft performance, weather conditions, and air traffic considerations.

Aircraft operating in the traffic pattern, including touch-and-go operations, generally follow standard FAA-recommended traffic pattern procedures and altitudes applicable to the aircraft type and operation. In addition, flight tracks associated with pilot training activities naturally vary based on aircraft performance, wind conditions, air traffic instructions, pilot experience levels, and the dynamic nature of airport operations, resulting in dispersion rather than repetitive overflight of a single property or area.

The airport will continue to coordinate with airport users, FAA, and local stakeholders to evaluate operational practices and identify reasonable opportunities to promote noise-sensitive flying procedures, including pilot education related to pattern operations, altitude, and repetitive flight activity where feasible.

Response to Comment 2.3:

MAA does not have the authority to regulate aircraft engine design, certification, or maintenance practices for aircraft using the airport, as those responsibilities fall to the FAA. 14 CFR 91.409 dictates that civil aircraft must have an annual inspection once per year, and further notes that aircraft used for hire flight instruction must undergo a comprehensive inspection every 100 hours of flight time. Inspections include the engine, airframe, control surfaces, landing gear, and avionics.

Engine maintenance and tuning have a minimal impact on noise generated by piston aircraft. How the aircraft is operated, including the speed during climb, RPM, aircraft altitude, aircraft weight, atmospheric conditions, and the location and dispersion of flight tracks, generally have a greater impact on the noise experienced on the ground than maintenance and tuning work.

Response to Comment 2.4:

This is an existing practice. MAA and the Air Traffic Control Tower at MTN have collaborated on the practice of alternating runways and patterns each week to the extent that wind and weather conditions allow.

Response to Comment 2.5:

As the airport sponsor and operator, MAA establishes lease terms, operating standards, and airport rules consistent with applicable federal obligations, safety requirements, and the airport’s role as a public-use aviation facility.

As MTN is the recipient of federal funds, MAA cannot compel participation in airport or community improvement meetings through lease agreements only applicable to specific users. However, MAA currently encourages airport tenants and users, including flight schools, to operate in a safe and noise-conscious manner consistent with the airport’s voluntary noise abatement practices. MAA also recognizes the value of continued communication between airport users and the surrounding community and will continue to evaluate opportunities to promote stakeholder engagement, education, and participation in community discussions related to airport operations and noise concerns, where appropriate and practicable.

Commenters 3–14: Irene Anderson, Missy Anderson, Marsha Ayres, Paul Brylske, Kimberly Fry, Amy Hepner, Charles Marek, Mary Muth, Sure O’Hare, Henry Olaya, Julie Taylorson, Domenic Zannino

Submission Method: Email

Original Comment:

[Comment 3-14.1] As a concerned citizen affected by operations at Martin State Airport, I am writing to ask what steps can be taken to reduce airport noise, as current efforts have not proven effective in our community. The Fly Friendly Program is not currently implemented at this airport. As a concerned citizen, what actions can I take to encourage the adoption of this program?

Response to Commenters 3–14

Response to Comment 3-14.1:

Most “Fly Friendly” programs are voluntary noise abatement initiatives intended to encourage pilots and airport users to follow operational practices that help reduce noise impacts on surrounding communities while maintaining safe aircraft operations. Typical measures include recommended flight tracks, preferred runway use, guidance on minimizing low-altitude overflights of residential areas where feasible, limitations on engine run-up locations, and outreach to pilots and tenants regarding noise-sensitive areas surrounding an airport. Because aircraft operations are regulated by the FAA, participation in “Fly Friendly” procedures is generally voluntary unless otherwise authorized through applicable FAA processes.

“Fly Friendly” programs vary widely by airport and are typically tailored to specific operational and community contexts. For example, John Wayne Airport, which many commenters referenced, serves a substantially higher volume of commercial service and business jet activity—handling over 11 million passengers annually—alongside a large general aviation population. Its “Fly Friendly” program is a voluntary, data-driven program that evaluates and scores operators based on use of quieter procedures, avoidance of sensitive hours, participation in noise abatement efforts, and broader environmental

stewardship. Top-performing general aviation jet operators are publicly recognized through a tiered awards system.

MAA first established the MTN NAP in the 1970s. The NAP includes a comprehensive set of procedures designed to reduce aviation noise impacts on the surrounding communities. These procedures include maintaining runway heading until reaching an altitude, maintaining the highest practical altitude on approach, standard traffic pattern altitudes, and limitations on touch-and-go operations between 10:00 p.m. and 6:00 a.m. (Refer to Section 5, Noise Abatement Plan, for the complete list of measures.)

In addition to the established NAP, MAA has implemented and continues to advance a series of initiatives to enhance awareness and effectiveness of existing noise abatement practices, including:

- **Alternating Touch-and-Go Patterns:** When operationally feasible, closed traffic patterns are alternated on a weekly basis to distribute overflights between surrounding communities (e.g., Bowley’s Quarters and Wilson Point), helping to avoid concentrating noise impacts in a single area.
- **Limiting Aircraft in the Pattern:** The MTN Air Traffic Control Tower limits the number of aircraft operating in the traffic pattern at any given time to maintain safety and reduce the frequency of overflights.
- **Noise Monitoring and Reporting:** Through the Airport Noise and Operations Monitoring System (ANOMS), MAA is developing reports to track compliance with voluntary noise abatement procedures, including operational timing, turn initiation altitudes, and traffic pattern altitudes.
- **Airfield Signage:** MAA is exploring installation of airfield signage to remind pilots of surrounding residential, noise-sensitive land uses.
- **Terminal Outreach Materials:** Posters and informational materials are being installed in terminals and hangars to increase pilot awareness of voluntary noise abatement procedures.
- **Pilot Education Initiatives:** MAA is developing pilot training and informational resources to further reinforce noise-sensitive operating practices.

MAA believes these measures will continue to improve awareness of and compliance with MTN’s voluntary noise abatement procedures. At this time, MAA does not plan to implement an operator ranking or rating system. Such programs can be resource-intensive, require specialized monitoring infrastructure, and may not be well-suited to the diverse operational environment at MTN. MAA’s approach emphasizes collaboration, education, and consistency with FAA guidance rather than comparative or enforcement-based frameworks.

Commenter 15: Joseph Stella

Submission Method: Email

Original Comment:

[Comment 15.1] Please look into the fly friendly program. Bowley Qtr resident

Response to Commenter 15

Response to Comment 15.1:

A response for this submission is provided under Commenters 3–14, Comment 3-14.1.

Commenter 16: David Hash

Submission Method: Email

Original Comment:

Once again, Bruce, I want to offer comments on the pending draft. Thanks in advance for giving this consideration.

I am a board member of the Bowleys Quarters Improvement Association (BQIA), and I have been participating on the Martin State Airport (MTN) Stakeholder Advisory Committee. At BQIA's monthly membership meeting last night, fellow board member Jim Hock told the audience about the "Fly Friendly" Program, and presented a video of how that program was working at John Wayne Airport in Orange County, California.

*The program highlighted the working relationship created between aircraft operators and the local community, with positive outcomes resulting in noise reductions adjacent to the flight paths. This is exactly what we are striving for in our local community around MTN, **[Comment 16.1]** and I urge MAA and MDOT to establish this program here. In fact, the items I listed on my previous email could be topics for discussion as this group comes together.*

I look forward to this new initiative at MTN, and offer my support to make it a reality...Dave Hash

Response to Commenter 16

Response to Comment 16.1:

A response for this submission is provided under Commenters 3–14, Comment 3-14.1.

Commenter 17: Rick Reid

Submission Method: Email

Original Comment:

*I live across Frog Mortar Creek close to the runway. As a resident impacted by operations at Martin State Airport, I am reaching out to inquire about measures that can be taken to reduce airport noise, as current efforts have not been effective in our community. **[Comment 17.1]** The Fly Friendly Program is not currently*

in place at this airport, and I would like to know what steps I can take as a concerned citizen to help advocate for its implementation.

Your response would be greatly appreciated.

Response to Commenter 17

Response to Comment 17.1:

A response for this submission is provided under Commenters 3–14, Comment 3-14.1.

Commenter 18: Pat Hook

Submission Method: Email

Original Comment:

Good afternoon,

Sending this letter on behalf of the Hawthorne Civic Association in Middle River, in support of a request to have the Fly Friendly Program enacted for Martin State Airport.

We believe that this program would be an asset in providing resources to help bring some relief to the noise issues that are affecting communities surrounding the airport area. In particular the residing flight schools whose low flight patterns are generating significant noise during their touch and go operations.

With the success of the program at other airports, we feel it has precedent to be successful at Martin State, as well as being a conduit to bring the flight schools to the table in an effort to work with the surrounding communities for a resolution that all parties can agree upon.

[Comment 18.1] We are asking that the Fly Friendly Program for Martin State Airport be taken into consideration.

Thank you.

Response to Commenter 18

Response to Comment 18.1:

A response for this submission is provided under Commenters 3–14, Comment 3-14.1.

Commenter 19: Patrice Brylske

Submission Method: Email

Original Comment:

I am writing to submit public comment to be included in public process related to evaluation of the Airport Noise Zone surrounding Martin State Airport (MTN). I live on the Frog Morte side of the airport, directly across from the location where aircraft orients their compasses. That is particular is incredibly loud and well exceeds any acceptable decibel limit.

[Comment 19.1] *I am requesting that MTN become a “fly friendly airport” for both fixed wing and helicopters. The flight schools and associated helicopters fly at dangerous, low altitudes upon take off that we can see the specific types of shoes the passenger or pilot are wearing. They fly directly over our home. In addition, the repetition of the cycle of takeoff and touch down has environmental, safety and health and well-being issues for Bowley’s Quarters.*

[Comment 19.2] *I am also putting forth the suggestion that the Flight Schools have attendance and participation in community improvement meetings as a condition of their rental agreement with the airport. As it stands, they have no accountability to the community but great, negative impact.*

Response to Commenter 19

Response to Comment 19.1:

A response for this submission is provided under Commenters 3–14, Comment 3-14.1.

Response to Comment 19.2:

A response for this submission is provided under Commenter 2, Comment 2.5.

Commenter 20: Tony Correlli

Submission Method: Email

Original Comment:

Thank you for the opportunity to share my concerns about the growing aircraft noise at Martins.

[Comment 20.1] *I would like to see limits put in place on the Flight Schools. The constant low frequency droning noise is extremely annoying and in some cases painful. At times the planes are taking off a minute apart to create a constant noise and vibration, at very low altitude above our roof top. It’s not just a plane taking off and gone, it a cycle.*

[Comment 20.2] *As far as the bigger jets etcetera, could noise barriers either natural such as low growth pine trees or barrier walls be installed? I believe the fact that the noise area has a large water mass surface, the noise travels unimpeded across the creek and river with a much louder impact on surrounding households.*

Also it is my understanding that is leaded fuel being used in these small planes. If that is so are there any reports or testing of the possibility of health issues of the neighborhoods below and near the flight path?

Finally, I would like to see the ownership and leadership of the flight schools present at and active at the community hearings.

The rights of all people should be respected. Thank you.

Responses to Commenter 20

Response to Comment 20.1:

MAA does not have the authority to place limits on the number of operations undertaken by any individual tenant at MTN, including flight schools.

Response to Comment 20.2:

Noise barriers (such as walls or earthen berms) may have the potential to reduce ground-based or line-of-sight noise sources in some contexts but are generally not feasible or effective for aircraft operation once airborne. Further, there are siting challenges and limitations associated with locating noise barriers around the airport that could prevent meaningful noise reduction.

Commenter 21: Kimberly Fry

Submission Method: Court Reporter

Original Comment:

*Okay. My public comment is – **[Comment 21.1]** I would like to request that prevent runway intersection departures for all aircraft departing from runway 15 midway. This request is being made due to the flight schools and smaller aircraft but should be for all aircraft. The reasoning for this is it allows the aircraft to reach higher altitudes more quickly, thereby reducing noise impacts to the Long Beach Estates and Galloway Creek residents. Further, since MAA and Martin Airport's main source of revenue is fuel sales, requiring further departure lengths should potentially assist with greater fuel consumption and thereby increase revenue.*

I represent the Bowleys Quarters Improvement Association, and I'm part of the stakeholder advisory committee. And at our recent meeting where we had Bowleys Quarters, Wilson Point, Hawthorn, Greenleigh, Fairwinds in attendance, all wanted to have this implemented into the plan, not as an option, but as mandatory. There is really no reason that somebody should say they can't start at the end of the runway. So that's our thinking. Thank you.

Response to Commenter 21

Response to Comment 21.1:

A response for this submission is provided under Commenter 1, Comment 1.1.

Commenter 22: George Kinsel

Submission Method: Court Reporter

Original Comment:

[Comment 22.1] There is one plane flying out of Martin State Airport that is extremely loud. It flies much higher than any other aircraft out of this area. I've complained about it. First thing was -- I was told the plane couldn't fly that often, so I wrote the times that it flew over. And then they had to admit that it did. Then I saw the plane across from the Middle River Post Office. It was turned so I couldn't see the tail number. And I described it to the people at the Martin, it was an unusual looking aircraft. It was a single-engine prop plane, but the pilot sat on top of the fuselage like a jet fighter. And they said no such plane existed at Martin. And that's it.

Response to Commenter 22

Response to Comment 22.1:

Comment noted.

Commenter 23: Nancy Corelli

Submission Method: Email

Original Comment:

The noise at Martin State Airport starts early and ends late. We have lived across the creek from the airport for about 25 years. The noise and air traffic seems to increase each year. We have eye witnessed several close calls with aircraft and helicopters. At times there are touch and go's that possibly the landing was aborted and making it dangerous for many in the community and the pilots. Aircraft take off way too low and loud. We have never minded medi-vac helicopters, we pray for them as we see them take off to assist those in need.

Bowleys Quarters has been a great community of people who enjoy the benefits of being near the water. We hope to continue the peacefulness.

[Comment 23.1] Please consider this a formal submission to evaluate the Airport Noise Zone at Martin State Airport. Respectfully Submitted

Response to Commenter 23

Response to Comment 23.1:

Aircraft departure procedures and minimum safe operating altitudes are regulated by the Federal Aviation Administration (FAA) and are designed to ensure the safe and efficient operation of aircraft within the national airspace system. Pilots must comply with FAA regulations, air traffic control instructions, published departure procedures, and aircraft performance requirements during takeoff and climb operations.

Residents may notice variability in the altitudes of individual departing aircraft (aircraft climb performance), which can be caused by a number of factors, including the aircraft type, weight, weather conditions, and ATC instructions. Any concerns related to the unsafe operation of an aircraft should be reported to the local FAA Flight Standards District Office (FSDO), which has the ability to investigate potential violations of federal aviation regulations. Individuals who observe aircraft operations they believe may be unsafe are encouraged to document relevant details, such as the date, time, location, aircraft description or registration number (if visible), and the nature of the concern, and report the information to the appropriate FAA FSDO for review.

Commenters 24–25: Paul Brylske and Carol Bateman

Submission Method: Email

Original Comment:

I am writing to submit public comment to be included in the process related to evaluation of the Airport Noise Zone surrounding Martin State Airport (MTN). I live on the Frog Morte side of the airport, directly across from the location where aircraft orient their compasses. That in particular is incredibly loud and well exceeds any acceptable decibel limit.

[Comment 24-25.1] *I am requesting that MTN become a “fly friendly airport” for both fixed wing and helicopters. While I understand fly friendly principals are not enforceable by the airport for pilots, this program is valuable to raise their awareness about the needs of the historic, well established residential neighborhoods in the community. The flight schools and associated helicopters fly at such dangerous, low altitudes upon take off that we can see the specific types of shoes the passenger or pilot are wearing. They repeatedly fly directly over our home. In addition, the repetition of the cycle of takeoff and touch down has environmental, safety, and health and well-being issues for all residents of Bowley’s Quarters.*

[Comment 24-25.2] *I am also putting forth the suggestion that the Flight Schools have attendance and participation in community improvement meetings as a condition of their rental agreement with the airport. As it stands, they have no accountability to the community but great, negative impact.*

Responses to Commenters 24–25

Response to Comment 24-25.1:

A response for this submission is provided under Commenters 3–14, Comment 3-14.1.

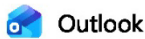
Response to Comment 24-25.2:

A response for this submission is provided under Commenter 2, Comment 2.5.

F.1 Original Email Submissions

5/21/26, 10:14 AM

Written Comments, Martin State Airport, Airport Noise Zone - Bruce Rineer - Outlook



Written Comments, Martin State Airport, Airport Noise Zone

From Brylske, Paul <brylske@kennedykrieger.org>

Date Mon 4/20/2026 5:42 PM

To Bruce Rineer <BRineer@bwairport.com>

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Dear Mr. Rineer,

I am writing to submit public comment to be included in the process related to evaluation of the Airport Noise Zone surrounding Martin State Airport (MTN). I live on the Frog Morter side of the airport, directly across from the location where aircraft orient their compasses. That in particular is incredibly loud and well exceeds any acceptable decibel limit.

I am requesting that MTN become a "fly friendly airport" for both fixed wing and helicopters. While I understand fly friendly principals are not enforceable by the airport for pilots, this program is valuable to raise their awareness about the needs of the historic, well established residential neighborhoods in the community. The flight schools and associated helicopters fly at such dangerous, low altitudes upon take off that we can see the specific types of shoes the passenger or pilot are wearing. They repeatedly fly directly over our home. In addition, the repetition of the cycle of takeoff and touch down has environmental, safety, and health and well-being issues for all residents of Bowley's Quarters.

I am also putting forth the suggestion that the Flight Schools have attendance and participation in community improvement meetings as a condition of their rental agreement with the airport. As it stands, they have no accountability to the community but great, negative impact.

Respectfully,

Paul Brylske
822 Frog Mortar Road
Middle River, Maryland 21220

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5/21/26, 10:14 AM

Written Comments, Martin State Airport, Airport Noise Zone - Bruce Rineer - Outlook

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2/2



Martin State Airport ANZ

From Tony Correlli <tony@rosedaleroofing.com>

Date Mon 4/20/2026 5:02 PM

To Bruce Rineer <BRineer@bwiairport.com>

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Thank you for the opportunity to share my concerns about the growing aircraft noise at Martins.

I would like to see limits put in place on the Flight Schools. The constant low frequency droning noise is extremely annoying and in some cases painful. At times the planes are taking off a minute apart to create a constant noise and vibration, at very low altitude above our roof top. It's not just a plane taking off and gone, it a cycle.

As far as the bigger jets etcetera, could noise barriers either natural such a low growth pine trees or barrier walls be installed? I believe the fact that the noise area has a large water mass surface, the noise travels unimpeded across the creek and river with a much louder impact on surrounding households.

Also it is my understanding that is leaded fuel being used in these small planes. If that is so are there any reports or testing of the possibility of health issues of the neighborhoods below and near the flight path?

Finally, I would like to see the ownership and leadership of the flight schools present at and active at the community hearings.

The rights of all people should be respected.

Thank you.

Respectfully,

Tony Correlli
824 Frog Mortar Road
410-365-1978

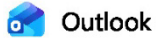
5/21/26, 10:31 AM

Martin State Airport ANZ - Bruce Rineer - Outlook

Have a great day !

about:blank

2/2



Fly Friendly Program @ Martin State Airport

From Domenic Zannino <citylivingprop@aol.com>

Date Thu 4/9/2026 8:18 PM

To Bruce Rineer <BRineer@bwiairport.com>

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Bruce,

As a concerned citizen affected by operations at Martin State Airport, I am writing to ask what steps can be taken to reduce airport noise, as current efforts have not proven effective in our community. The Fly Friendly Program is not currently implemented at this airport. As a concerned citizen, what actions can I take to encourage the adoption of this program?

Sincerely

Sent from my iPhone



Outlook

Written Comments, Martin State Airport, Airport Noise Zone

From Patrice Brylske <pbrylsk1@jhmi.edu>
Date Mon 4/20/2026 2:57 PM
To Bruce Rineer <BRineer@bwiairport.com>

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Dear Mr. Rineer,

I am writing to submit public comment to be included in public process related to evaluation of the Airport Noise Zone surrounding Martin State Airport (MTN). I live on the Frog Morter side of the airport, directly across from the location where aircraft orients their compasses. That is particular is incredibly loud and well exceeds any acceptable decibel limit.

I am requesting that MTN become a "fly friendly airport" for both fixed will and helicopters. The flight schools and associated helicopters fly at dangerous, low altitudes upon take off that we can see the specific types of shoes the passenger or pilot are wearing. They fly directly over our home. I addition, the repetition of the cycle of takeoff and touch down has environmental, safety and health and well-being issues for Bowley's Quarters.

I am also putting forth the suggestion that the Flight Schools have attendance and participation in community improvement meetings as a condition of their rental agreement with the airport. As it stands, they have no accountability to the community but great, negative impact.

Respectfully,
Patrice Brylske
822 Frog Mortar Rd.
Middle River, MD 21220



Airport Noise

From Carol Bateman <cbateman459@gmail.com>

Date Mon 4/20/2026 3:56 PM

To Bruce Rineer <BRineer@bwairport.com>

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I am requesting that MTN become a "fly friendly airport" for both fixed wing and helicopters. While I understand fly friendly principals are not enforceable by the airport for pilots, this program is valuable to raise their awareness about the needs of the historic, well established residential neighborhoods in the community. The flight schools and associated helicopters fly at such dangerous, low altitudes upon take off that we can see the specific types of shoes the passenger or pilot are wearing. They repeatedly fly directly over our home. In addition, the repetition of the cycle of takeoff and touch down has environmental, safety, and health and well-being issues for all residents of Bowley's Quarters.

I am also putting forth the suggestion that the Flight Schools have attendance and participation in community improvement meetings as a condition of their rental agreement with the airport. As it stands, they have no accountability to the community but great, negative impact.

Respectfully,
Carol Bateman
820 Frog Mortar
Middle River, Md 21220



Outlook

Fly Friendly Program / Hawthorne Support

From Pat Hook <pjhook11@aol.com>**Date** Thu 4/16/2026 2:03 PM**To** Bruce Rineer <BRineer@bwiairport.com>

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Good afternoon,

Sending this letter on behalf of the Hawthorne Civic Association in Middle River, in support of a request to have the Fly Friendly Program enacted for Martin State Airport.

We believe that this program would be an asset in providing resources to help bring some relief to the noise issues that are affecting communities surrounding the airport area. In particular the residing flight schools whose low flight patterns are generating significant noise during their touch and go operations.

With the success of the program at other airports, we feel it has precedent to be successful at Martin State, as well as being a conduit to bring the flight schools to the table in an effort to work with the surrounding communities for a resolution that all parties can agree upon.

We are asking that the Fly Friendly Program for Martin State Airport be taken into consideration.

Thank you.

Regards,

Pat Hook
President
Hawthorne Civic Association
Middle River Md

5/21/26, 10:52 AM

Subject: Fly Friendly Program @ Martin State Airport - Bruce Rineer - Outlook



Subject: Fly Friendly Program @ Martin State Airport

From Marsha Ayres <mayres1027@gmail.com>

Date Thu 4/16/2026 10:22 AM

To Bruce Rineer <BRineer@bwiaairport.com>

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As a concerned citizen affected by operations at Martin State Airport, I am writing to ask what steps can be taken to reduce airport noise, as current efforts have not proven effective in our community. The Fly Friendly Program is not currently implemented at this airport. As a concerned citizen, what actions can I take to encourage adoption of this program to reduce airport noise at Martin State Airport? Marsha Ayres

about:blank

1/1



Outlook

Fly Friendly Program

From Rick Reid <emailrreid@gmail.com>
Date Fri 4/10/2026 7:00 PM
To Bruce Rineer <BRineer@bwiairport.com>

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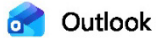
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Hello Bruce,

I live across Frog Mortar Creek close to the runway. As a resident impacted by operations at Martin State Airport, I am reaching out to inquire about measures that can be taken to reduce airport noise, as current efforts have not been effective in our community. The Fly Friendly Program is not currently in place at this airport, and I would like to know what steps I can take as a concerned citizen to help advocate for its implementation.

Your response would be greatly appreciated.

Rick Reid
1118 Susquehanna Ave
Middle River, MD 21220
410-686-7444



Fly Friendly Program @ Martin State Airport

From kimberly fry <kimberly.fry1@icloud.com>

Date Fri 4/10/2026 4:26 PM

To Bruce Rineer <BRineer@bwiairport.com>

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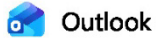
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Bruce,

As a concerned citizen affected by operations at Martin State Airport, I am writing to ask what steps can be taken to reduce airport noise, as current efforts have not proven effective in our community. The Fly Friendly Program is not currently implemented at this airport. As a concerned citizen, what actions can I take to encourage the adoption of this program?

Sincerely

Sent from my iPad



Outlook

Fly Friendly Program @ Martin State Airport

From Sue • O' H A R E <sohare881@gmail.com>**Date** Fri 4/10/2026 2:32 PM**To** Bruce Rineer <BRineer@bwiairport.com>

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Bruce,

As a concerned citizen affected by operations at Martin State Airport, I am writing to ask what steps can be taken to reduce airport noise, as current efforts have not proven effective in our community. The Fly Friendly Program is not currently implemented at this airport. As a concerned citizen, what actions can I take to encourage the adoption of this program?

Sincerely,
The O'Hares



Outlook

Additional Comments on the DRAFT Airport Noise Zone Update

From David Hash <dhash1@retiree.jh.edu>**Date** Fri 4/10/2026 10:56 AM**To** Bruce Rineer <BRineer@bwiairport.com>**Cc** Harold Fowler <HFowler2@martinstateairport.com>; Kim Fry <kimberly.fry1@verizon.net>; James Hock <james.n.hock@gmail.com>; Office of Senator J. B. Jennings <jb.jennings.ind@senate.state.md.us>; Mary Muth <marymuth14@gmail.com>

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Date: April 10, 2026**To:** Bruce Rineer, Manager

Noise Program

Office of Environmental Compliance and Sustainability

Maryland Aviation Administration

Maryland Department of Transportation

From: Davd Hash

3804 Chestnut Road, Middle River, MD 21220

Once again, Bruce, I want to offer comments on the pending draft. Thanks in advance for giving this consideration.

I am a board member of the Bowleys Quarters Improvement Association (BQIA), and I have been participating on the Martin State Airport (MTN) Stakeholder Advisory Committee. At BQIA's monthly membership meeting last night, fellow board member Jim Hock told the audience about the "Fly Friendly" Program, and presented a video of how that program was working at John Wayne Airport in Orange County, California.

The program highlighted the working relationship created between aircraft operators and the local community, with positive outcomes resulting in noise reductions adjacent to the flight paths. This is exactly what we are striving for in our local community around MTN, and I urge MAA and MDOT to

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5/21/26, 10:55 AM

Additional Comments on the DRAFT Airport Noise Zone Update - Bruce Rineer - Outlook

establish this program here. In fact, the items I listed on my previous email could be topics for discussion as this group comes together.

I look forward to this new initiative at MTN, and offer my support to make it a reality...Dave Hash

about:blank

2/2



Outlook

Comments on the DRAFT Airport Noise Zone Update Public Meeting March 18, 2026

From David Hash <dhash1@retiree.jh.edu>**Date** Mon 3/30/2026 5:11 PM**To** Bruce Rineer <BRineer@bwiairport.com>**Cc** Harold Fowler <HFowler2@martinstateairport.com>; Kim Fry <kimberly.fry1@verizon.net>; James Hock <james.n.hock@gmail.com>; Office of Senator J. B. Jennings <jb.jennings.ind@senate.state.md.us>

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Date: March 30, 2026**To:** Bruce Rineer, Manager

Noise Program

Office of Environmental Compliance and Sustainability

Maryland Aviation Administration

Maryland Department of Transportation

From: David Hash

3804 Chestnut Road, Middle River, MD 21220

Thank you, Bruce, for the **Airport Noise Zone Update** you and your colleagues presented to community representatives on Wednesday, March 18th, 2026, at Martin State Airport. I appreciate the opportunity to respond to your presentation, and more specifically to the ongoing noise problems that local residents have been trying to address for many years, without much success.

My comments will be totally focused on the noise issues related to the so-called Touch-and-Go operations of the flight schools located at the airport. You have heard from me and many of my neighbors that these flights too often generate very loud and aggravating noise levels as they repeatedly fly over the same neighborhoods. Their flight paths hardly change at all, resulting in the same houses being overflown over and over, with no relief from the engine noise.

Before offering some ideas for airport leaders to consider, I'd like to underscore that I am very interested in our airport remaining successful and continuing to serve the aviation community. And by the same token, I would like the flight schools to flourish, especially considering the need to address the shortage of trained pilots for commercial carriers. This is a serious national problem, and the flight schools are critical to graduating more candidates to meet this need. But there's something missing.

What's missing is recognition on the part of the flight schools that their operations are not conducted in a vacuum. They fly over their **neighbors** day in and day out, with little or no appreciation of the noise impacts we are having to live with. The key word here is neighbors. We believe we are due some level of consideration and respect as they constantly use "our" air space for their flights. We simply want them to be aware of the effect their operations have on us, and strive to be better neighbors by taking some steps to address our noise issues.

Here are a few observations and suggestions that I would like to direct to both the airport leadership and the flight schools:

1. Acknowledge that the concerns of the local community being affected by the touch-and-go flights should be communicated to the flight schools, in the interest of establishing a working relationship between them and their neighbors.
2. Take a look at the flight patterns and consider making neighbor-friendly changes that might include increasing altitude, lowering volume and repetition, delaying or modifying turns and throttling, and adopting new patterns that do not have the flights going over the same properties repeatedly (as depicted in Figure 3-5).
3. Ensure that aircraft engines are properly tuned and maintained to minimize engine noise (Note: some planes create very little noise at all, especially as they make their turns...can all the planes meet that standard?)
4. Air traffic controllers should consider mixing up the flight patterns (as much as possible) so as to spread out and/or alternate the noise impact.
5. And last but not least, the airport (Maryland Aviation Administration/MDOT) is the landlord (or equivalent) to the flight schools, and as such has the ability (and **responsibility**) to enter into lease terms with their tenants that serve the public interest. In this case, it is clearly in the public interest to have the flight schools be good neighbors and address and minimize the noise issues affecting the community.

Thanks again, Bruce, for providing this opportunity to convey my comments about the recent ANZ Update. I look forward to hearing from you and will remain optimistic that you can facilitate an action plan that is respectful of our long-standing noise concerns.

5/21/26, 10:55 AM

Comments on the DRAFT Airport Noise Zone Update Public Meeting March 18, 2026 - Bruce Rineer - Outlook

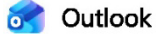
Cc: Harold Fowler, Chief, MTN Operations and Maintenance

Kim Fry and Jim Hock, Chairs, Martin State Airport Stakeholder Advisory Committee

The Honorable J.B. Jennings, Senator, Maryland State Senate

about:blank

3/3



Outlook

Re: Fly Friendly Program @ Martin State Airport

From Charles Marek <nannbuz11@aol.com>

Date Thu 4/9/2026 9:43 PM

To Bruce Rineer <brineer@bwiaairport.com>

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Sent from my iPhoneBuz Marek

> On Apr 9, 2026, at 9:06 PM, Charles Marek <nannbuz11@aol.com> wrote:

>

> Bruce,

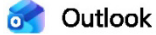
> As a concerned citizen affected by operations at Martin State Airport, I am writing to ask what steps can be taken to reduce airport noise, as current efforts have not proven effective in our community. The Fly Friendly Program is not currently implemented at this airport. As a concerned citizen, what actions can I take to encourage the adoption of this program?

>

> Sincerely

>

> Sent from my iPhone



Fly Friendly Program @ Martin State Airport

From Paul Brylske <pbrylske@icloud.com>
Date Thu 4/9/2026 8:21 PM
To Bruce Rineer <brineer@bwiaairport.com>
Cc Paul Brylske <brylske@kennedykrieger.org>

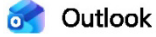
[You don't often get email from pbrylske@icloud.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

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Bruce,

As a concerned citizen affected by operations at Martin State Airport, I am writing to ask what steps can be taken to reduce airport noise, as current efforts have not proven effective in our community. The Fly Friendly Program is not currently implemented at this airport. As a concerned citizen, what actions can I take to encourage the adoption of this program?

Sincerely
Paul Brylske
Resident
822 Frog Mortar Road
Bowleys Quarters, Md. 21220
Sent from my iPhone



Outlook

Fly Friendly Program @ Martin State Airport

From Amy Hepner <amykay21220@yahoo.com>

Date Thu 4/9/2026 8:21 PM

To Bruce Rineer <brineer@bwiaairport.com>

[You don't often get email from amykay21220@yahoo.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

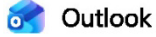
Caution: CAUTION: Suspicious? Double-check! This email is from an external source. If something seems unusual, even from someone you know, verify directly. Forward suspicious emails directly to Email Abuse (abuse@mdot.maryland.gov) or call the MDOT Service Desk at 410-768-7181 for assistance.

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Sincerely

Amy Hepner
Middle River, Maryland 21220



Outlook

Fly Friendly Program @ Martin State Airport

From irene anderson <irene.anderson61@gmail.com>

Date Thu 4/9/2026 8:21 PM

To Bruce Rineer <brineer@bwiaairport.com>

You don't often get email from irene.anderson61@gmail.com. [Learn why this is important](#)

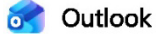
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Thanks

Irene Anderson



Outlook

Fly Friendly Program @ Martin State Airport

From Joseph Stella <jstella44@icloud.com>

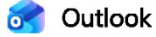
Date Thu 4/9/2026 8:20 PM

To Bruce Rineer <brineer@bwiaairport.com>

[You don't often get email from jstella44@icloud.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

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Please look into the fly friendly program. Bowley Qtr resident
Sent from my iPhone



Fly Friendly Program @ Martin State Airport

From Marino Plumbing <awamarinoplumbing@gmail.com>

Date Thu 4/9/2026 8:19 PM

To Bruce Rineer <brineer@bwiairport.com>

You don't often get email from awamarinoplumbing@gmail.com. [Learn why this is important](#)

Caution: CAUTION: Suspicious? Double-check! This email is from an external source. If something seems unusual, even from someone you know, verify directly. Forward suspicious emails directly to Email Abuse (abuse@mdot.maryland.gov) or call the MDOT Service Desk at 410-768-7181 for assistance.

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[Missy Anderson](#)

AWA Enterprise Inc, t/a

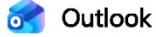
Marino Plumbing & Heating

19 Ingleside Ave

Catonsville, MD 21228

410-747-5615

awamarinoplumbing@gmail.com



Outlook

Fly Friendly Program @ Martin State Airport

From Mary Muth <muth_mary@yahoo.com>

Date Thu 4/9/2026 8:18 PM

To Bruce Rineer <brineer@bwiairport.com>

Caution: CAUTION: Suspicious? Double-check! This email is from an external source. If something seems unusual, even from someone you know, verify directly. Forward suspicious emails directly to Email Abuse (abuse@mdot.maryland.gov) or call the MDOT Service Desk at 410-768-7181 for assistance.

Bruce,

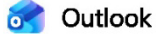
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Sincerely

Mary Muth

C 443.744.9221

Marymuth14@gmail.com



Fly Friendly Program @ Martin State Airport

From HENRY OLAYA <olayahank@aol.com>

Date Thu 4/9/2026 8:18 PM

To Bruce Rineer <brineer@bwiairport.com>

[You don't often get email from olayahank@aol.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Caution: CAUTION: Suspicious? Double-check! This email is from an external source. If something seems unusual, even from someone you know, verify directly. Forward suspicious emails directly to Email Abuse (abuse@mdot.maryland.gov) or call the MDOT Service Desk at 410-768-7181 for assistance.

Bruce,

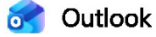
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Sincerely

My best

Henry Olaya

Sent from my iPhone



Outlook

Fly Friendly Program @ Martin State Airport

From Domenic Zannino <citylivingprop@aol.com>

Date Thu 4/9/2026 8:18 PM

To Bruce Rineer <brineer@bwiaairport.com>

[You don't often get email from citylivingprop@aol.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

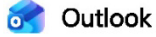
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Sincerely

Sent from my iPhone



Fly Friendly Program @ Martin State Airport

From Julie Taylorson <jtaylorson22@gmail.com>

Date Thu 4/9/2026 8:18 PM

To Bruce Rineer <brineer@bwiairport.com>

You don't often get email from jtaylorson22@gmail.com. [Learn why this is important](#)

Caution: CAUTION: Suspicious? Double-check! This email is from an external source. If something seems unusual, even from someone you know, verify directly. Forward suspicious emails directly to Email Abuse (abuse@mdot.maryland.gov) or call the MDOT Service Desk at 410-768-7181 for assistance.

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Sincerely

Julie Taylorson

Realtor

RE/MAX Components

410-446-6379

jtaylorson22@gmail.com

Sent from my iPhone

F.2 Public Meeting Transcript of Oral Comments

Private Comment - March 18, 2026	DC Metroplex BWI Community Roundtable
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6	MARYLAND AVIATION ADMINISTRATION
7	DC METROPLEX BWI COMMUNITY ROUNDTABLE
8	PUBLIC COMMENT
9	
10	March 18, 2026
11	7:35 p.m.
12	
13	KIMBERLY FRY
14	
15	
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18	
19	
20	Transcribed by:
21	CRC Salomon, Inc.

Office (410) 821-4888 CRC Salomon	2201 Old Court Road, Baltimore, MD 21208 www.crcsalomon.com - info@crcsalomon.com	Facsimile (410) 821-4889 Page: 1
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1 P R O C E E D I N G S

2 MS. FRY: Okay. My public comment is I would
3 like to request that -- prevent runway intersection
4 departures for all aircraft departing from runway 15
5 midway. This request is being made due to the flight
6 schools and smaller aircraft but should be for all
7 aircraft. The reasoning for this is it allows the
8 aircraft to reach higher altitudes more quickly, thereby
9 reducing noise impacts to the Long Beach Estates and
10 Galloway Creek residents. Further, since MAA and Martin
11 Airport's main source of revenue is fuel sales, requiring
12 further departure lengths should potentially assist with
13 greater fuel consumption and thereby increase revenue.

14 I represent the Bowleys Quarters Improvement
15 Association, and I'm part of the stakeholder advisory
16 committee. And at our recent meeting where we had
17 Bowleys Quarters, Wilson Point, Hawthorn, Greenleigh,
18 Fairwinds in attendance, all wanted to have this
19 implemented into the plan, not as an option, but as
20 mandatory. There is really no reason that somebody
21 should say they can't start at the end of the runway. So

1 that's our thinking. Thank you.

2 COURT REPORTER: You're welcome. And if you
3 didn't state your name, could you state your name?

4 MS. FRY: Yes. My name is Kimberly Fry.

5 COURT REPORTER: Thank you very much.

6 (Comment concluded.)

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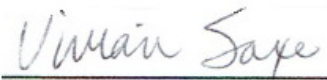
20

21

C E R T I F I C A T E

I, Vivian Saxe, hereby certify that I
transcribed from audio file the proceedings to the best
of my ability in the foregoing-entitled matter; and I
further certify that the foregoing is a full, true, and
correct transcript of the audio files produced.

IN WITNESS THEREOF, I have subscribed my name
on March 19, 2026.



Vivian Saxe, CET

Transcriber

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MARYLAND AVIATION ADMINISTRATION

7

DC METROPLEX BWI COMMUNITY ROUNDTABLE

8

INDIVIDUAL COMMENT

9

10

March 18, 2026

11

6:33 p.m.

12

13

GEORGE KINSEL

14

15

16

17

18

19

20

Transcribed by:

21

CRC Salomon, Inc.

1 P R O C E E D I N G S

2 MR. KINSEL: There is one plane flying out of
3 Martin State Airport that is extremely loud. It flies
4 much higher than any other aircraft out of this area.
5 I've complained about it. First thing was -- I was told
6 the plane couldn't fly that often, so I wrote the times
7 that it flew over. And then they had to admit that it
8 did.

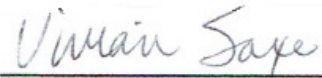
9 Then I saw the plane across from the Middle
10 River Post Office. It was turned so I couldn't see the
11 tail number. And I described it to the people at the
12 Martin, it was an unusual looking aircraft. It was a
13 single-engine prop plane, but the pilot sat on top of the
14 fuselage like a jet fighter. And they said no such plane
15 existed at Martin. And that's it.

16 (Comment concluded.)
17
18
19
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21

C E R T I F I C A T E

I, Vivian Saxe, hereby certify that I
transcribed from audio file the proceedings to the best
of my ability in the foregoing-entitled matter; and I
further certify that the foregoing is a full, true, and
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Transcriber

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