



Montgomery County Airpark

Aircraft Noise: Community Impacts Analysis and Recommendations

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Executive Summary

The Montgomery County Airpark is owned and operated by the Montgomery County Revenue Authority (MCRA). The MCRA is a self-sustaining entity that does not receive funds from the county. The MCRA is governed by a six-member Board of Directors. Day-to-day operation of the airpark comes under the responsibility of the Airpark Manager.

The airpark is located in Montgomery County, Maryland, just outside the City of Gaithersburg. Over the years, residential development has expanded around the airpark. This, combined with a steady growth in annual operations, is leading to increased concerns and complaints from the community.

Vianair Inc., formerly ABCx2, LLC., was asked to provide Montgomery County with assistance in addressing these issues. Specific tasks include:

- Identifying community issues and impacts associated with Airpark operations
- Identify strategies to reduce aircraft noise impacts
- Developing community engagement strategies
- Devising industry engagement strategies including flight schools and air traffic control
- Providing general aviation consulting and subject matter expertise as needed

This report provides the findings of our review of historic and current conditions as well as opportunities to address/improve the areas noted above.



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Baseline Assessment

The first step in this process was to establish a baseline of existing conditions. This included a review of operational conditions and trends going back to 2010. For historical context, operational data reported by the Maryland Aviation Administration (MAA) included data going back to 1990. At that time annual airpark operations were reported at 108, 328 which is significantly lower than current operational levels.¹ Annual operations for 2021 are reported at 67,195.²

In addition to reviewing operational data, to gain a clearer understanding of the specific community issues and concerns, the analyses included a review of noise complaints provided by the Airport, discussions with Airport and County staff, an extensive review of media and social media related to the airpark, and an interview with a member from Citizens for Airpark Safety.

Several other documents and resources were reviewed including the Airpark Noise Compatibility Study, which included an analysis of noise exposure attributed to Airpark Operations and recommendations proposed to the FAA for mitigation. Furthermore, the *Airpark Capital Improvement Program* and the *Maryland Economic Impact of Airports Report*, were also included in the baseline assessment.

Finally, FAA sourced data was reviewed to obtain operational data including annual operations, operations breakdown by operator type (commercial, general aviation, military, etc.), operation type (i.e., local versus itinerant), the number of based aircraft, and how this has changed over the last decade.

Research during this initial phase (baseline assessment) suggested that the majority of resident concerns and complaints are related to flight training activity. Not surprisingly, touch-and-go activity was the most common issue noted in a number of sources. Media coverage about the airpark, social media comments, and input from the County (including complaint data) reinforced the fact that flight training is a leading issue for the communities surrounding Montgomery County Airpark (GAI). The review of operational data also supported this. Operations data was compiled from 2011 to 2021 based on data obtained through the FAA's Terminal Area Forecast (TAF).

¹ Source: Maryland Aviation Administration (<https://montgomerycountyairpark.com/wp-content/uploads/2021/08/Operations-Report-from-Maryland-Aviation-Administration-2021.pdf>)

² Source: FAA Terminal Area Forecast Data. This data is based on estimations made by the Maryland Aviation Administration.



In the TAF, “Local operations” are flights which depart the airport and remain within the traffic pattern, or close to the airport, or depart to, or return from a practice area within 20 miles of the airport. These are usually training operations including touch-and-goes and flights to and from the local practice areas.

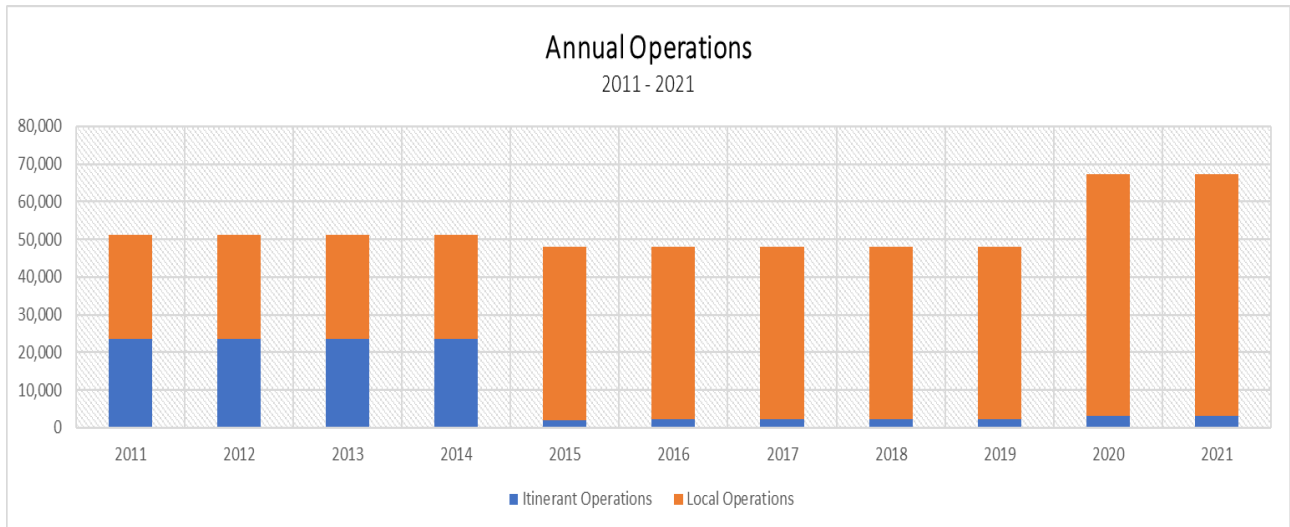


Figure 1- Total Annual Operations (Source: FAA, Terminal Area Forecast)

Operations data including total annual operations, operations broken down by “local” and “itinerant,” and the number of operations by operator category (i.e., air carrier, air taxi, and general aviation) are reported to the Federal Aviation Administration by the MAA. There is no air traffic control tower at the Airpark, nor is there adequate radar coverage to provide accurate operational data. Therefore, operations counts are based on acoustical traffic counts conducted seasonally. According to the MAA;

“Precision of the annual estimate is measured by the sampling error or 95% confidence interval. The confidence interval is an estimated range (plus and minus the annual operations) with which one can be 95% confident of the true range of operations. The sampling error is simply the confidence interval expressed in percentage. The annual analysis form identifies the annual operations as well as the sampling error and the 95% confidence interval.”³

MAA estimates from 2011 through 2014 indicate both total annual operations and the split between itinerant and local operations remained flat (Figure 1). This is likely, at least in part, due to the subjective sampling methodology used by MAA. As noted, this is a non-towered airport with no air traffic control facility.

³ Stover, Gerald, Maryland Aviation Administration. Letter to Justin Bollum, February 4, 2022.



Operations counts are based on seasonal acoustic sampling rather than consistent observation. This should be considered when reviewing the operational statistics, particularly the breakdown of local versus itinerant operations. While acoustic sampling can be used to count operations, it is unclear how MAA differentiates between local and itinerant operations. And while the reliability of the operations counts is unclear, it is likely there has been an increase in local operations between 2011 and 2021.

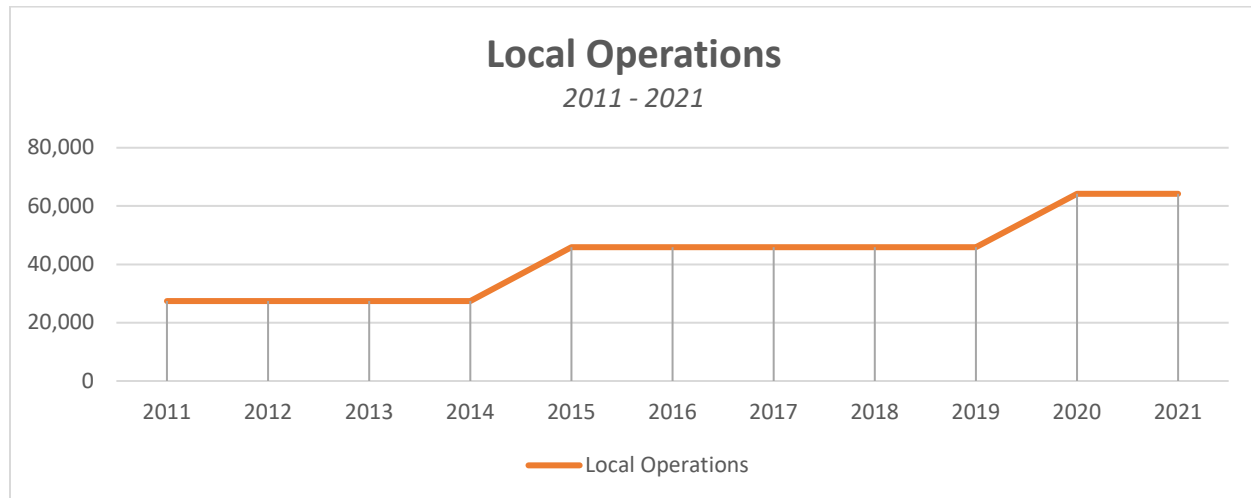


Figure 2 - Local Operations, 2011-2021 (Source: FAA, Terminal Area Forecast)

Operations for 2021 were analyzed further, including a review of operations by operator category. The outcome was consistent with expectations, suggesting the majority of operations were local general aviation. Local general aviation operations (likely flight training) made up the majority of total annual operations at 96%. See Figure 3 below. Again, it should be noted this data is based on acoustic sampling and subjective estimates. The operational data was reviewed in support of the baseline assessment and to gain a general understanding of the Airpark. The accuracy of this data was not confirmed as part of this task.

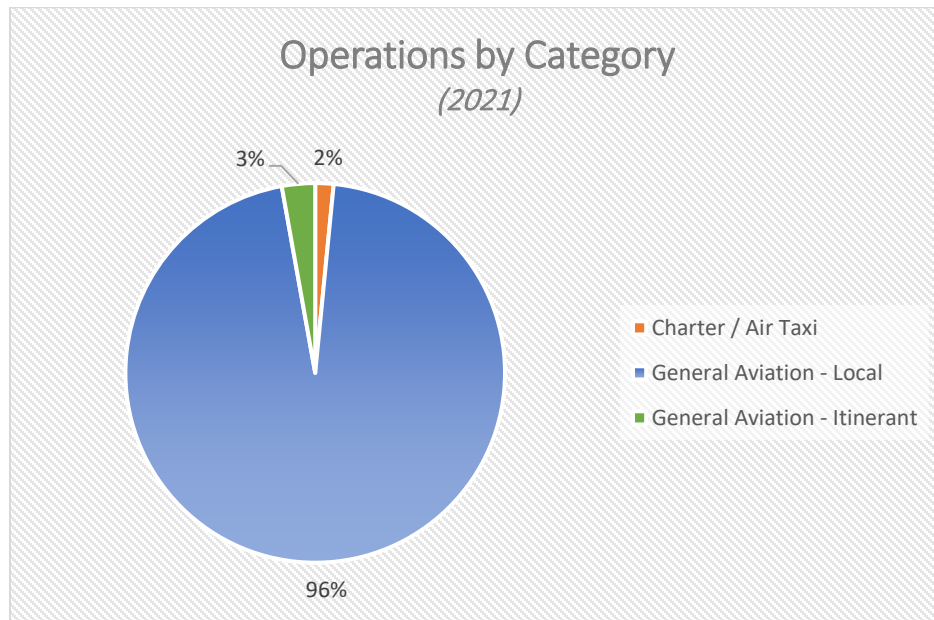


Figure 3 - Daily Operations by Operator Category, 2021 (Source: FAA Terminal Area Forecast)

Identification of community issues and impacts associated with aircraft operations

To identify the primary concerns from the community and specific operational impacts we used multiple data sources including input from County staff, airport complaint submissions, media coverage, social media, the Airport’s Noise Compatibility Study (FAR Part 150), pilot guides, resident input, and more.

Most of the community concerns and complaints seemed to relate to flight training activity. During a discussion with a member of Citizens for Airpark Safety, it was noted that “the significant issues began in 2019 when training operations increased drastically.”

Noise complaint records are also consistent with this. An article published in Bethesda Magazine on June 24, 2021, quotes the former Airpark Manager who stated, “In 2019, there were 27 complaints submitted to the airpark. That grew to 191 complaints from 11 households in 2020 and 2,835 complaints from 35 households in 2021.”⁴ Input from the Airpark indicated an automated complaint submission system was introduced, resulting in a significant increase in complaint volumes by a relatively small number of households.

⁴ Bohnel, S. (2021). Council will investigate complaints at County's Airpark. Bethesda Magazine. Retrieved April 10, 2022, from <https://bethesdamagazine.com/bethesda-beat/government/council-will-investigate-complaints-at-countys-airpark/>



According to Airpark staff, complaints submitted through this system were blocked as of February 2022, and complaint numbers have since returned to pre-2021 levels. And while noise complaints grew significantly in 2021, it should be noted these were submitted by a total of 35 households.

Fiscal Year	Local Operations		
	Civil	Military	Total
2011	27,418	0	27,418
2012	27,418	0	27,418
2013	27,418	0	27,418
2014	27,418	0	27,418
2015	45,865	0	45,865
2016	45,865	0	45,865
2017	45,865	0	45,865
2018	45,865	0	45,865
2019	45,865	0	45,865
2020	64,206	0	64,206
2021	64,206	0	64,206

Table 1 - Annual Local Operations (Source: Federal Aviation Administration)

After a review of traditional media, social media, and interactions with the community, the following community concerns and issues were identified:

- Increased noise levels
- Increased number of noise events
- Increased number of overflights during late-night and early-morning hours
- Increase in number of low-flying aircraft
- Fear of aircraft accidents
- Increased air pollution (primarily lead emissions).

Aviation safety and air pollution were referenced in social media; however, the primary focus is aircraft noise. Specific concerns include references to “low flying” aircraft, the number of events, the overall noise exposure and impacts to daily living and quality of life, and aircraft noise events during late-night and early-morning hours.



Touch-and-go activity was also referenced frequently, likely due to the repetitive nature of closed-traffic operations and the frequency of flights over the same neighborhoods. And the majority of complaints were related to light piston/propeller type aircraft; there were no specific references to jet or helicopter operations and no reference to military operations.

Identification of strategies to reduce aircraft noise impacts

Ensuring an understanding of the primary community concerns was a critical first step in identifying recommendations to effectively address them. Based on our research, the primary issue for residents relates to local, flight training operations. To address this, we propose a combination of the following strategies for consideration.

Increase Pattern Altitude

The current published airport traffic pattern is 1,000' above ground level (AGL). This was increased 800' AGL which was used in the early 1990s. This increase in pattern altitude was likely a recommendation implemented as part of the Part 150 Study. It should be noted that when the Part 150 study was completed, annual operations were significantly higher than current volumes.

1,000' AGL is the standard pattern altitude for propeller-driven aircraft.⁵ However, traffic pattern altitude can be raised or lowered based on operational needs. Increasing pattern altitude may reduce noise exposure some areas but it may also result in a shift in the pattern resulting in increased overflights for others. A thorough analysis of the operational and acoustic effects would be required to determine the benefits (or impacts) of an increase in pattern altitude.

Establish a “Preferential Runway” Program

The Pilot Guide⁶ references Runway 14 as the designated “calm wind” runway. Input from the Airpark noted that this is specifically for noise abatement. Rebranding this as a “preferential runway” (which is the common language when associated with airport noise programs) may encourage pilot conformance based on the understanding of why Runway 14 is preferred. Additionally, this existing effort should be highlighted in community outreach to ensure residents are aware of this and other efforts the airport is making in support of reducing community impacts.

⁵ FAA Aeronautical Information Manual

(https://www.faa.gov/air_traffic/publications/atpubs/aim_html/chap4_section_3.html)

⁶ <https://montgomerycountyairpark.com/wp-content/uploads/2020/11/Pilots-Guide-2020.pdf>



Encourage Operators to Remain within Recommended Traffic Pattern Boundaries

Community input collected through a review of social media, airpark complaint data, and resident engagement, suggested aircraft conducting touch-and-goes fly well outside the recommended pattern outlined in the Pilot Guide. The Airpark publishes recommended pattern boundaries in an effort to minimize community noise impacts. Without consistent flight tracking coverage, this activity could not be reviewed. Pilot education and engagement could focus on improving awareness and conformance with the recommended airport traffic pattern boundaries.

Incorporating flight tracking would enable Airpark staff to monitor conformance with the recommended flight patterns. This data could be used in pilot education and engagement to encourage awareness of the noise program and to encourage conformance. If conformance levels are high, that information should be shared with the community.

Modifications to the closed-traffic pattern could be made to increase overflight of the industrial and commercial properties on the northeast side, close-in to the airport, may relieve some of the impacts for residents of the Hadley Farms community and the neighborhoods to the east. This could be accomplished by recommending tighter, close-in patterns when there are fewer aircraft in the closed-traffic pattern. As is always the case, changes in flight patterns, altitude, etc., may offer benefits in some areas at the cost of increased impacts in others. An operational and acoustic analysis would be required prior to implementation of any changes.

Voluntary Restriction on the Number of Aircraft Conducting Touch-And-Goes

As more aircraft enter the pattern, the airport traffic pattern dimensions will typically increase in width and length to accommodate spacing for additional aircraft. This results in pushing aircraft further out and over neighborhoods that may not normally experience high volumes of repetitive overflights. FAA regulations prohibit public-use airports from imposing restrictions on the number and types of operations, but working with the individual flight schools, voluntary self-management could be utilized to establish a maximum number of aircraft in the pattern at a given time. When the pattern is full, pilots could opt to go to nearby airfield or conduct touch-and-goes at a later less busy time.

Note, discussions with the Airpark indicated at least one of the flight schools currently encourages instructors and students to utilize other airports to reduce congestion at GAI. This messaging could also be used when engaging other flight schools, flying clubs, etc., to reduce the impacts on communities in proximity to the airpark. Additionally, these types



of efforts are the part of the Airpark should be publicized through community outreach channels to promote community awareness.

Voluntary Restriction on Closed-Traffic Pattern Operations Overnight

Late-night and early-morning operations can be especially impactful for nearby communities and this concern was noted during the baseline research. FAA regulations prohibit public-use airports from imposing mandatory curfews; however, voluntary curfews are permitted. Collaborating with local pilots, Fixed Base Operators (FBOs), and flight schools to discourage touch-and-go activity between specific hours (i.e., 10PM-7AM, 11PM-6AM, etc.) would reduce the heightened impact of nighttime aircraft operations.

Discussions with the Airpark indicated they discourage training operations between 8PM and 8AM in an effort to reduce noise impacts. Specific references to this effort were not found during the baseline research. If the measure already exists, collaboration with the flight schools and flying clubs to promote awareness is recommended. This is also something that could be noted in the Pilot Brochure to encourage pilot awareness.

Preferential Ingress and Egress Routes

Preferential routing should be considered for aircraft approaching and departing the Airpark. A common and effective practice is establishing preferred corridors over areas that are less noise sensitive. Examples include major roadways, green space, industrial/commercial areas, etc. Traffic going to and from the practice areas (and other local airports) should utilize such community-friendly routes if possible.

Discourage use of Intersection Departures

While intersection departures can reduce taxi-times, this type of operation decreases the required time that aircraft need to ascend before overflying residential areas. Departing aircraft should use full runway length when possible.

Improving / Expanding Community Engagement

Effective community outreach is a critical component in addressing aircraft noise issues. Community engagement can take many forms depending on the specific objective(s) and audience.



Objectives of community outreach and engagement can include information sharing, information collection, or a combination of the two. Education (one-way communication) is an essential element in noise management, to ensure residents understand basic aviation concepts, regulatory limitations, and the responsibilities of key stakeholders. Basic aviation topics that may apply at GAI could include:

- Basic airport and flight operations
- Airport traffic patterns, expected altitudes, ingress/egress routes
- Aviation regulations
- Aviation stakeholder roles and responsibilities (i.e., Revenue Authority, Airpark Administration, Federal Aviation Administration, Flight Schools and FBOs, Aircraft Operators, etc.
- Noise complaints – how complaints are processed, investigated, etc.
- Existing Airpark noise program – history and current efforts the Airpark has implemented to reduce community impacts

Tools for community engagement can vary based on the specific objectives and audience. Calls to the airport about noise concerns (or complaints) provide an opportunity to better understand community concerns, to identify potential deviations from the noise program recommendations, and to educate residents on the topics listed above.

Community meetings and workshops provide the opportunity to reach larger numbers of residents. Workshops can be unstructured such as an “open forum” or Q&A or more structured with a set agenda and a focus on specific topics.

Targeted outreach can be pursued through briefings provided at Homeowner Association (HOA), neighborhood association meetings, enabling the topic to focus on the interests of a particular group based on geographic area. HOA and community newsletters and websites may also be used to engage the community, to address concerns, and to encourage awareness of where residents can go with questions.

And in a post-COVID world, the use of video conferencing has been normalized, providing the option of hosting meetings or workshops electronically, enabling participants to log in from the comfort and convenience of their home or office. These meetings can also be recorded and posted to the County’s website for later viewing.

The Airpark (or County) website can provide the most cost-effective way to provide information to the community. Most airports provide community-focused information on their websites. Storyboards, Frequently Asked Questions (FAQs), and the use of video can



all be used to make technical information easier to understand and this material can dispel misinformation and confusion. Web-based resources can also be helpful when responding to noise complaints, as callers can be directed to the appropriate content on the website as a source of more information.

Social media provides another option for community engagement. Social media can be tricky, so a social media strategy should be developed in advance. Social media platforms such as Facebook and Twitter can be used to inform residents about specific conditions such as a runway closure that would result in changes in operations or noise. These tools can also be used to inform residents of upcoming outreach events, where to go with questions or concerns, and point residents to the website for resources which will address questions and concerns.

Airport open-houses offer another way to open the facility to the general public. For many, the only experience they have with the airpark may be hearing airplanes overflying their home. Open-houses allow people to learn about the airport and aviation and to showcase the value of the airpark as a member of the community.

Organizations including the National Business Aviation Association, Aircraft Owners and Pilots Association, and local pilot groups may offer support to the airpark for community engagement.

In addition to reaching out to residents living in the area, providing information for prospective homebuyers is also important. Proactively encouraging awareness of the airpark, general flight patterns, and potential for noise to those considering homes in the vicinity of the airpark can enable those who are sensitive to aircraft noise make an educated assessment prior to a home purchase. While disclosures may be required for some homes in the area, formal disclosure notices are often introduced at the time of closing which is often too late in the process to be effective. Additionally, the disclosure notice may be easily overlooked. This valuable information can be hosted on the Airpark (or County) website and advertised through social media and collaboration with real estate professionals.

Community Education and Outreach

Statements made by residents in the media and social media suggested there is a high level of misinformation and misunderstanding in the community. This is common across the US and highlights the need for outreach and education. Many of the strategies described above can be used to support community education.



Community education can help with demystifying some of the complexities of aircraft operations (runway selection, traffic patterns, altitudes, etc.), as well as aviation regulations. When these are better understood, constructive dialogue, critical to building trust, is possible.

In the context of this report, Community Outreach and Education is intended to reference communication that is primarily intended to provide information to the public. This communication is primarily one-way in nature and less interactive as opposed to “Community Engagement” (discussed later in the report). Community outreach can be undertaken in many forms. Typically, these include the use of internet resources including the airport’s website and other web-based resources, social media, newsletters, webinars, public briefings and presentations, informational brochures, etc.

Based on the research conducted during the baseline phase, expanding the Airpark’s existing community outreach is recommended. The Airpark website has a section with information dedicated to “Aircraft Noise and Safety,” including “Frequently Asked Questions” with answers. This is a great approach to informing the community and addressing common questions.

The content on the Airpark’s website could be expanded and updated. FAQs should be reviewed and modified or expanded based on the current most frequently asked questions and concerns. Explanations should be reviewed and revised to ensure they are easily understood.

Community Engagement

Community engagement is an extension of community outreach, however, in the context of this report, engagement is focused more on two-way communication or actively “*engaging*” the public. Engagement encourages two-way information sharing. Topics for airpark engagement would likely overlap with the topics listed above for community outreach. However, engagement provides the opportunity for conversation and discussion, rather than simply informing (one-way).

Public meetings and workshops, interactive webinars, neighborhood and homeowner association meetings, and one-on-one meetings, etc., all provide the opportunity for the airpark to both provide information and to receive it. Effective community engagement is critical for getting feedback from the community and understanding current issues and concerns.



Based on the research conducted during the baseline phase, establishing a formal community engagement program is recommended.

Improvements in the Complaint Management Process

Aircraft noise complaints are one of the most common ways for the public to engage the airport. For this report, “noise complaints” is used generically. Complaints can be related to various topics such as noise impacts, safety concerns, perceived violations of airport or local rules, etc. In this report, “noise complaints” is intended to be a generic term to include complaints and concerns shared about any topic related to aircraft operations.

Noise complaints can provide the airport with valuable information and the opportunity to receive such information and share it. Typically, noise complaints relate to operations that were fully compliant with federal aviation regulations. As an example, the complaint may be about a noise event during the late-night hours that resulted in a sleep disturbance. This provides the opportunity to share the airport’s efforts to discourage overnight operations, but to also note the limitations imposed by federal regulations. Complaints about aircraft flying “too low” should be investigated, and if appropriate, this provides an opportunity to explain why the aircraft was at the appropriate altitude based on the phase of flight or other operational conditions.

An effective complaint management system is important for several reasons. Recording and tracking complaint submissions enables analyses to identify trends based on location, nature of complaint, time-of-day, etc. This information can be used to help focus noise abatement efforts as well as identify areas to expand community outreach and engagement efforts.

Complaint management includes receipt, recording, investigation, and response to complaint submissions. Our baseline research suggested that some residents perceive the Airpark and the County as downplaying or ignoring residents’ concerns and complaints. Noise complaints should be documented and reviewed to identify opportunities to address aircraft noise issues and/or to engage concerned residents. Noise complaint reports can be documented and published demonstrating the fact that all complaints are documented, processed, and what if any follow-up was completed (when appropriate).

Enhancing the existing complaint management system through improved technology (improved complaint form and development of a complaint database) and ensuring there is dedicated and well-trained staff to accept, investigate, and respond to noise complaints is recommended.



Deployment of an Airport Operations Monitoring (Flight Tracking) System

The fact that the Airpark is an uncontrolled field poses several challenges to addressing aircraft noise issues. With no control tower and limited flight track data, it is difficult to investigate noise complaints, to monitor noise program conformance, and to maintain an understanding of airport operations in terms of flows, operational volumes, nighttime operations, etc. The typical airport operations monitoring system would support key functions including:

- Complaint investigation, analysis, and response
- Noise program conformance analysis and reporting
- Pilot outreach and engagement
- Monitoring changes in operations and noise exposure over time
- Public outreach
- Annual operations counts

The majority of systems include complaint management functionality, which would improve the efficiency of logging complaints, investigating, and analyzing operational data, and documenting any follow-up (engaging pilots or flight schools, etc., as well as follow-up with the complainant). Furthermore, these systems provide tools for analyzing noise complaints and identifying patterns, such as complaint volumes (increasing or decreasing), complaint submission by geographic area, complaints attributed to specific operations or operators, and primary concerns. This information can then be used to expand and improve the noise abatement program, and community/industry engagement efforts. A flight tracking system would also provide better data for the County's operations counts, thus avoiding the need for in-person observations.

The costs of noise and operations monitoring systems varies based many factors. It is likely the cost of a system that would meet the Airpark's needs would be between \$40K-\$70K annually. This cost will vary based on the vendor and system functionality required. Low-cost options exist and due to the lack of radar coverage at GAI, a system with ADSB flight tracking functionality is recommended.

Update Part 150 Study

The Airpark completed a Part 150 (Noise Compatibility Study) in 1993, which several recommendations in a draft Noise Compatibility Program. This research did not include a Record of Approval from the FAA (noting which recommendations were approved) and there was no definitive record of what measures were implemented. Several of the



recommendations from the Part 150 were duplicated in recommendations identified during the baselining for this report.

An update to the Part 150 could open opportunities for federal support and federal funding for noise abatement and mitigation. Part 150 studies are eligible for federal funding as are many of the recommendations approved that are part of Part 150, including procurement of an airport operations monitoring system.

Updating the Part 150 would provide the opportunity to assess the existing noise exposure around the airport and provide an opportunity for structured community (and industry) engagement to collaboratively identify strategies for addressing aircraft noise impacts.

Evaluation Airpark Roundtable History and Cost/Benefit of Replacement

Airport Community Roundtables are common among airports across the United States. Roundtables provide an opportunity for community engagement, two-way information sharing, and collaborative problem-solving.

In 1990, Montgomery County established the Montgomery County Airpark Liaison Committee. The mission of the committee was to:

Provide a forum for communication among interested groups and individuals concerned with the operations of Montgomery County Airpark.

The thirteen-member committee included five (5) residents, as well as County staff, elected officials, and representative Airpark users. The original term of the committee was 18 months. This was extended multiple times. In 2009, the membership was expanded, and the term of the committee was extended to 2012. The committee was disbanded in 2020.

Whether or not to reestablish the committee or to create a new one is a question for the County. A roundtable can be an effective tool for constructive community engagement, while it can also be detrimental if not managed properly.

Reestablishing a roundtable could enable collaboration among key stakeholders (county representatives, Airpark management, Airpark users, and community residents), which could provide a forum for effective engagement, education, and cooperative problem solving.



A key benefit to having a dedicated roundtable, working group, committee, etc., is the opportunity to providing education to the participants. Note that within this report the terms roundtable, committee, and working group are intended to be synonymous. Member training can help “level the playing field” by providing members with an understanding of key topics and concepts and inform the decision-making and recommendations put forth by the group.

Specific topics for education and training will vary based on the group make-up and specific issues being addressed. Potential examples include:

- Aviation/Technical
 - Aircraft and airport operations
 - Aviation Regulations
 - Flight School Operations and Pilot Training

- Community/Other
 - Community Issues and Impacts
 - County Land-Use and Zoning

Community support for re-establishing a roundtable seems high, at least for those who were involved with the original roundtable or have specific issues with the airport and/or aircraft operations.

References to the value of a roundtable included the need to ensure noise complaints are reaching the appropriate parties (airport management, County, etc.). If reestablishing a roundtable is considered, the mission, objectives, and role(s) of the roundtable should be considered prior to moving forward. It is important for the County, Airport, Roundtable Members, and the community to understand the scope of the Roundtable’s role and mission.

The charter for the Airpark Liaison Committee was well crafted and did outline the specific objectives and intent of the Committee. A review of the available meeting summaries was inadequate in understanding the impact and effectiveness of the committee, however, the fact that it was disbanded suggests that it was not effective in meeting the County’s goals. In the long-term, re-establishing a roundtable is recommended.

In the short-term, a technical advisory or task group should be considered. The task group would focus on a specific task or scope, in this case, flight training operations and community impacts. The goal of the task group should be to help the Airpark identify both



operational strategies to reduce community impacts, and engagement strategies to include community engagement (to ensure the community issues are understood and the community feels “heard,” community outreach (to encourage realistic expectations and a basic understanding of what can and cannot be done and why), and industry engagement to encourage industry awareness of the issues, impacts, and recommended operational procedures and practices. Industry engagement will be discussed further in the following section.

A task group would have a specific objective and timeline. Once their work is completed or the task accomplished, the group would be disbanded. This approach leaves the County from a longer-term (perpetual) commitment, but if the task group proves effective, it could be transitioned to a longer-term roundtable with a wider scope and mission.

Membership in a flight training task group should include representatives from the Airpark and County as operators of the airport. Industry participants should include aircraft operators, flight schools, flight instructors, and air traffic control (TRACON). A third-party consultant is also recommended to provide subject-matter expertise and facilitation.

Based on the research conducted during the baseline phase, development of a Flight Training Task Group with a clear charter and mission is recommended. The work for this task group will likely require 12-24 months to complete. Based on the outcomes from the task group, the County should evaluate the benefit of re-establishing a larger committee with a broader scope.

Industry Engagement

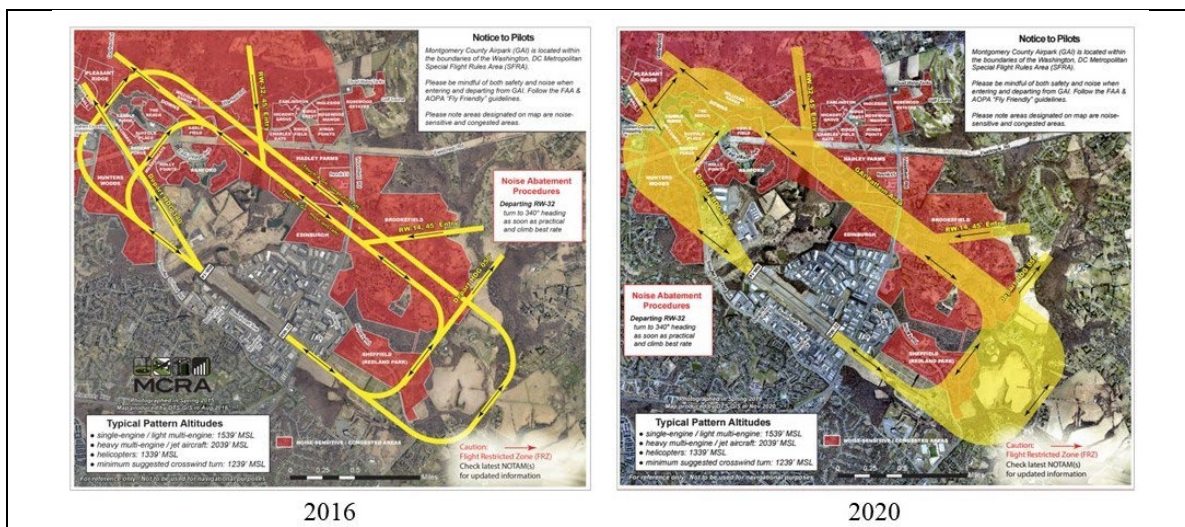
Industry engagement efforts should include aviation stakeholders including aircraft operators (i.e., pilots, flight schools, flight instructors, fixed base operators, flying clubs, etc.), and air traffic control. Since the Airpark is uncontrolled, this may include Potomac TRACON for air traffic engagement.

The Airpark’s website provides basic noise abatement information in the form of a pilot guide. The initial version was published in 2016. It was updated in 2020. Both pilot guides include a map highlighting “noise sensitive” residential areas. The 2016 version of the brochure provides additional detail including differentiating the recommended touch-and-go paths for “most aircraft” (i.e., small piston) and “large aircraft”. This graphic depicts a tighter, closer-in pattern which may be preferable for minimizing community noise impacts. The updated merges the two paths and does not differentiate between small and larger aircraft. Based on an initial land-use analysis, it appears the closer-in pattern results



in less of an impact. It is recommended that when the guide is updated, the original map (2016 version) be considered.

The pilot guide also recommends conformance with the FAA and AOPA “Fly Friendly” guidelines which. Providing links to these materials or the AOPA “Noise Awareness Steps” could further encourage awareness and conformance with these recommendations, especially for those who may be unfamiliar with the AOPA recommendations. A copy of the AOPA Noise Awareness Steps is included in the Appendices. AOPA offers other materials to support airport efforts to effectively engage both industry stakeholders and communities including “AOPA’s Guide to Airport Noise and Compatible Land Use” which available for download from AOPA’s website. *(A copy can also be provided by Vianair upon request).*



The brochure is available to pilots via the website and available in hard copy in the terminal building. The pilot brochure highlights some of the noise program elements and recommended procedures and distribution should be expanded to ensure access by both local/GAI-based pilots and itinerant or visiting pilots. Existing noise program elements not included in the brochure should be incorporated during the next update.

Copies of the brochures could be distributed via the flight schools (i.e., available in planning rooms or at a/c checkout), FBOs, and other airport-bases businesses that rent aircraft or provide services. Additionally, information about the noise program could be incorporated in flight training curriculum and ground school courses.



Industry engagement provides the opportunity to expand support and participation in the airpark's noise abatement efforts. Pilots are often unaware of the impact of aircraft operations on nearby communities. Because of this, they often under-estimate the value of conformance with noise abatement recommendations and why participation is important.

Working with industry stakeholders to develop noise abatement measures encourages buy-in and ensures the recommendations are actionable. In cases where flight training is the primary issue, close coordination with local flight schools, flight instructors, and flight students can be especially effective.

Similar to an airport roundtable, establishing an industry task force or working group could be a good first step to formalizing engagement with key industry stakeholders. Industry engagement can help ensure they understand the impacts of aircraft operations on the community and the opportunities and benefits to working collaboratively with the Airpark to minimize those impacts and to help the airpark coexist with the surrounding community.

The baseline research did not uncover any formal industry engagement efforts beyond publication of the pilot guides. Direct collaboration with the flight schools, FBOs, and flying clubs, could be formalized and ongoing. As an example, briefings to the flight schools and instructors would be helpful in sharing the specific community issues with the flight schools and leveraging their expertise in identifying solutions.

Based on the research conducted during the baseline phase, development of an industry engagement plan/strategy is recommended. This should include collaboration with the flight schools and potentially the formation of the Technical Advisory Group to review the primary community complaints and community impacts and to identify opportunities to mitigate those impacts.

Other recommendations include development of flight training materials (train the trainer and train the student) to incorporate noise abatement into flight training curriculum. A more detailed pilot guide should be developed, following expansion of the existing noise abatement recommendations. Airpark staff could offer briefings to pilot groups and airpark tenants (flight schools, flying clubs, FBOs, etc.), to expand awareness of the noise program.



Conclusion

According to MAA data, operations at the Airpark have been growing since 2019. While the actual numbers are difficult to ascertain, it is assumed that operations at GAI are consistent with the growth in aviation operations nationwide. Operational levels for both commercial and general aviation are influenced by economic conditions as well as other factors. The COVID pandemic which began in 2019, caused a drop in aviation in the US, but operations have been recovering nationwide since 2020⁷.

The downturn in aviation due to COVID and the economic slow-down has played a role in many communities increasing sensitivity to aircraft noise. In 2019, operations were down, in some areas, significantly. Then, in 2020, operations began to recover. This recovery may be perceived as growth, rather than resumption of previous levels. Additionally, more people are working from home, which can also increase the sensitivity to overflights of residential areas. Continued growth in aviation should be expected.

Noise complaints also increased within the time-period studied, however, much of the increase was attributed to the use of an automated system for complaint submission. Based on input from the Airpark, this “artificial” spike in complaints is not necessarily reflective of a change in operations or noise exposure. In 2020 there were 191 total complaints from 11 households. This grew to a total of 2,835 complaints in 2021, but from only 35 households.

In addition to noise complaint data, a review of media coverage and social media suggests local traffic operations including touch-and-goes are a concern for residents located in proximity to the Airpark and busy ingress/egress routes. And this is a common theme among general aviation airports across the US. Touch-and-go operations can result in repetitive overflights for some communities throughout the day. However, touch-and-go operations as well as practice approaches are a critical part of flight training and pilot recurrency training. Efforts to minimize the impacts of these operations are described within this report and recommended for consideration and further analysis. Additionally, community outreach to ensure the public’s understanding of these operations, why they are important, and the Airpark’s efforts to reduce noise impacts should also be expanded to encourage realistic expectations.

⁷ Federal Aviation Administration, “Air Traffic by the Numbers”
https://www.faa.gov/air_traffic/by_the_numbers/media/Air_Traffic_by_the_Numbers_2022.pdf



The airpark has made efforts to address aircraft noise impacts for decades. The completion of the Part 150 Study in 1993 was a major step toward this goal and demonstrated a commitment to reduce community noise impacts. The Airpark Liaison Committee was established to encourage collaboration among key community and industry stakeholders and introduce basic noise program elements.

With the growth in operations, specifically flight training activity at the Airpark, and the increase in community concerns, the County may want to make efforts to expand the noise program which should include establishing a formal industry stakeholder engagement strategy and expand community engagement.

Following a baseline review of current and historical conditions, Vianair provided recommendations in several functional areas including aircraft recommendations, community engagement and industry engagement.

Recommendations

Specific recommendations include establishing a noise complaint management system to record, investigate, analyze, and report complaint data. This can help Airpark staff identify trends in operations and noise impacts, track community concerns, and ensure the residents know their complaints are not being ignored and the County is proactively working to reduce noise impacts.

Deployment of a flight tracking system would enable the tracking of operations, identification, and investigation of specific incidents where pilot engagement may be appropriate. This would also provide more accurate operational data for community outreach efforts including responding to noise complaints and enhance the airpark's annual operations reporting.

Reestablishing a roundtable or task group is also recommended. Initially, a small task group focused on addressing community impacts attributed to flight training may be preferable to launching a larger roundtable. A task group could be established with a specific term, so upon completion of the tasking, the group would be disbanded. If the County found value in the collaboration, the task group could be expanded to address other aircraft impacts and community concerns.

In addition, establishment of an industry advisory group is also recommended, to include the flight schools, Flying Clubs, pilot groups, and others who participate in or facilitate flight training activities at the Airpark. Typically referred to as a "Technical Advisory



Group” (TAG), this would include industry representatives only, but be a forum for identifying or evaluating operational measures. A TAG could work alongside a larger roundtable (in an independent advisory capacity) or function as a subcommittee. The benefit of having a dedicated TAG is the ability to leverage local technical expertise and to collaborate with those entities with direct control over whether the noise program measures are followed. They can also help with developing and supporting the industry engagement strategy to encourage awareness and conformance with the program elements.

The final recommendations involved establishing formal community engagement and industry engagement programs. Setting up a better process for noise complaint management and reestablishing an airport roundtable, task group, and/or technical advisory committee would all support expanding engagement. Other recommendations are provided for expanding both community and industry engagement.



Appendices


Appendix 1 - GAI Pilot Guide

Appendix 2 - AOPA Noise Awareness Steps



Appendix 1 – Pilot Guide (2020 Edition)

PILOT'S GUIDE TO MONTGOMERY COUNTY AIRPARK (GAI)

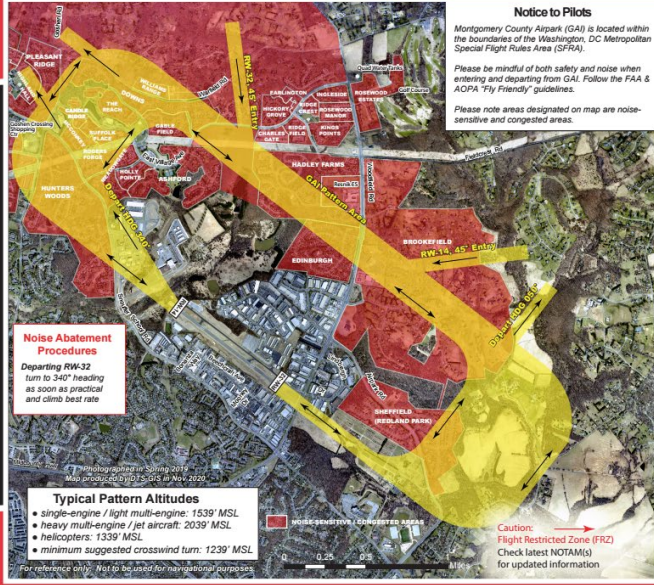


A Division of
Montgomery County
Revenue Authority

MCRA

As pilots, we are the key to a successful noise management program. We urge your cooperation and thank you for helping GAI to be a good neighbor.

Notice to Pilots
Montgomery County Airpark (GAI) is located within the boundaries of the Washington, DC Metropolitan Special Flight Rules Area (SFRA).
Please be mindful of both safety and noise when entering and departing from GAI. Follow the FAA & AOPA "Fly Friendly" guidelines.
Please note areas designated on map are noise-sensitive and congested areas.



Noise Abatement Procedures
Departing RW-32
turn to 340° heading
as soon as practical
and climb best rate

Typical Pattern Altitudes

- single-engine / light multi-engine: 1539' MSL
- heavy multi-engine / jet aircraft: 2039' MSL
- helicopters: 1339' MSL
- minimum suggested crosswind turn: 1239' MSL

For reference only. Not to be used for navigational purposes.

Caution:
Flight Restricted Zone (FRZ)
Check latest NOTAMS
for updated information

MONTGOMERY COUNTY AIRPARK (GAI)


Although several sources of information exist that apply to the "Rules of the Road" or commonly used procedures to ensure orderly traffic flow at non-towered airports, the Montgomery County Revenue Authority (MCRA), along with the Aircraft Owners and Pilots Association (AOPA), local flight instructors and others, have contributed information contained in this brochure that is to be considered as "local" procedures that apply to pilots flying in and out of Montgomery County Airpark (GAI).

This publication is not intended to substitute for official FAA recommended procedures at non-towered airports in terms of basic right-of-way rules and traffic flow. Rather, its purpose is to show pilots flying to and from GAI the generally expected methods of pattern entry and exit along with typical altitudes and communication frequencies. By practicing the procedures as illustrated, a safer flying environment along with reduced noise disturbances to our neighbors on the ground should result.

In addition to departure and arrival recommendations, we have included noise abatement information, typical pattern altitudes for single and multi-engine aircraft along with helicopters, typical touch and go flight track patterns, and a comprehensive list of important and frequently used telephone numbers.

The MCRA is the owner, operator and grant sponsor of GAI and we welcome comments and/or suggestions to improve this publication. Thank you for your cooperation.

KEITH MILLER
Chief Executive Officer
Montgomery County Revenue Authority
www.montgomerycountyairpark.com




Airport Information	
Elevation	539' MSL
Runway	32-14 Length 4201 Width, 75 Asphalt
Taxiway	Width 35' Asphalt
Traffic Pattern	RW 32-Right Hand Pattern
Sectional Chart	Washington
Area Chart	Baltimore/Washington
Approaches	Non-Precision VOR 14, RNAV (GPS) 14
Unicom (CTAF)	123.075
Fuel/Services	122.85
Lights	MIRL (PCL 123.075), Rotating Beacon, VASI RW 14
AWOS	128.275, Phone 301-977-2971
Clearance Delivery	121.600
Clearance Delivery Telephone	866-429-5882
Fixed Based Operator (FBO)	301-963-8043
DC Metro Aviation Services	Full Service - Jet A, Full & Self Service - 100LL Fuel
Aircraft Storage and Hangars	
Flight Instruction	
Bravo Flight Training	240-780-7697
Pilot in Training Flight Academy	929-235-4272
Positive Attitude Aviation	301-704-0345
Washington Intl. Flight Academy (WIFA)	240-246-7529
Maintenance Services	
D&P Testing	301-980-4220
Deblois Aerospace	301-641-4657
GAI Aircraft Services	202-664-3635
Paragon Aviation Detailing	571-499-2063
Positive Attitude Aviation	301-704-0345
Rodgers Precision Maintenance LLC	713-628-7781
Part 135 Charters	
OpenAir Charters	800-940-2FLY
Cafe	301-330-2222
Airport Manager	301-963-7100

Local and Frequently Called Numbers	
Emergency/Police/Fire	911
Suspicious Activity	1-866-GA-SECURE
FAA Hotline/Noise Complaints	1-800-322-7873
Baltimore Flight Standards District Office	410-787-0040
Rental Cars	
Enterprise	301-948-8188
Hertz	301-260-9393
Taxi Services	
Action Taxi	301-840-1122
Orange Taxi	301-912-0000
Limousine Service	
Martin's Sedans	301-260-9393
Presidential Limo	301-840-5500
RMA Limo	301-231-6555
Hotels/Motels	
Comfort Inn Shady Grove	301-330-0023
Courtyard by Marriott	301-527-9000
Hilton Gaithersburg	301-977-8900

Noise Abatement Suggestions

- Follow published noise abatement procedures.
- Calm wind – use Runway 14.
- If practical, and within manufacturer's guidelines, Reduce RPMs after lift off.
- Avoid intersection take offs.
- Climb at best rate, not best angle.
- AIM minimum suggested crosswind turn at 1239' MSL.

Updated November 2020





Appendix 2 – AOPA Noise Awareness Steps



AOPA Noise Awareness Steps

NOTE: These are only general recommendations by AOPA. Some may not be advisable for every aircraft in every situation. No noise reduction procedures should be allowed to compromise flight safety. Safety always comes first.

- If practical, avoid overflying noise-sensitive areas. Make every effort to fly at or above 2,000 feet AGL over such areas when overflight cannot be avoided.
- Consider using a reduced power setting if flight must be low because of cloud cover or overlying controlled airspace or when approaching the airport of destination. Propellers generate more noise than engines; flying with a lower RPM setting will reduce aircraft noise substantially.
- Perform stalls, spins, and other practice maneuvers over water or uninhabited terrain.
- Familiarize yourself and comply with your airport's noise abatement procedures.
- Use PAPI/VASI whenever available. This will indicate a safe glidepath and allow a smooth, quiet descent to the runway.
- Retract the landing gear either as soon as a landing straight ahead on the runway can no longer be accomplished or as soon as the aircraft achieves a positive rate of climb. If practical, maintain best-angle-of-climb airspeed until reaching 500 AGL or an altitude that provides clearance from terrain or obstacles. Then accelerate to best-rate-of-climb airspeed. If consistent with safety, make the first power reduction at 500 feet.
- Fly a tight landing pattern to keep noise as close to the airport as possible. Practice descent to the runway at low power settings and with as few power changes as possible.
- If possible, do not adjust the propeller control for flat pitch on the downwind leg. Instead, wait until on final. This practice not only provides a quieter approach, but it also reduces stress on the engine and propeller governor.
- Avoid low-level, high-powered approaches, which not only create high noise impacts, but also limit options in the event of engine failure.

Source: <https://www.aopa.org/-/media/Files/AOPA/Home/Advocacy/AOPANoiseSteps.pdf>