

Airport Noise Zone Update Stakeholder Advisory Committee

**Meeting #2
Martin State Airport**

**June 26, 2025
6:00 PM – 8:00 PM**

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*

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**

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

Introductions

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

SAC Meeting #1 Recap

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)



ANZ Study Update

The ANZ update process includes status review of the NAP.

Airport Noise Zone (ANZ)	Noise Abatement Plan (NAP)
<p>Provides the means to identify and control incompatible land development around Martin State</p> <p>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)</p>	<p>Prescribes measures to monitor, reduce, and/or eliminate incompatible land use areas within the ANZ to the extent possible while maintaining efficient airport operations</p>

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)
<p><u>Noise Zone Regulations; Part I</u></p> <p>The purpose of this subtitle is to:</p> <ol style="list-style-type: none"> (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. 	<p><u>Chapter 11.03.03</u></p> <p>Defines the prediction method to be used to develop 'noise contours of equal noise exposure' (subject to the approval of the Executive Director)</p> <p>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.</p>
<p><u>Noise Zone Regulations; Part II</u></p> <p>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</p>	<p><u>Section 11.03.03.05</u></p> <p>Provides a process for permits for construction within the Noise Zone Surrounding a State-Owned Airport</p>

Expectations

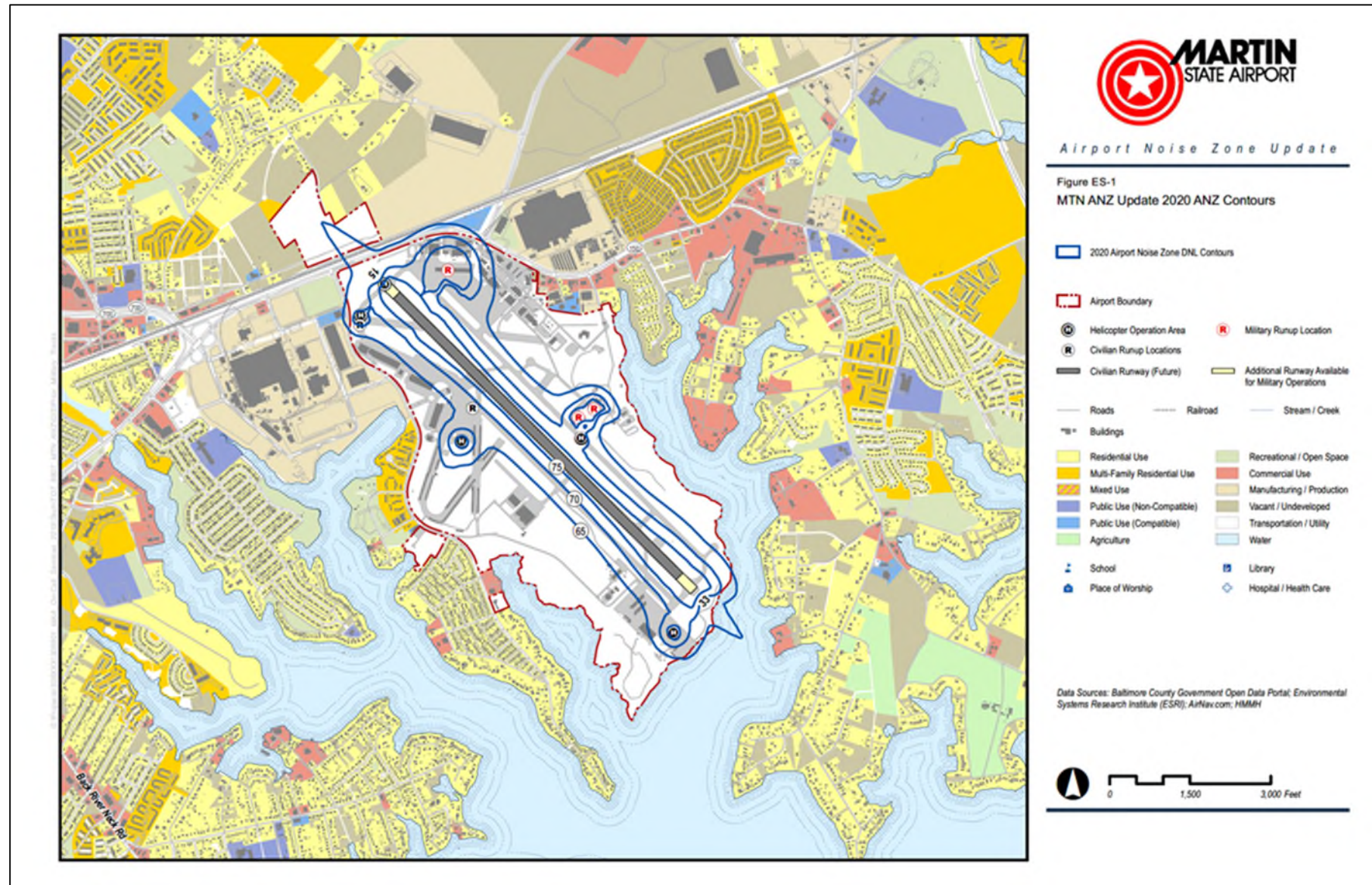
The ANZ provides a means to:

- 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

Martin State Noise Zone (2020)



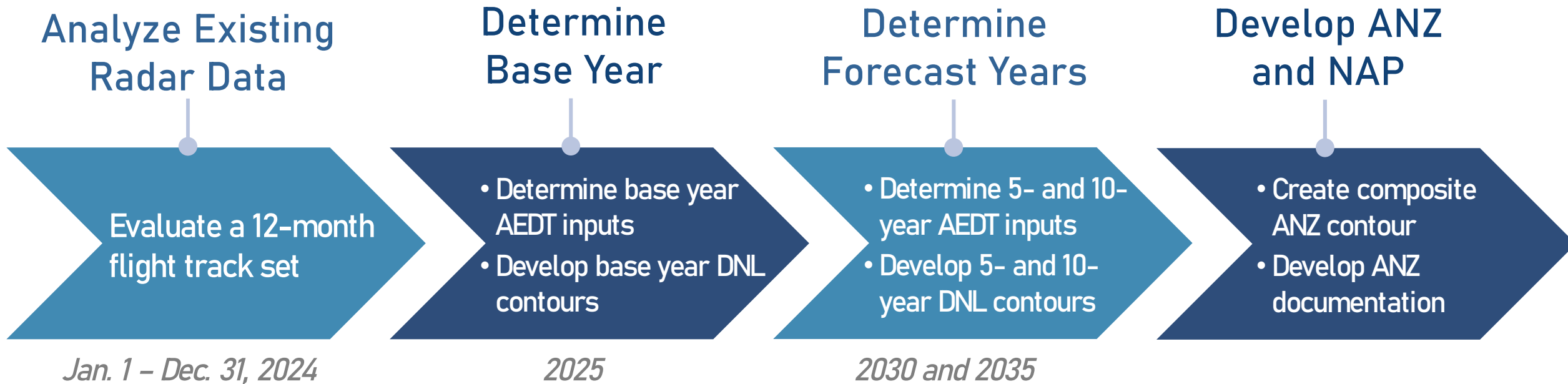
SAC Responsibilities

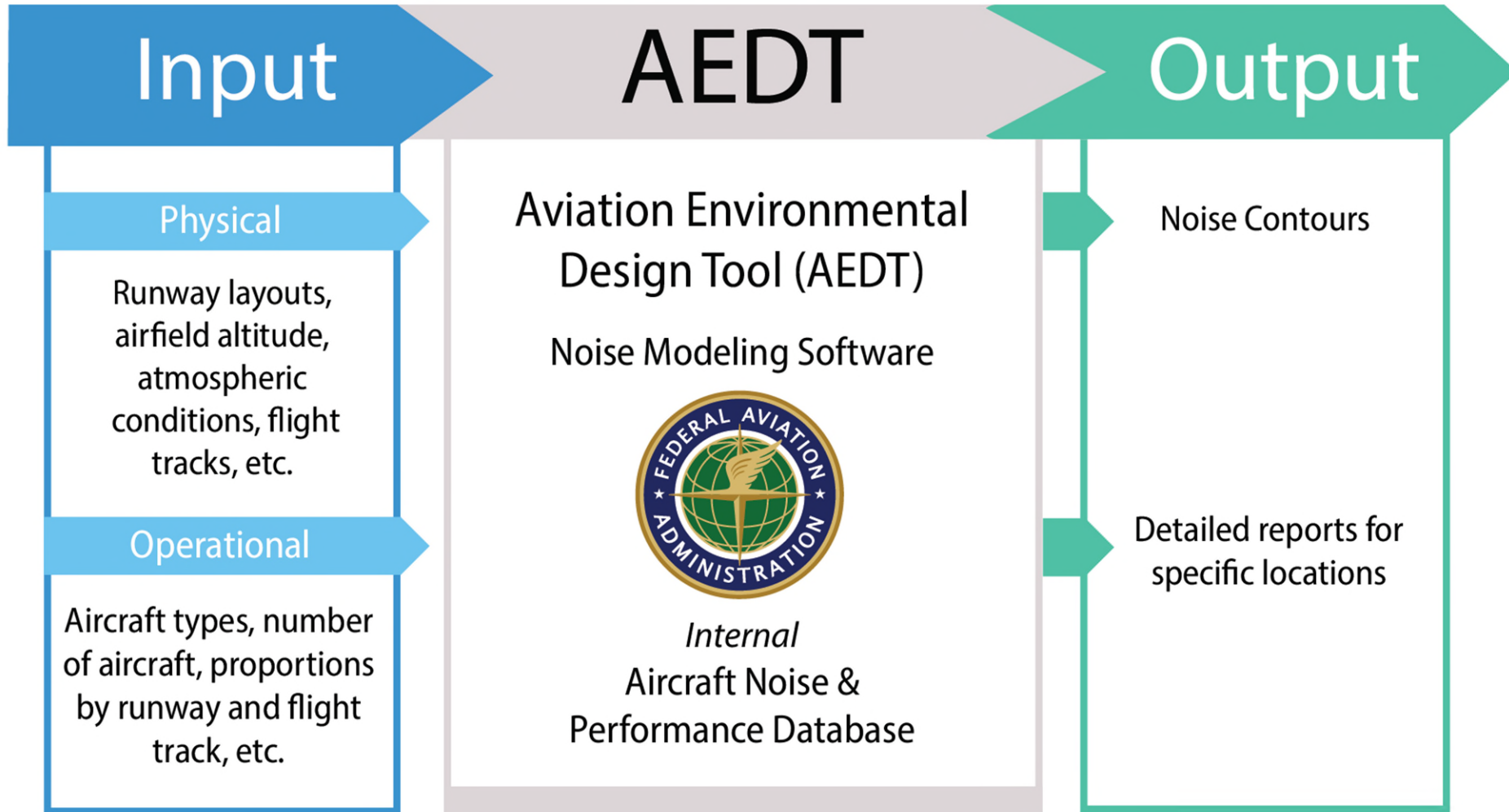
- **Contribute to study inputs**
 - Discussion and feedback at SAC meetings
 - Provide input, advice, and guidance related to Noise Abatement Plan
 - understand ANZ effects on stakeholders
- **Review modeling assumptions**
 - Base year and forecasts
- **Review analysis results**
 - Base, 5-year, and 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.

ANZ Noise Modeling Process

ANZ Noise Modeling Process





Noise Model Inputs

Airport Layou

Base Year (2025)

Runups

- Pre-flight run-ups and Maintenance run-ups will be performed in designated areas



Airport Noise Zone Update

Figure 1
Existing (2025) Runway Layout

- Helicopter Operation Area
- Obstacle-Peak Locations
- Obstacle Runway
- Airport Boundary
- Roads
- Railroads
- Stream/Drain
- Military-Peak Location
- Additional Runways Available for Military Operations

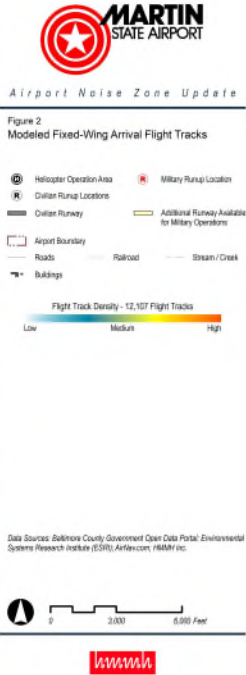
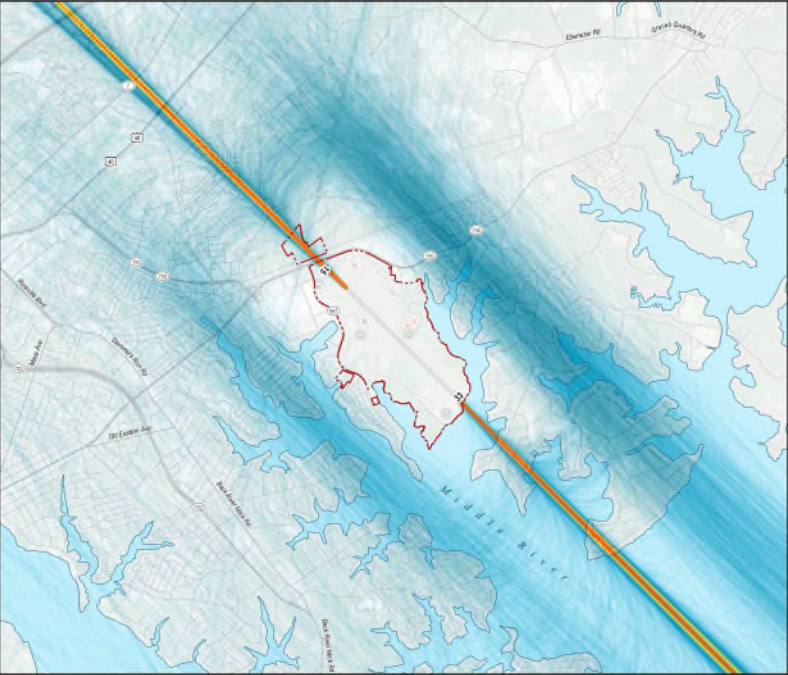
Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; ICAO



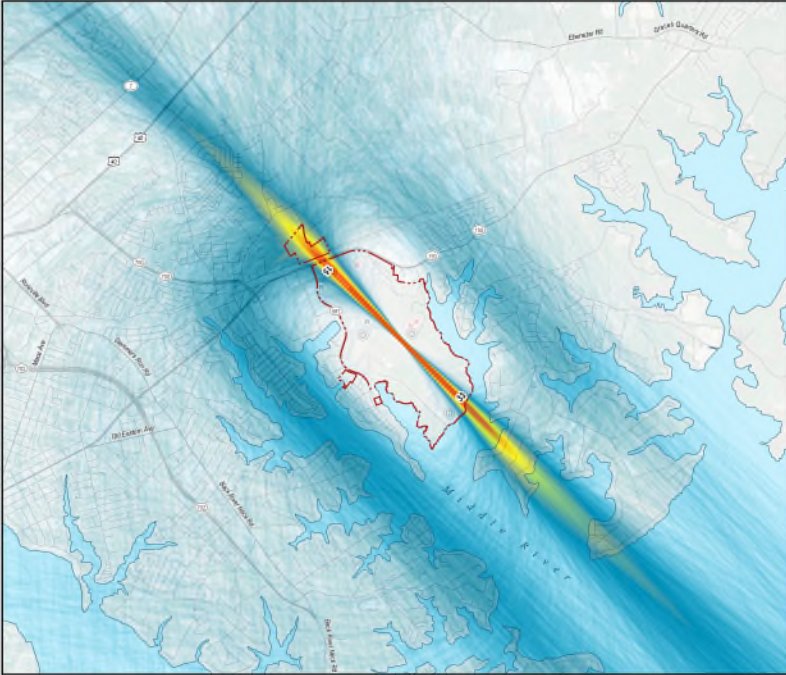
Model Track Development

- **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

Fixed Wing Modeled Flight Track Density

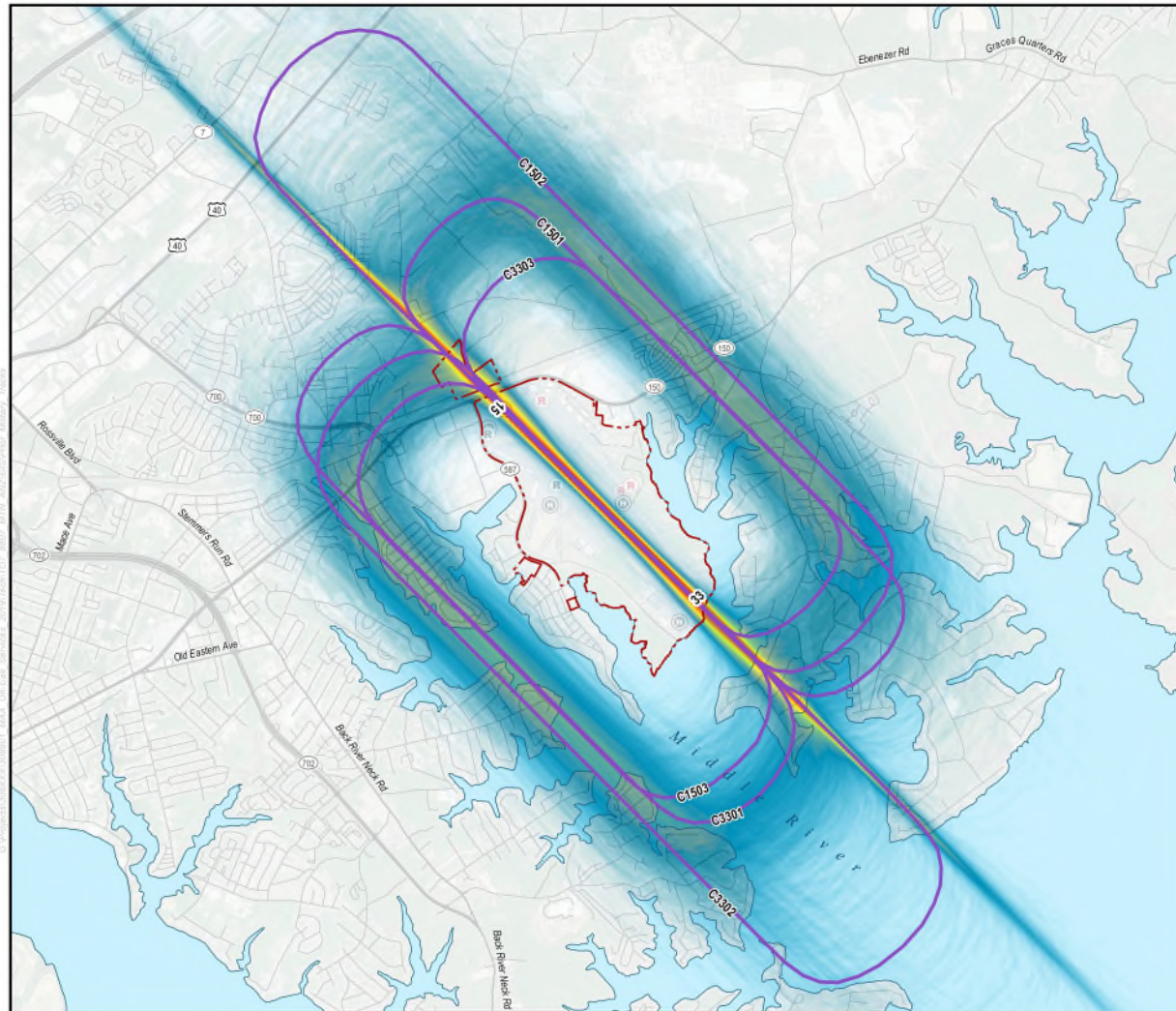


Arrival tracks



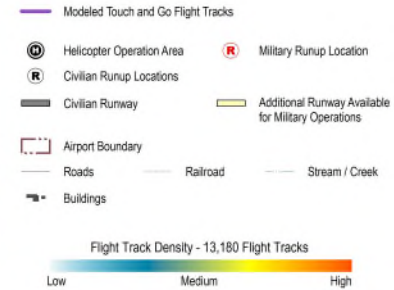
Departures tracks

Fixed Wing Modeled Circuit/Touch and Go Tracks

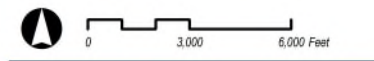


Airport Noise Zone Update

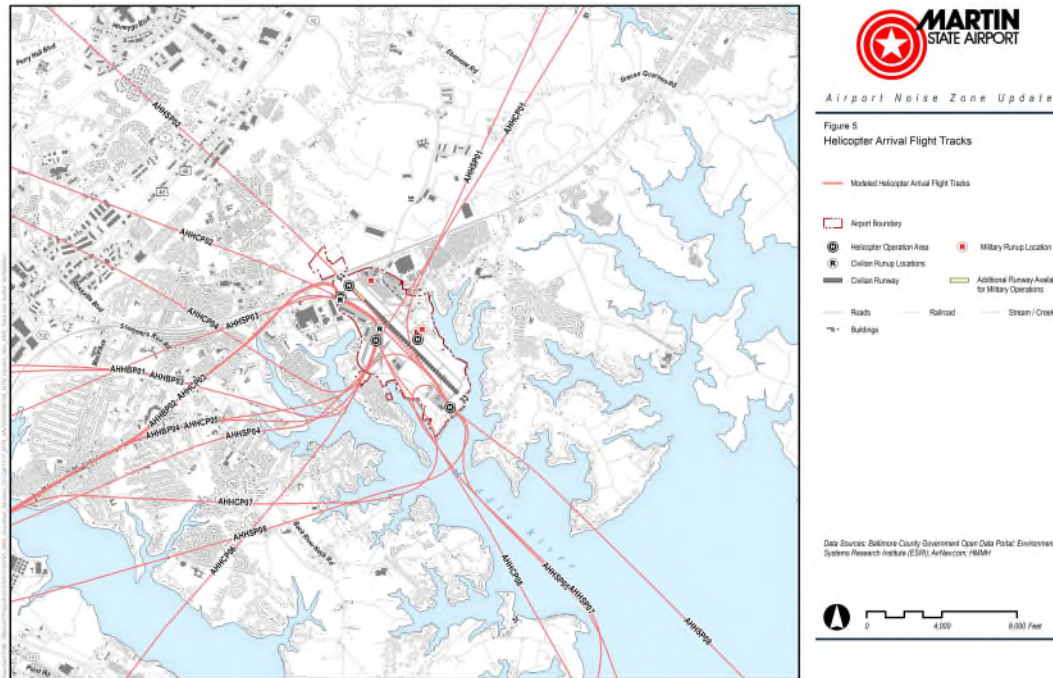
Figure 4
Fixed-Wing Touch and Go Flight Tracks



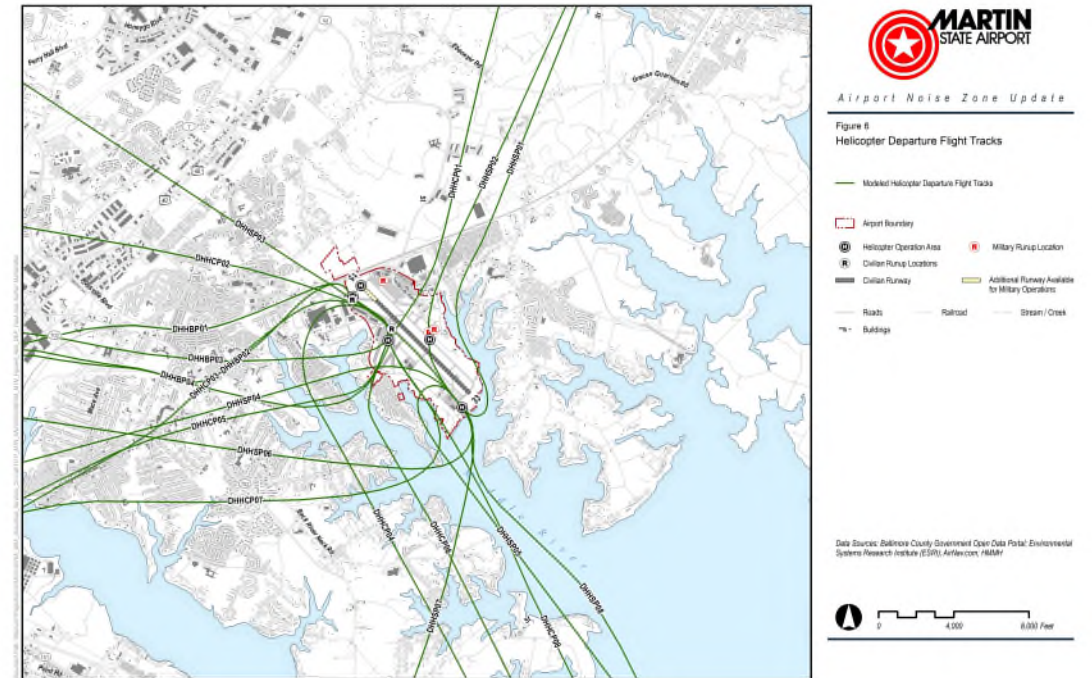
Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HMMH Inc.



All Helicopter Modeled Flight Tracks

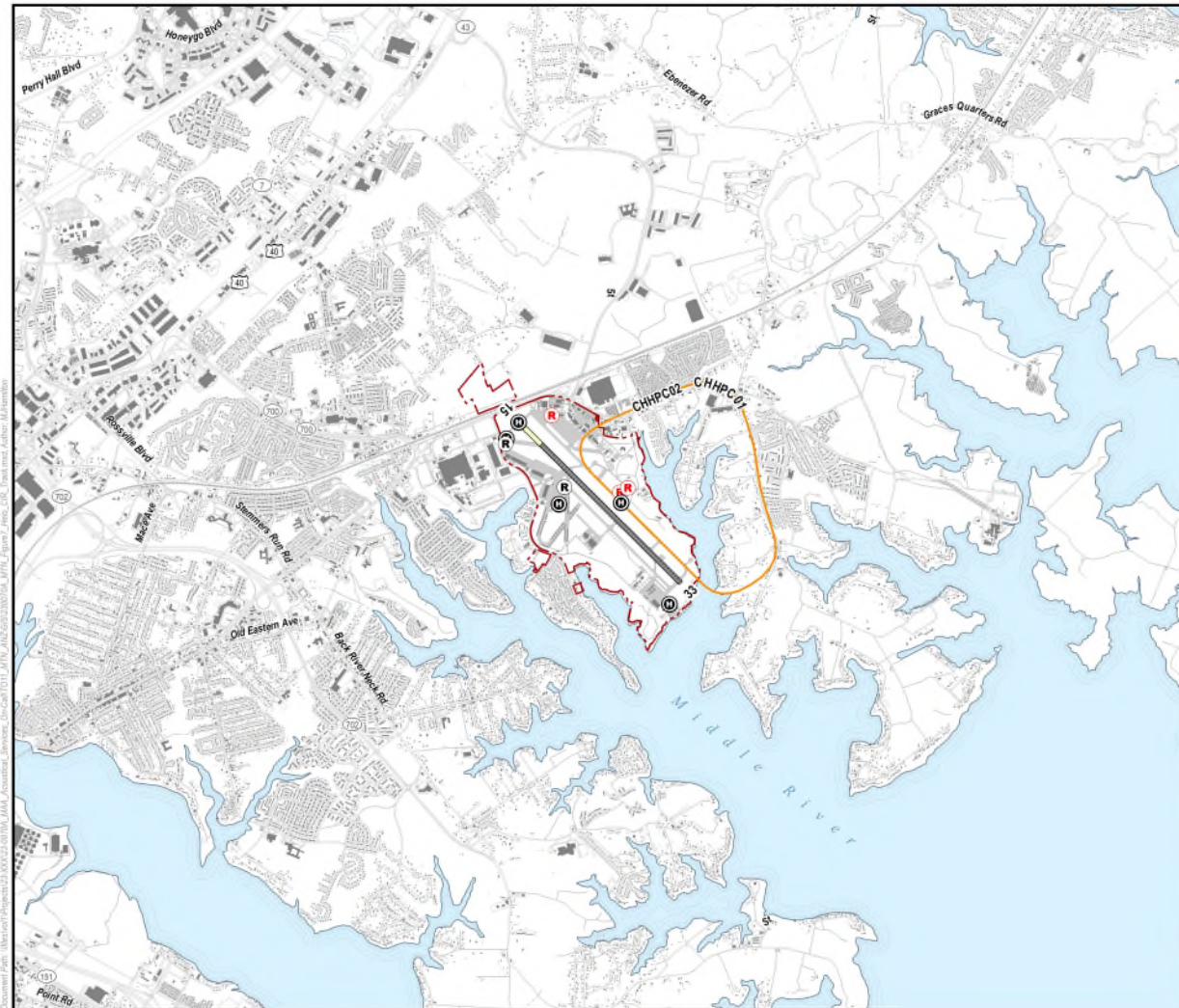


Arrival tracks



Departures tracks

Helicopter Modeled Circuit/Touch and Go Tracks

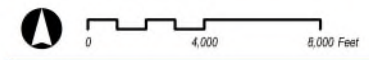


Airport Noise Zone Update

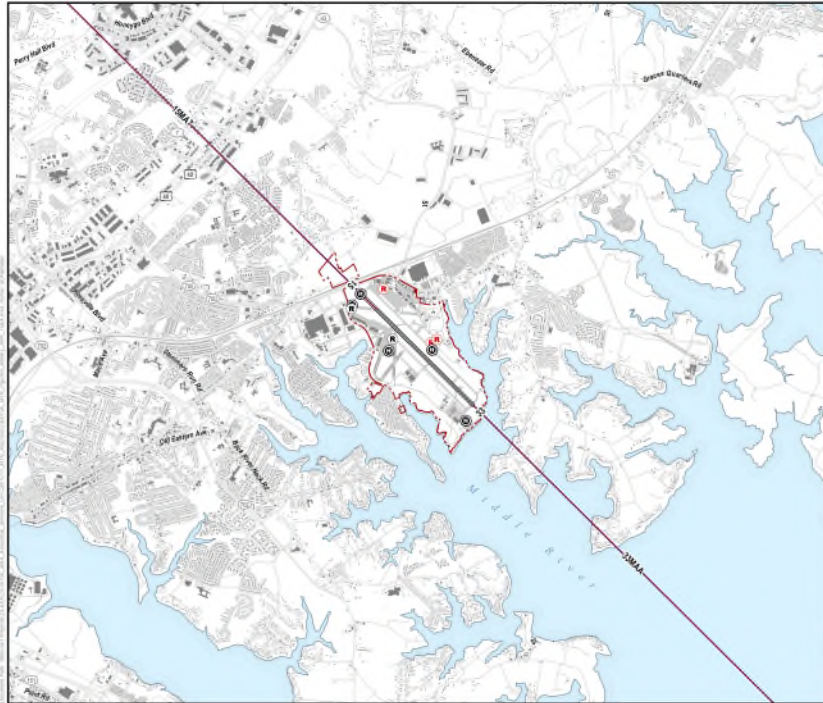
Figure 7
Helicopter Touch and Go Flight Tracks

- Modeled Helicopter Touch and Go Flight Tracks
- Airport Boundary
- Helicopter Operation Area
- Civilian Runup Locations
- Civilian Runway
- Roads
- Buildings
- Military Runup Location
- Additional Runway Available for Military Operations
- Railroad
- Stream / Creek

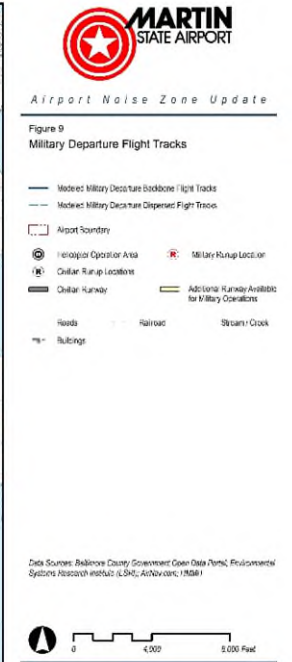
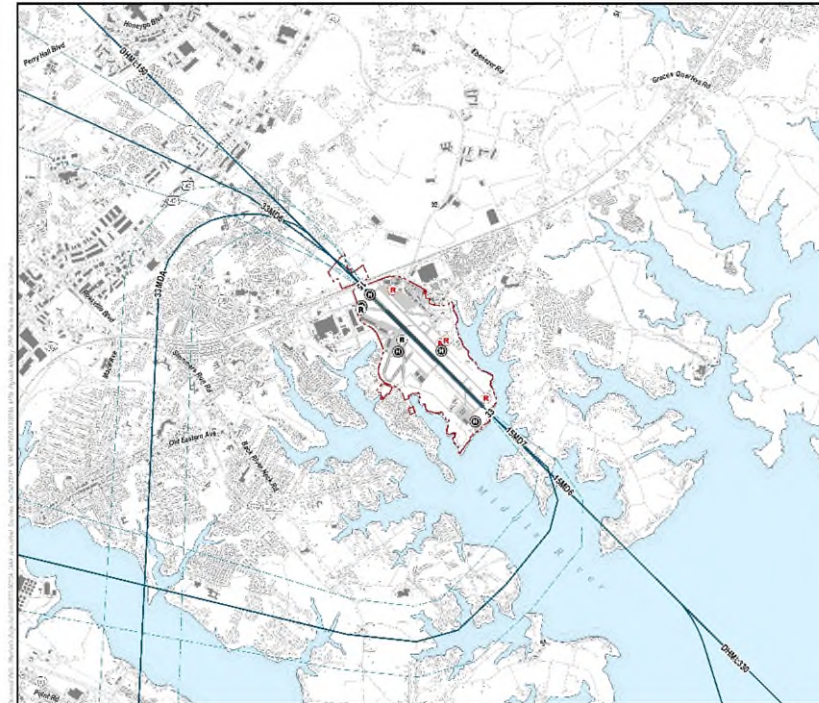
Data Sources: Baltimore County Government Open Data Portal; Environmental Systems Research Institute (ESRI); AirNav.com; HMMH



Military Modeled Flight Track



Arrival tracks



Departures tracks

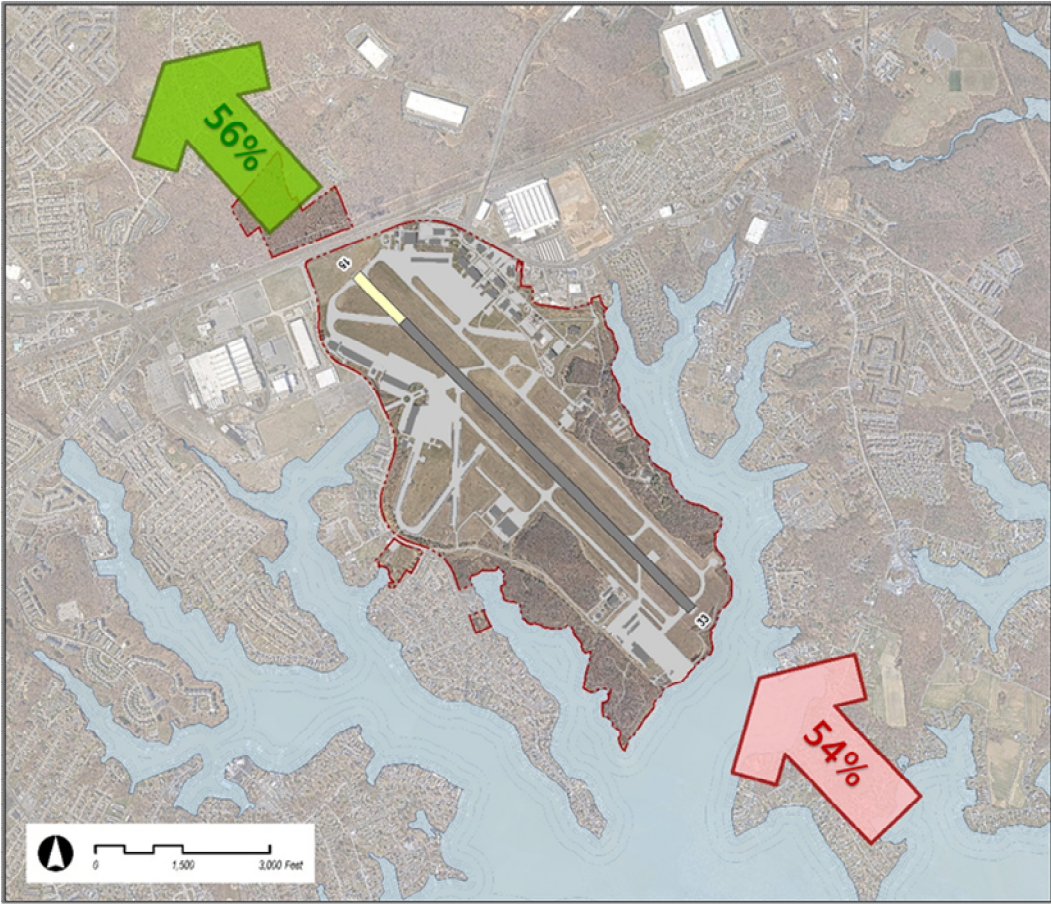
Base Year (2025) Operations

- 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.

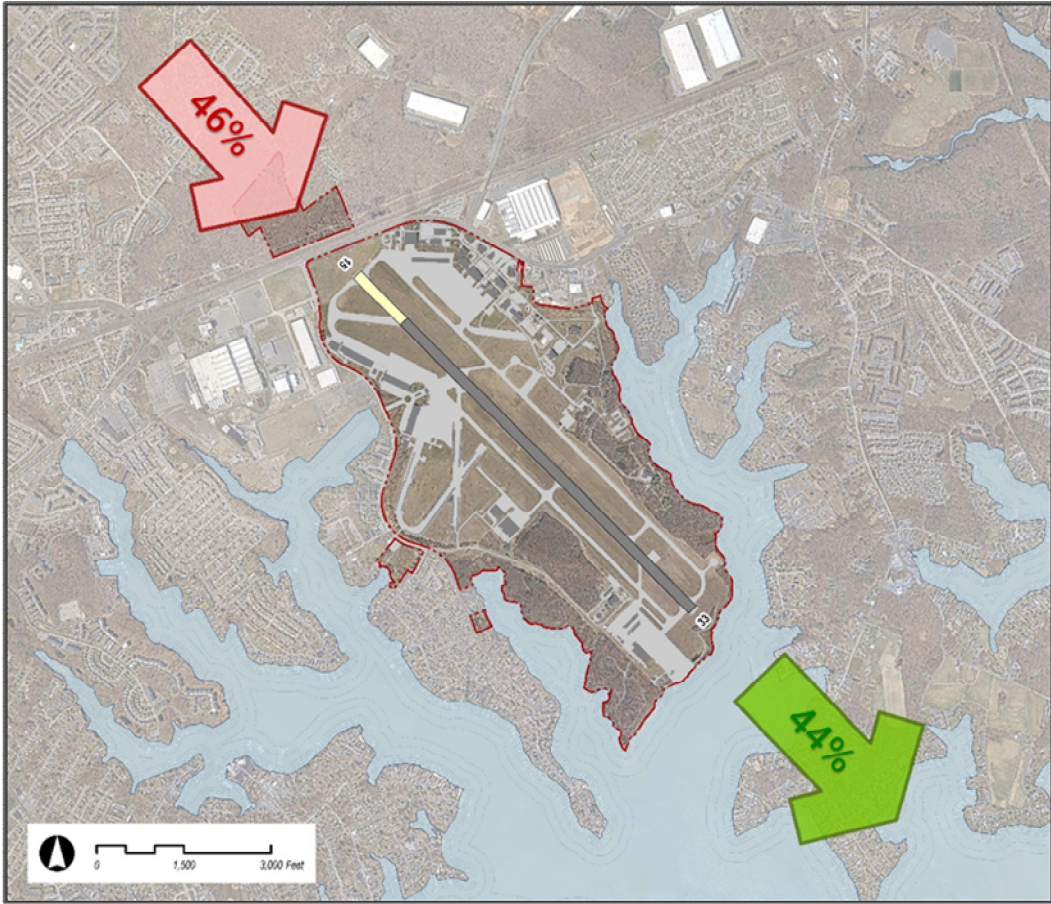
Operations Category	Operations Count	Operations Percentage
Air Carrier (AC)	5	<0.1%
Air Taxi (AT)	2,772	3.1%
General Aviation (GA)	84,939	94.9%
Military (ML)	1,773	2.0%
Total	89,489	
Average Annual Day (AAD)	245.18	

Runway Utilization

Base Year (2025)



West Flow 54%



East Flow 46%

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)

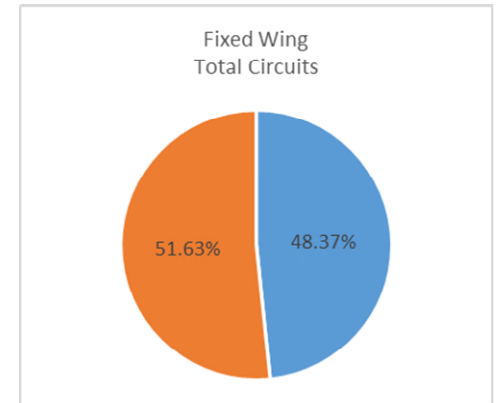
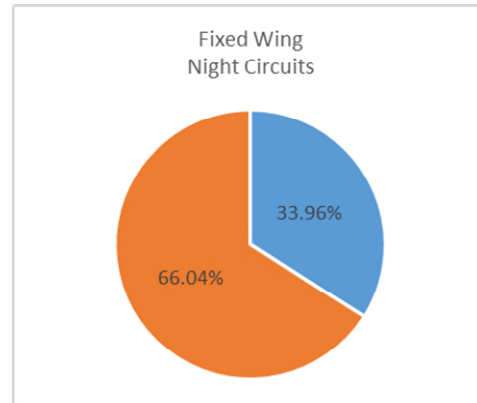
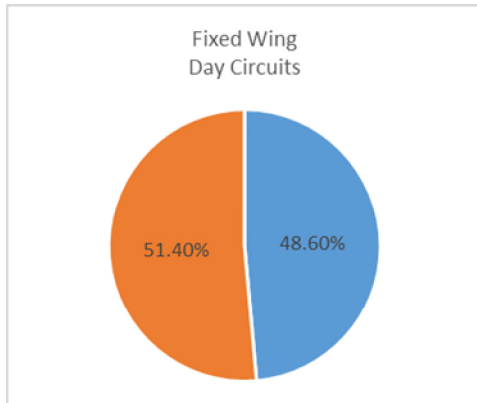
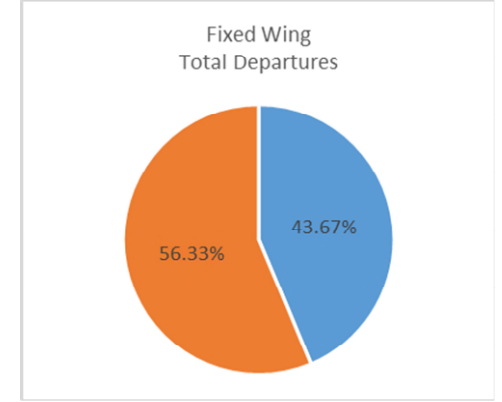
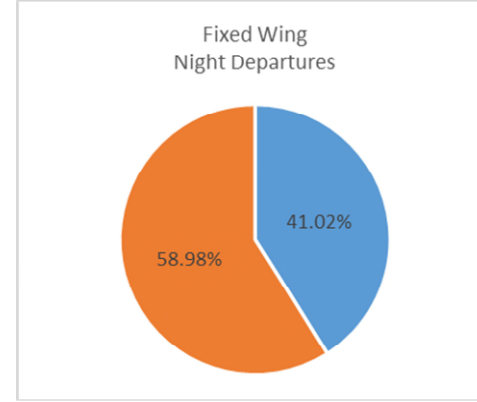
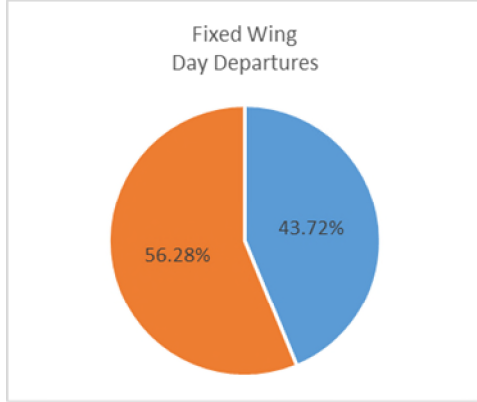
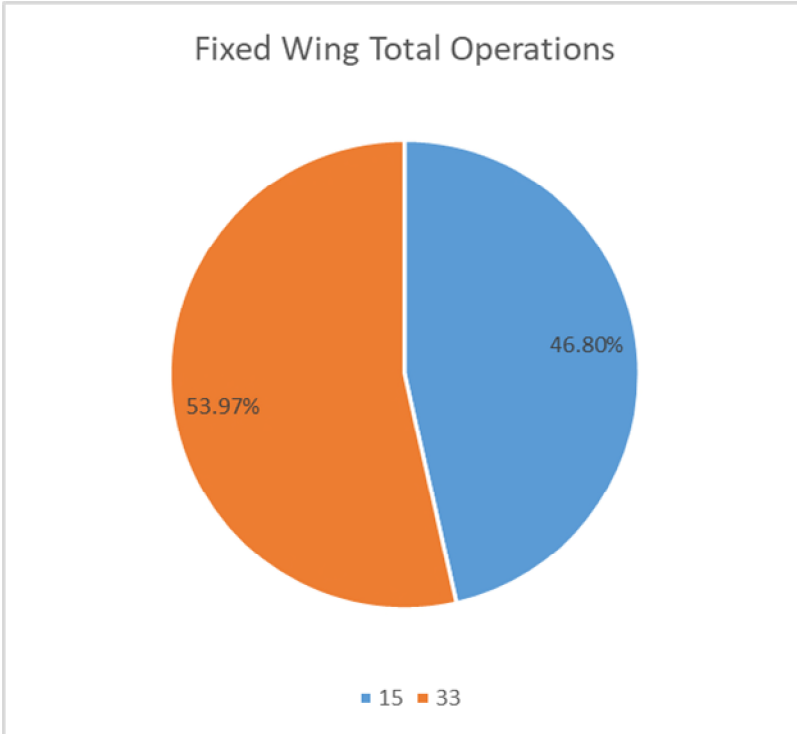
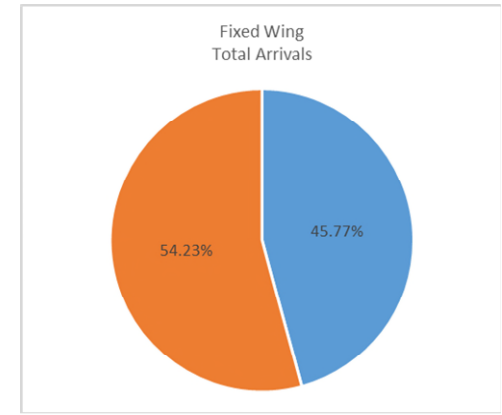
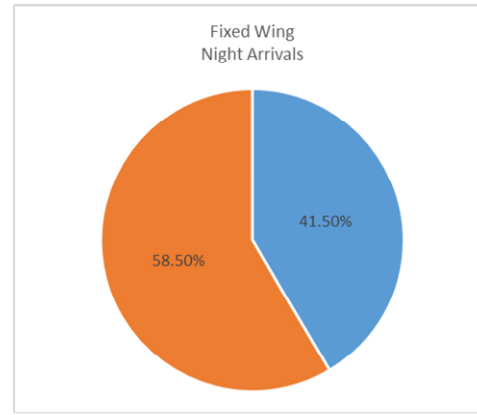
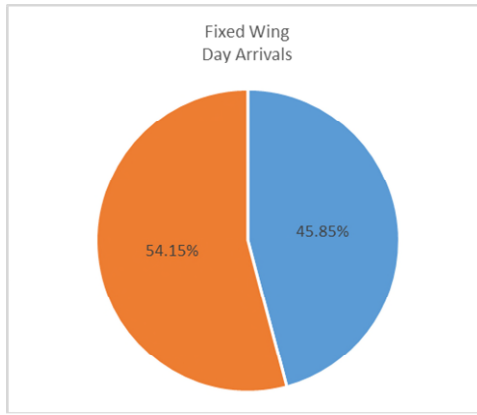


- Military

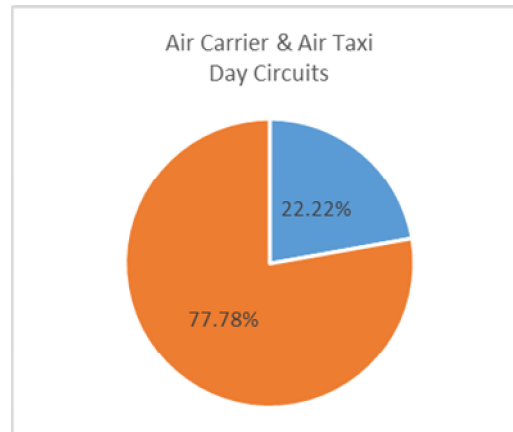
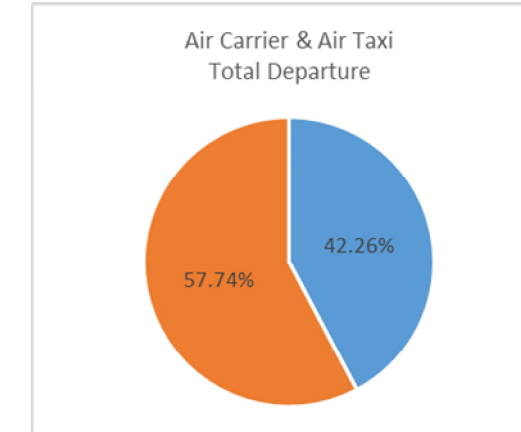
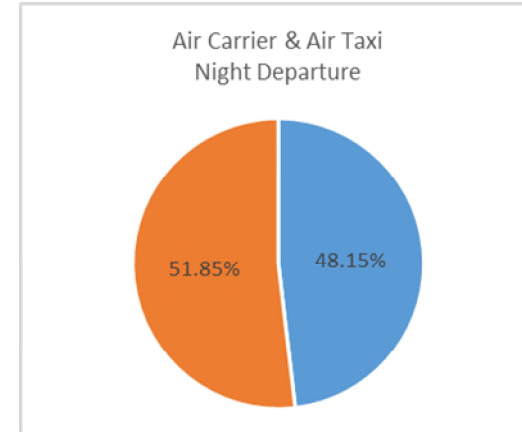
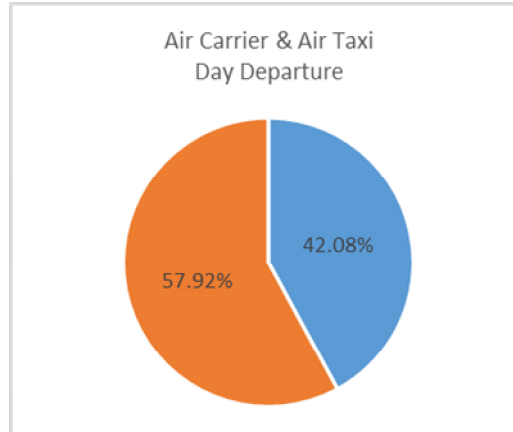
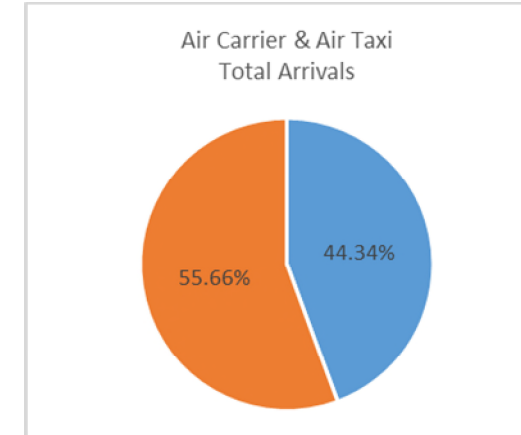
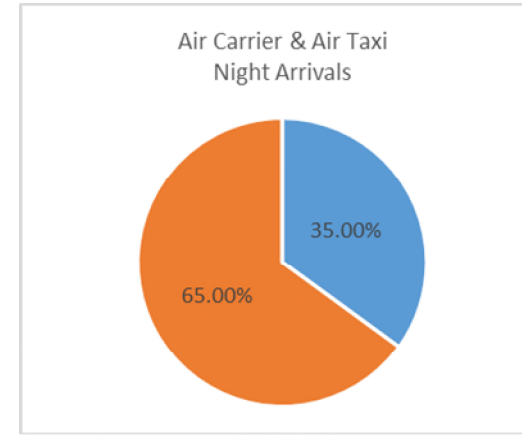
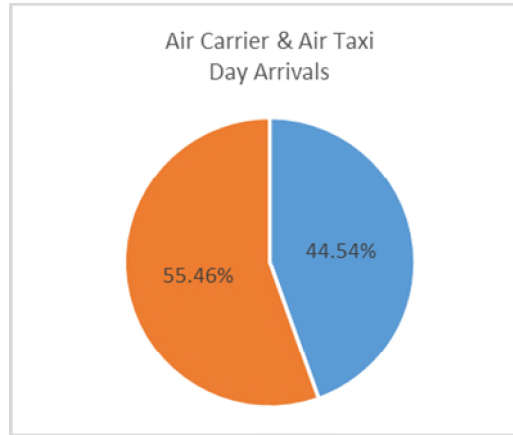
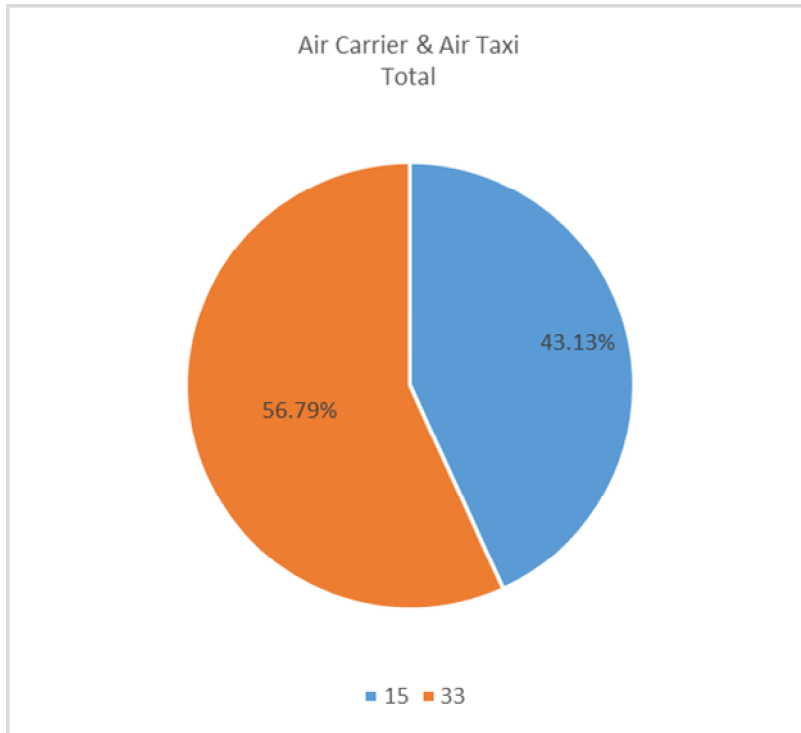
- A10C (Fairchild A-10C Thunderbolt II)
- S70 (Sikorsky UH-60 Black Hawk)
- DHC6 (Raytheon Super King Air 200 and other military twin-engine turboprop aircraft)



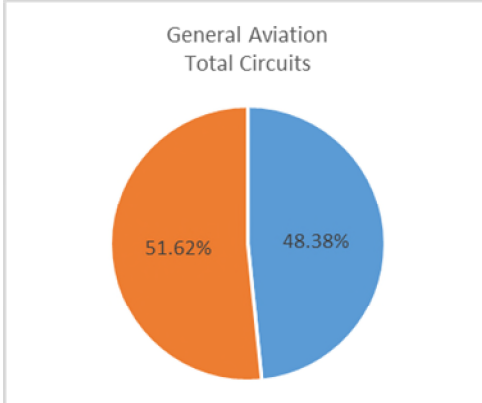
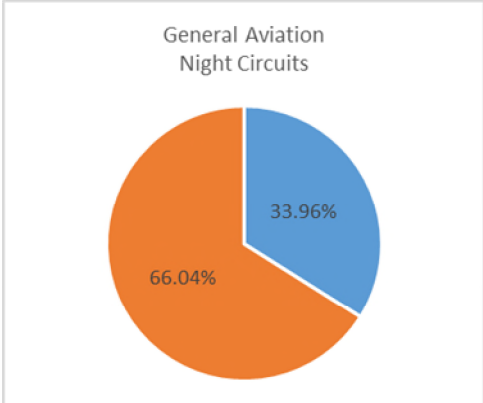
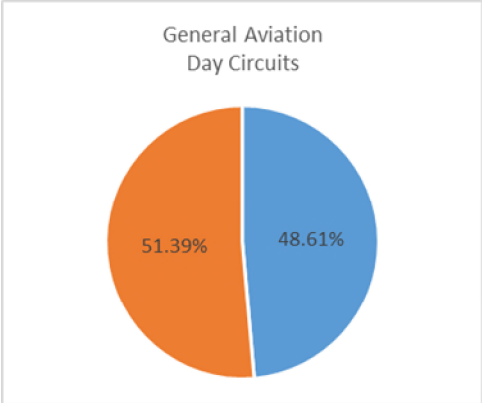
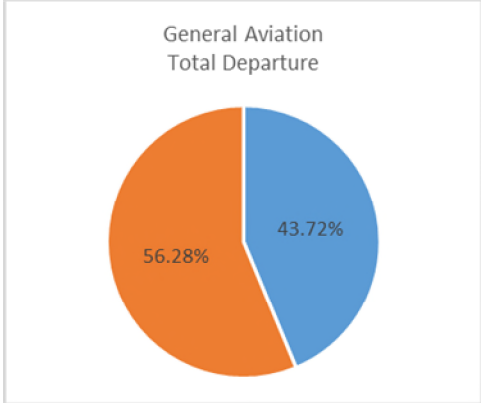
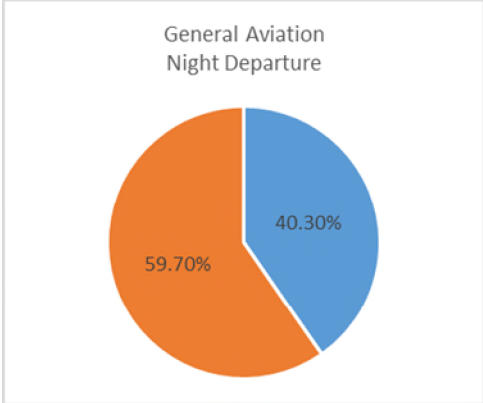
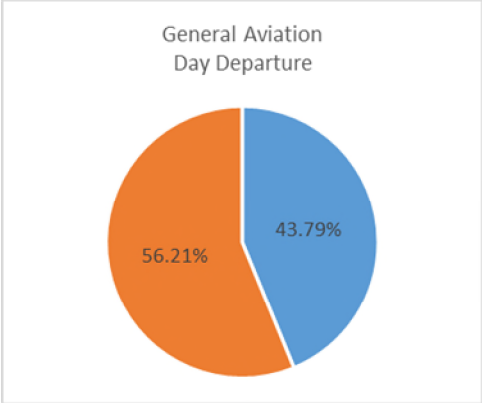
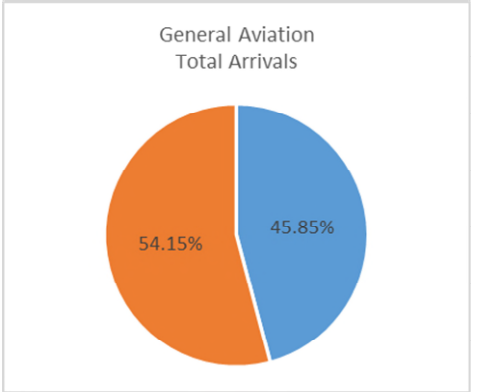
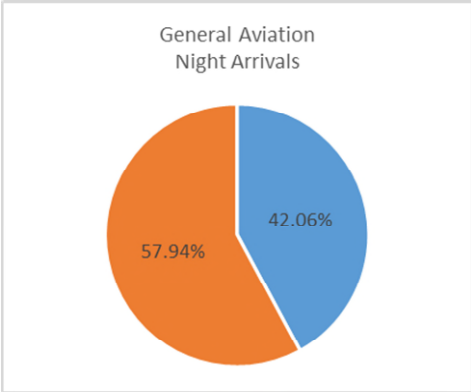
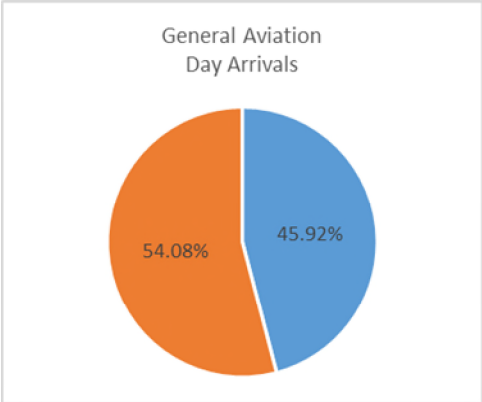
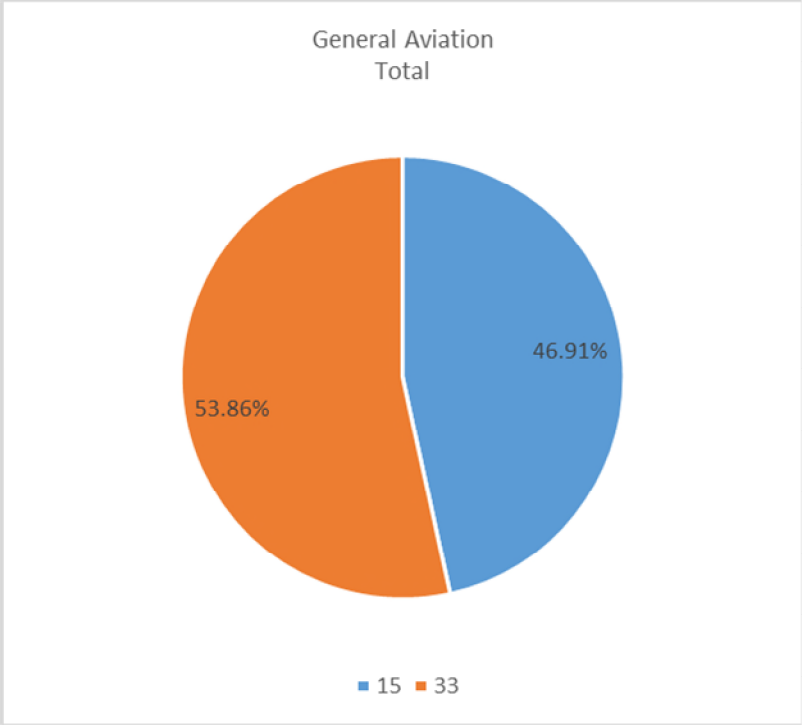
Total Fixed Wing Runway Utilization



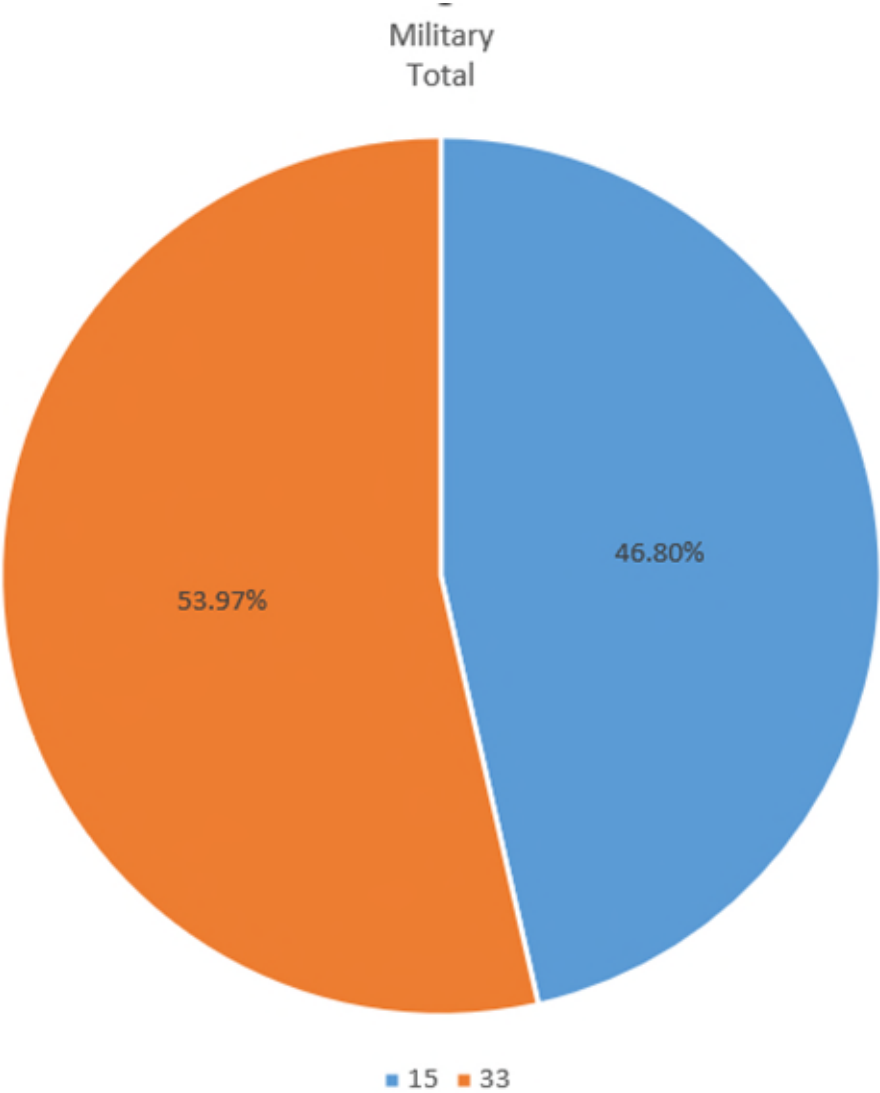
Air Carrier & Air Taxi Runway Utilization



General Aviation Runway Utilization



Military Runway Utilization



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.

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	

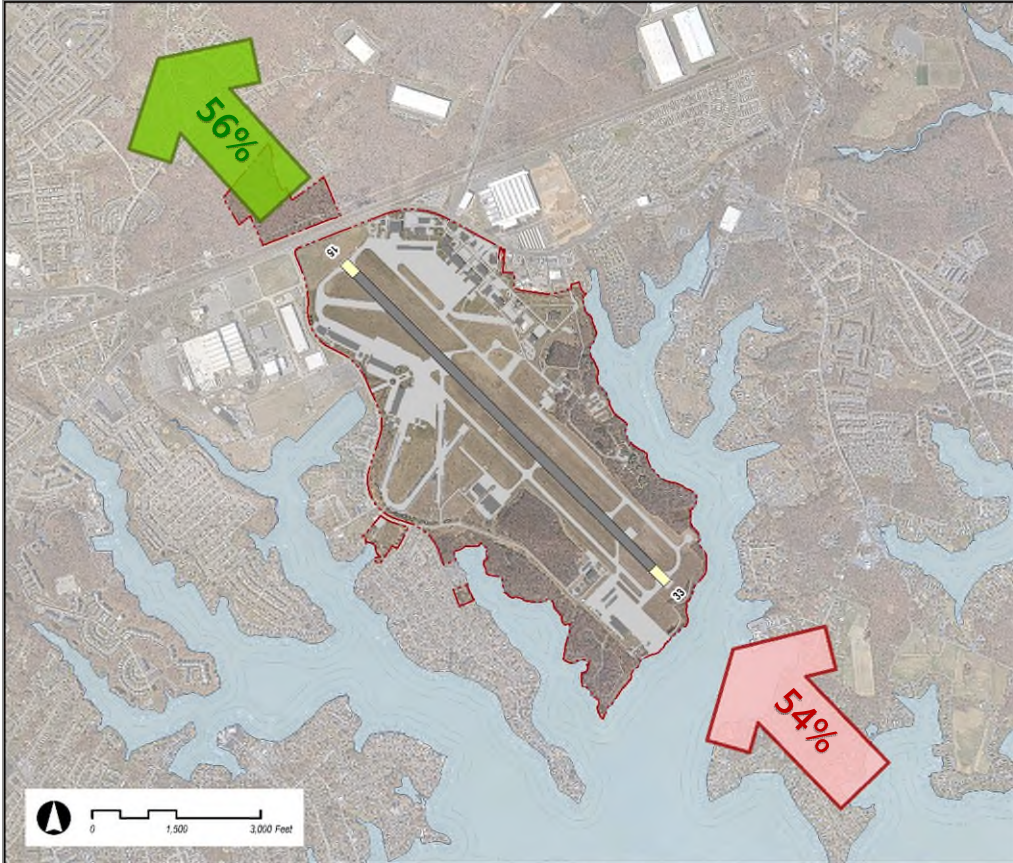
Ten-Year (2035) Operations

- 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

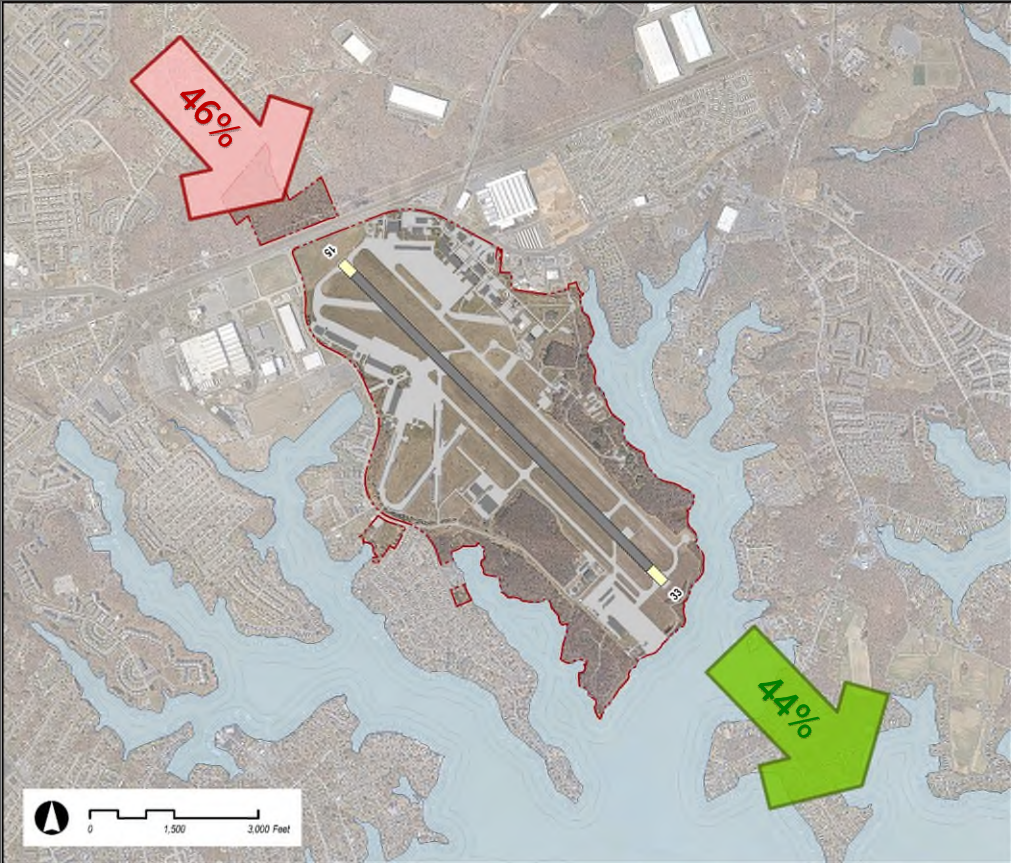
Operations Category	Operations Count	Operations Percentage
Air Carrier (AC)	5	<0.1%
Air Taxi (AT)	3,632	3.8%
General Aviation (GA)	91,604	95.9%
Military (ML)	523	0.3%
Total	95,764	
Average Annual Day (AAD)	262.37	

Runway Utilization

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



West Flow 54%



East Flow 46%

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 Contours (Next Meeting)

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

Noise Abatement Plan (NAP) Overview

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

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.

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

Noise Abatement Plan (NAP):

Touch-and-Go or Practice Approaches

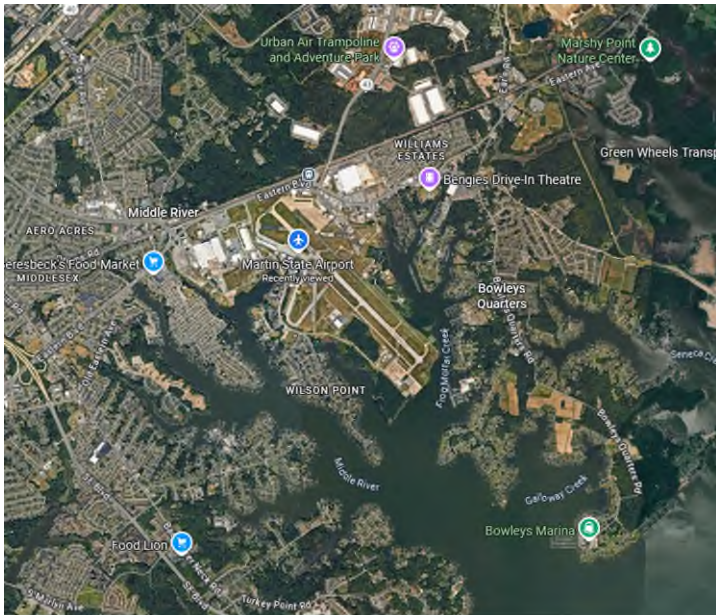
No touch-and-go and/or practice approaches or practice landings are permitted between 10:00 p.m. to 6:00 a.m. daily unless approved by MTN Operations and Maintenance staff.

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

Zoning Permit and Appeal Procedure

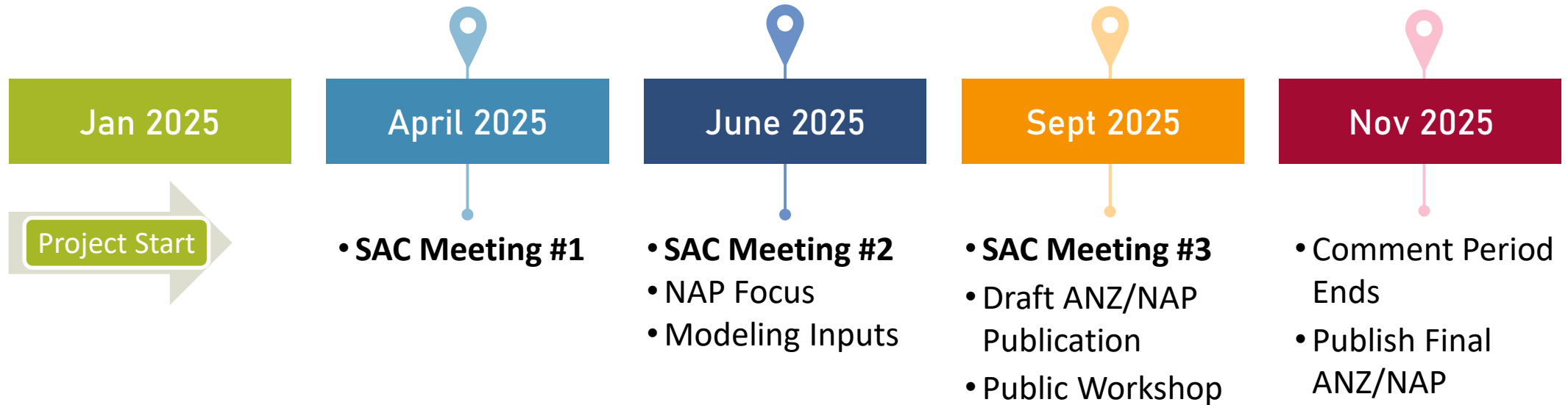
- » MAA regulates land use within the Airport Noise Zone.
- » Anyone desiring to construct or modify a structure or land use is required to obtain an Airport Zoning Permit.

MDANG Noise Barriers

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

Schedule and Resources

Proposed Project Schedule



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,
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ANZ Project Managers

Tyler White, Principal Consultant, twhite@hmmh.com

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

Additional Resources

2020 Martin State ANZ

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

WebTrak

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

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

Thank **You.**

Martin State Airport

