

Martin State Aircraft Noise Mitigation Report

(2021 JCR, p. 81)

**A Report to the Maryland General Assembly
Senate Budget and Taxation Committee
and
House Appropriations Committee**

September 2021

Maryland Department of Transportation
Maryland Aviation Administration

The Maryland Department of Transportation Maryland Aviation Administration (MDOT MAA) offers this report in response to budget bill language contained in the 2021 Joint Chairmen's Report (JCR). The language states:

...provided that \$100,000 of this appropriation may not be expended until the Maryland Aviation Administration (MAA) submits a report on efforts to reduce aircraft noise at Martin State Airport, in particular helicopter related noise. This report should include the following information:

- (1) A study of the impact of aircraft noise on communities near Martin State Airport, specifically including the impact of helicopter traffic over the Wilson Point Community;*
- (2) Any actions MAA is currently taking to address this issue; and*
- (3) Any additional actions that MAA could take to mitigate the impact of aircraft noise, specifically helicopter noise on the Wilson Point Community and surrounding communities.*

Background

The MDOT MAA is the owner and operator of Martin State Airport (MTN), the second busiest general aviation airport in Maryland, which hosts a variety of tenants, including the Maryland Air National Guard (MDANG) 175th Wing, flight schools, Maryland State Police Aviation Command Headquarters, Baltimore County and Baltimore City police aviation units, news channel flight departments, corporate aircraft, and private aircraft. MTN serves a vital role in Maryland's aviation system including as a Federal Aviation Administration (FAA) designated 'reliever airport' for Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall Airport).

Aviation pioneer Glenn L. Martin purchased 1,260 acres in Middle River to construct an aircraft manufacturing plant, relocating his manufacturing activities from Ohio to Maryland. The first aircraft was manufactured at the airport in 1929, and manufacturing activities continued through WWII, when the Martin Company employed over 53,000 workers. Those from all over the country came to Middle River during the war to work for the Martin Company, to support the necessity for a large workforce. Glenn L. Martin constructed homes for his employees near the airport in Wilson Point, as well as the community of Aero Acres. Following the war, many of those employees stayed in Middle River and today, generations later, the Martin legacy lives on in the communities as those families still reside in the area.

MTN has one runway, designated Runway 15/33¹, and three helicopter operating areas, which provide essential service to City, County and State law enforcement organizations, as well as others. A paved circular helipad is in the central terminal area that hosts airport tenants including Baltimore County Police, two news agencies, several flight training schools, and a medical emergency response unit. The Baltimore City Police Department typically operates from the area near the Runway 15 end, a short distance from their hangar. Military helicopter operations also use this location, following the Eastern Avenue corridor. Lastly, the Maryland State Police operate from the Strawberry Point complex on the southeast corner of the MTN campus.

¹ MTN at one point had three runways, including Runway 18/36 which placed aircraft over the Wilson Point community. Two runways were decommissioned in the late 1960s.

MTN is surrounded by water and a mix of commercial, industrial, and residential land uses. The Wilson Point community is situated adjacent to MTN, between Middle River and Stansbury Creek. This close proximity to MTN means aircraft and helicopter noise are routine and unavoidable occurrences. However, the MDOT MAA has worked closely with the Air Traffic Control Tower staff and helicopter operators to take maximum advantage of compatible land use corridors. Most helicopter departures and arrivals use what is referenced as the “Checkpoint 4” flight path into and out of MTN, which places aircraft over vacant land which is used for recreation purposes, thus avoiding direct overflights of the Wilson Point community. **Attachment 1** provides an overview of the helicopter paths used into and out of MTN, and **Attachment 2** provides a sample of helicopter operations in 2021.

Community Impact Study on Aircraft Noise

The MDOT MAA recently completed a comprehensive multi-year study of the existing and forecasted impact of aircraft noise on communities surrounding MTN, which includes both fixed wing and helicopter operations.

The Maryland Environmental Noise Act of 1974 provides for the protection of citizens from the impact of transportation related noise. The aviation portion of the Act requires the MDOT MAA to create an Airport Noise Zone (ANZ) to control incompatible land development around MTN and a Noise Abatement Plan (NAP) to minimize the impact of aircraft noise on people living near the Airport. The initial ANZ for MTN was established in 1977 and is required to be updated every five years. In 2019, the MDOT MAA initiated an update to the MTN ANZ which was certified in April 2021.²

The ANZ is determined by a composite of three noise contours: existing conditions (2019) and two forecast years (2025 and 2030) that take into account forecast growth and planned facility improvements. The largest of the three contours in any area around the Airport determines the Noise Zone, thereby offering protection within the largest of the existing or future noise exposure contours. The noise environment is described by contours of equal noise exposure, representing the noise that occurs during an average 24-hour day, in terms of the Day-Night Average Sound Level (DNL). Compatible land use standards are outlined in COMAR Section 11.03.03.03, Limits for Cumulative Noise Exposure, and indicate that 65 DNL is the typical threshold for residential and other noise-sensitive land uses.

Public Participation: 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. A Stakeholder Advisory Committee (SAC) convened representatives of stakeholder groups affected by airport activities to ensure that these groups were informed of the MTN ANZ update process and methodology. Representatives of the Wilson Point Civic Improvement Association were invited and attended both SAC meetings. Members reviewed study inputs, assumptions, analyses, and documentation, and were encouraged to provide input, advice, and guidance related to the NAP. They were invited to share pertinent MTN ANZ update information with the groups or any interested citizens that they represent.

Following publication of the draft ANZ study, a virtual public workshop and public hearing was held on January 26, 2021. During the public hearing portion of the meeting no comments were received. Written comments were accepted January 15, 2021 through February 16, 2021. The MDOT MAA received no written comments during this comment period.

² The Final ANZ as well as materials from the Stakeholder Advisory Committee meetings, can be viewed at <https://maacommunityrelations.com/content/anzoneupdate/mtnanz.php>.

Results: The ANZ update, which accounts for existing operations and forecasted growth, encompasses 411 acres and remains almost entirely on airport property (approximately 96 percent), and does not include any noise-sensitive land uses (such as residential or educational facilities). The ANZ represents a 4 percent increase from the 394 acres contained within the previous ANZ, attributed in part to increased operations and the future condition of the runway layout for Runway 15/33, which includes plans to reconfigure each end of the existing runway for civilian aircraft. The ANZ increased by approximately one acre in size on the northwest side of the airport along Wilson Point Road off the approach end of Runway 15 due to the Baltimore City Police helipad location and the addition of a civilian aircraft engine runup location. **Attachment 3** presents the 2020 ANZ.

Review of Noise Abatement Plan: Under the current ANZ, there are no noise sensitive land uses within the ANZ for MTN. However, the MDOT MAA has updated the original NAP to accurately reflect current operating conditions at MTN. 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 program includes noise abatement measures, compatible land use measures and measures that focus on program implementation, communication, monitoring, and updating. The NAP update was done with cooperation of MDANG, airport users, the aviation industry, and local governments.

Review of Potential Need for Noise Assistance Programs: As indicated above, there are no noise-sensitive land uses within the MTN ANZ. Therefore, a Federal Noise Compatibility Planning Study (Title 14 Code of Federal Regulations Part 150) is not warranted, as federal funding for noise assistance program thresholds are not met.

Actions Taken to Address Aircraft Noise

In addition to regular updates to the MTN ANZ, the MDOT MAA actively works with tenants, airport users, and the community to identify and resolve community concerns. These include:

Land Use Planning: The MDOT MAA is taking steps to ensure the continued availability of the compatible land use corridor used for helicopter arrivals/departures over Checkpoint 4.

Engine Maintenance Activity: In 1989, MDANG erected noise barriers to provide reductions in noise impacts from engine maintenance activity for areas east and northeast of MTN. The MDANG is continuing to evaluate improving the reduction of engine maintenance activity.

Noise Concerns: MTN maintains telephone service for citizens to register noise-related complaints at any time 24 hours per day, 7 days a week. The telephone number is 410-682-8802. Members of the public also have 24-hour access to view aircraft operations and can register complaints utilizing MDOT MAA's [WebTrak system](#). Implemented in 2019, WebTrak provides an interactive portal for the viewing of aircraft in the vicinity of BWI Marshall Airport and MTN and provides the opportunity to file noise complaints directly to the MDOT MAA. WebTrak users can geolocate a place of interest (home, work, etc.) and view either current (16-minute delayed) or historical aircraft overflights. WebTrak includes an aircraft's type, altitude, origin & destination airports, and flight identification. WebTrak does not include data on military aircraft flights or operations due to reasons of national security. Noise complaints are investigated and the complainant is provided with any relevant information.

Coordination with Tenants: The MDOT MAA leadership works with our partners at Midwest ATC³ to educate and remind the pilot community based at MTN, along with pilots based at

³ Midwest ATC operates the Air Traffic Control Tower under contract with the FAA.

other airports, about noise sensitive communities around the airport. The air traffic controllers at Midwest ATC regularly remind pilots to extend their upwind leg when departing Runway 15 to avoid turning too early over the Bowley's Quarters community. The MDOT MAA and Midwest ATC routinely work with the flight school operators to remind their flight instructors and students about the airport's noise abatement plan and communities around the airport. In meetings with airport tenants, noise complaints are routinely discussed to educate the pilot community on the impacts of their flight activity. When warranted, reminders about the airport's noise abatement plan are shared with tenants in the airport newsletter. Helicopter operators departing MTN have been asked to gain as much altitude as safely possible when departing.

Community/HOA Meetings: As requested, the MDOT MAA attends, presents, and answers questions by community organizations, homeowners' associations, and other interest groups in the vicinity of MTN. The Wilson Point and Bowley's Quarters associations represent communities closest to MTN and have received several briefings and updates on airport related matters including aircraft operations. The MDOT MAA has met with representatives of the Wilson Point community at MTN on several occasions to educate them on helicopter operations at the airport, safety, the National Airspace System, as well as the role of the FAA in controlling flight activity at and around airports in the . Air traffic controllers at MTN have conducted studies of the helicopter activity in the vicinity of Wilson Point. The studies revealed that there are, on average, less than six daily helicopter flights at MTN. This information was shared with the community. The MDOT MAA also placed a noise monitor on the property of a resident in the Wilson Point community to collect aircraft noise data. The results of that study were also shared with residents of the community.

Elected Official Briefings: As requested, the MDOT MAA presents to State and local elected officials on a wide range of topics, including aircraft and helicopter noise impacts. The MDOT MAA leadership met most recently with the Senator from the Seventh District at MTN to brief him on the concerns raised by a resident of the Wilson Point community about helicopter flights over the community. In that meeting, the MDOT MAA shared with the Senator that MTN has a very complex airspace with a variety of high-speed fixed wing aircraft including military, and diverse rotary wing helicopter operations including law enforcement and flight training. For safety reasons air traffic controllers segregate these various types and speeds of aircraft to maintain an efficient and accident free system for all aircraft owners and operators. Any attempt to mix rotary and fixed wing aircraft operations to the one runway at MTN becomes a detriment to the safety and efficiency of the National Airspace System.

MAA Community Relations website: The MDOT MAA maintains a [website](#) dedicated to noise and community relations, which contains frequently asked questions, links to relevant noise studies, near-real time flight tracking information, and means to submit noise complaints. Additional information is available at <https://martinstateairport.com/noise-abatement/>.

Additional Actions

As part of regular facility planning to accommodate existing and forecasted demand, the MDOT MAA has evaluated changes to the MTN airfield that would modify the location of some helicopter facilities. These include:

- As part of an ongoing environmental review of proposed projects at MTN, the existing helipad in the Midfield terminal area could be relocated to the Strawberry Point Complex on the southeast portion of MTN property.
- Longer range planning efforts include the potential to relocate helicopter operations to the north side of the facility. Most flight school helicopters currently conduct training (touch-and-go) operations in this area, along Taxiway Tango (**See Attachment 1**). It should be noted that due to the complexity of such a large infrastructure investment and reconfiguration, it would take significant time and funding to receive FAA approval, environmental approval, design, and construction of these facilities.

The MDOT MAA will continue to address any noise complaints, and to work with the tenants at MTN to address community concerns. The MDOT MAA will also continue to evaluate noise exposure on a regular basis through the ANZ process, and as needed through environmental review of proposed projects (such as through the ongoing Draft Environmental Assessment, which can be viewed at <https://marylandaviation.com/environmental/environmental-planning/>).

Attachments

Attachment 1: Helicopter Operating Areas

Attachment 2: MTN Helicopter activity between January 1, 2021 and June 30, 2021

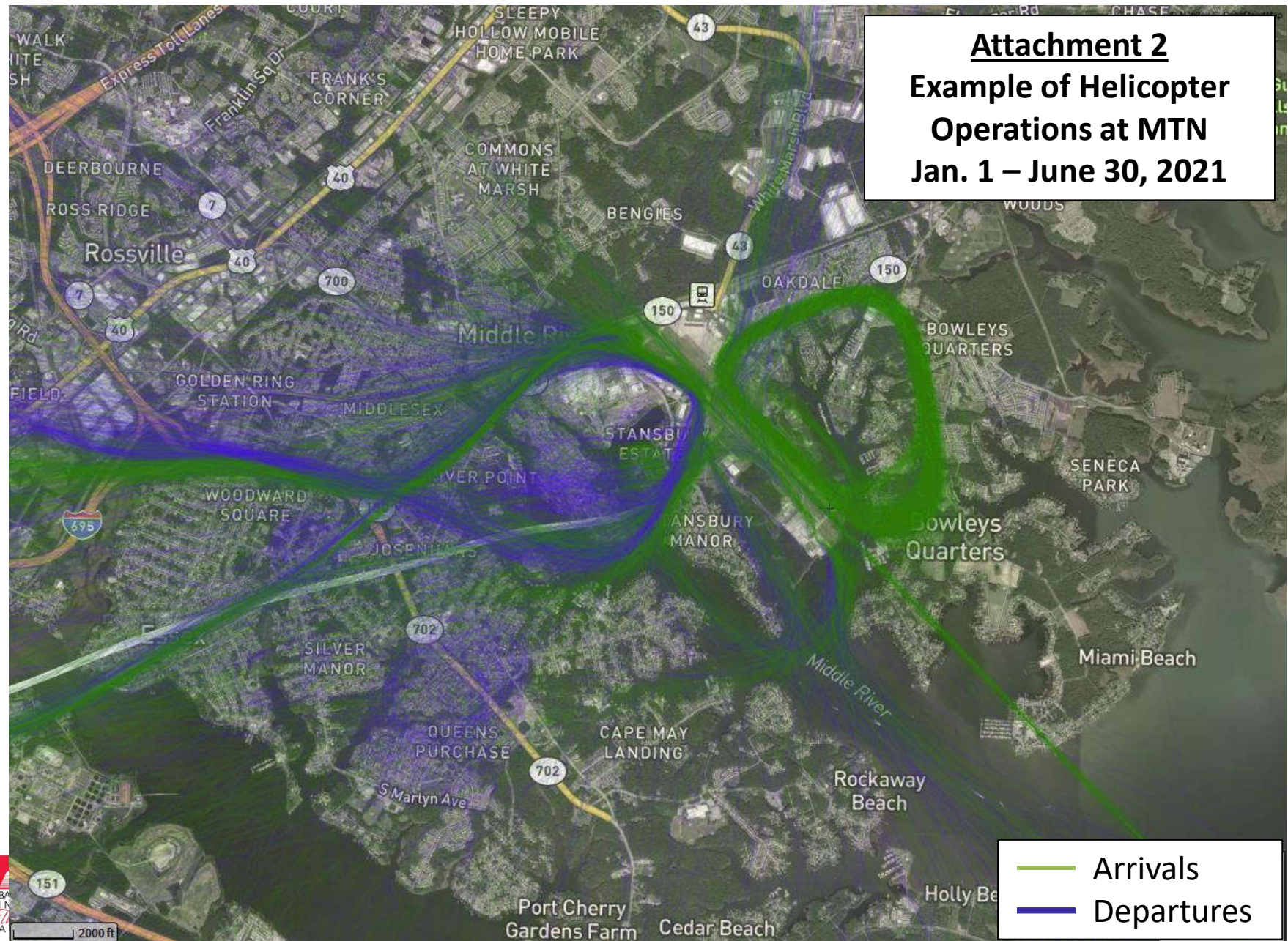
Attachment 3: Map showing the location of 2020 MTN ANZ

Attachment 1

MTN Helicopter Operating Areas

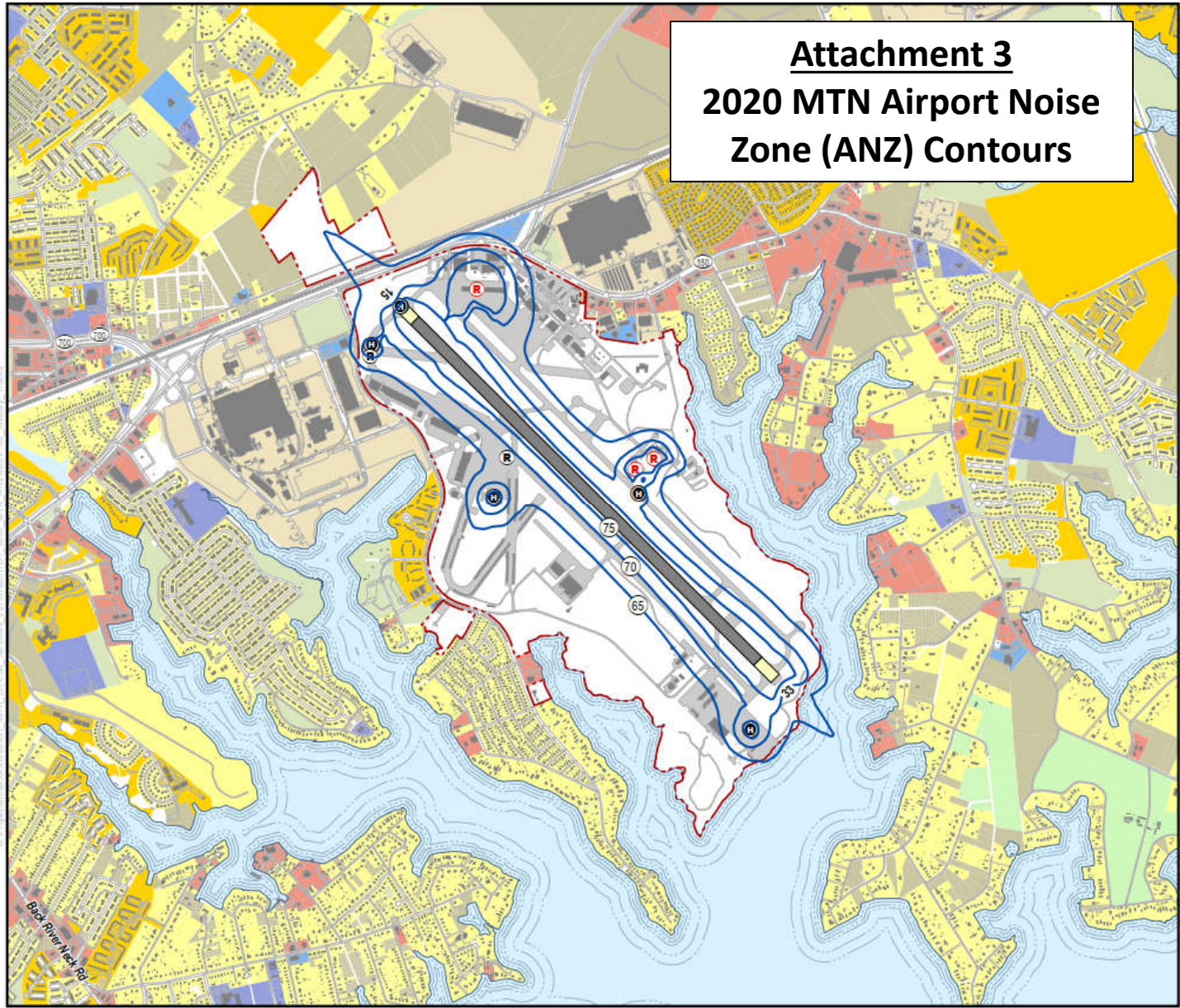


Attachment 2
Example of Helicopter
Operations at MTN
Jan. 1 – June 30, 2021





Attachment 3 2020 MTN Airport Noise Zone (ANZ) Contours



Airport Noise Zone Update

Figure ES-1
MTN ANZ Update 2020 ANZ Contours

- 2020 Airport Noise Zone DNL Contours
- Airport Boundary
- H Helicopter Operation Area
- R Civilian Runup Locations
- R Military Runup Location
- Civilian Runway (Future)
- Additional Runway Available for Military Operations
- Roads
- Railroad
- Stream / Creek
- Buildings
- 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

