



## CITY COUNCIL COMMUNICATION AGENDA ITEM 7B

**SUBJECT:** ROCKY MOUNTAIN METROPOLITAN AIRPORT ROUNDTABLE UPDATE

**DATE:** JUNE 1, 2021

**PRESENTED BY:** EMILY HOGAN, ASSISTANT CITY MANAGER FOR COMMUNICATIONS AND SPECIAL PROJECTS  
MEGAN DAVIS, DEPUTY CITY MANAGER  
HEATHER BALSER, CITY MANAGER

### **BACKGROUND:**

In 2019, the City of Louisville partnered with the Town of Superior to address noise from Rocky Mountain Metropolitan Airport (RMMA), which is located in Broomfield. Following a number of complaints from residents about noise from RMMA, the City and Town hired aviation consultant ABCx2, which has specialized experience in working with communities and airports to address noise issues.

### **2021 WORK PLAN:**

The 2021 City Council Work Plan includes the following: continue efforts to address noise complaints from RMMA with neighboring communities, including:

- Participate in Community Noise Roundtable and pursuit of formal procedural changes.
- Conduct pilot/industry outreach for voluntary noise abatement procedures.
- Analyze 2020/2021 operations/complaint data and trends.

### **COMMUNITY NOISE ROUNDTABLE:**

In 2019, the FAA recommended the establishment of a Community Noise Roundtable as a formal mechanism to advance noise mitigation recommendations that require FAA approval. After City staff initiated numerous conversations with RMMA and Jefferson County staff, and sent letters to the Jefferson County Commissioners regarding the establishment of a Roundtable, Jefferson County convened staff from Jefferson County, Boulder County, Broomfield, Westminster, Arvada, Superior and Louisville (all communities located within the Class D airspace of RMMA) to discuss concerns regarding airport operations and impacts. The group supported the establishment of a formal Roundtable and entered into an IGA in November, 2020.

Per the IGA, the purpose of the RMMA Community Noise Roundtable (RMMA-CNR) is as follows:

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 2 OF 10**

- Identify the dimension of noise issues, discover possible mitigation actions, find opportunities for implementation of mitigation measures and evaluate the effectiveness of mitigation measures.
- Share up-to-date data in order to identify potential voluntary noise reduction opportunities.
- Identify potential operational changes to the airport that would require federal approval.
- Build consensus around recommendation for noise reduction measures, whether voluntary or mandatory (understanding that mandatory measures require FAA approval)
- Review available data regarding noise reduction measures.
- Review airport development plans, operational changes and surrounding community development plans for associated noise impacts.

*January RMMA-CNR Meeting*

The Roundtable held its kickoff meeting on January 11. The agenda consisted of introductions from member communities and representatives, a presentation from RMMA on the background of the airport and formation of the Roundtable and discussion of meeting logistics (Board elections, scheduling of public comment, facilitator options, notice of meetings, etc.).

*February RMMA-CNR Meeting*

The agenda for the February 8 meeting consisted of election of Chair and Vice-Chair, public comment, facilitator interviews and selection, confirmation of regular meeting dates and format and an update from the RMMA Director.

Superior representative Mark Lacis was elected Chair and Louisville representative Jeff Lipton was elected Vice-Chair. It was decided that 30 minutes of public comment would be offered at each meeting with 3 minutes allotted to each speaker. There were 10 individuals who shared public comment.

Three consultants were interviewed for the role of meeting facilitator, including Primacy Strategy Group, P-2 Solutions and CDR Associates. Primacy was awarded the contract, which will be funded by member dues. Primacy has extensive experience working with airport and surrounding communities on noise-related issues and helped to establish the Centennial Airport Noise Roundtable. There was also discussion about potentially hiring a technical consultant like ABCx2 to assist with data collection, flight modeling, etc.

The RMMA Director's update focused on airport operations and data provided by the FAA's Air Traffic Activity Data System (ATADS). There was discussion among the Roundtable members of the need for more detailed traffic data.

**CITY COUNCIL COMMUNICATION**

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 3 OF 10**

*March RMMA-CNR Meeting*

The agenda for the March 8 agenda consisted of an overview of the airport traffic heat map provided by Louisville and an introduction/Q&A with the FAA. In regards to the heat map, Vice-Chair Lipton was asked if there was a breakdown of altitude of flights, traffic that originates from RMMA vs. elsewhere, time of day and arrivals vs. departures.

John Bauer, Manager of the FAA's Denver District Office, provided an overview of grant assurances, which is when an entity accepts funds from FAA-administered airport financial assistance programs, they must agree to certain obligations (or assurances). To-date, RMMA has received \$92.5 million from the Airport Improvement Program.

Major takeaways from the FAA presentation include:

- The FAA can help guide the work the RMMA-CNR can do and evaluate proposals. The FAA District Office and Air Traffic Control generally relay what is allowed per grant assurances/laws.
- The FAA will work with the RMMA-CNR on a regular basis. The FAA serve as subject matter experts. They will not develop solutions but the RMMA-CNR can bounce ideas off of and learn legal/technical requirements.
- Grant assurances govern a lot of what an airport can do. Often roundtables want to limit types/classes of aircraft/operators, which is not permitted. One of the most effective strategies that can be implemented without the FAA is developing noise abatement procedures. This is an ongoing effort that requires continued focus with new pilots and others who are not familiar with RMMA. Traffic patterns will require more input from air traffic perspective in regards to what is legal, safe, allowable and potential impacts to surrounding facilities/airspace.
- Effective noise abatement programs that are successful take continued work/dedication to inform all people involved. Flight schools will have new students/instructors on routine basis. Can achieve 90% compliance with effective program. There could still be pilots who visit RMMA who are not familiar with noise abatement procedures. Flight schools have tried to comply with procedures.
- A Part 150 Study could be funded under the FAA's Airport Improvement Program but would have to compete against other projects. Part 150 Study will help educate all stakeholders in regards to noise levels and where mitigation may be recommended. If RMMA were to request the study as part of their Capital Improvement Program, it would be eligible. The study will model noise and provide an explanation to surrounding communities regarding the noise levels the FAA would be concerned about (exceed 65 decibels for day/night noise levels) and may consider mitigation. While the FAA could cover 90-95% of the cost of the study, Jefferson County would have to provide matching funds.

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 4 OF 10**

- To potentially change a flight pattern, there would have to be extensive analysis of impacts. Recommendations would have to go through study/development before the FAA would implement new flight paths. It can take 18-24 months to analyze such proposals, which would involve community outreach, test flights, etc. Information would be put into an algorithm and identify the best possible outcome.
- The primary objective in handling traffic at RMMA is safety. For the most part, air traffic goes to/from the north. This routine was developed when there were not houses in the area and it was the best scenario at the time.
- Flight paths and airspace procedures are standardized across the nation. The FAA has established a national system to ensure that pilots learn the same standards across the board similar to vehicle operator rules.
- Instructions based on noise abatement procedures are not provided by Air Traffic Control. The primary focus of Air Traffic Control is safety. Noise abatement procedures are usually airport or community generated.
- There are not established flight paths or hard altitudes for Visual Flight Rules to/from RMMA. Pilots have established a routine to the north along Highway 287.
- Pilots have been encouraged to cloak their tail number as a result of inappropriate contact made in the past year, which can make the environment unsafe.
- RMMA cannot limit types of aircraft per its grant assurances. It can encourage specific development but cannot prohibit certain uses.
- There are no assurances for communities impacted outside of the RMMA Airport Influence Area. This area is looked at from a safety perspective as RMMA controls the facility but the federal government controls airspace.
- Require public engagement per grant assurances for airport planning work is usually done during master planning processes. Jefferson County controls development at the airport and cannot limit growth due to noise issues. It can be thoughtful about how growth is executed but cannot preclude specific development for issues beyond safety.

#### *April RMMA-CNR Meeting*

At the April 5 meeting, the RMMA-CNR heard from ABCx2 in regards to the work completed by Louisville and Superior and the RMMA Director on noise complaints received by the airport since 2011 and operations from the 1970s to present day. The RMMA Director also provided an overview of RMMA plans like the 2011 Master Plan. It was noted that the presentation on noise complaints does not include reports received directly by cities/towns.

Major takeaways from the ABCx2 presentation include:

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 5 OF 10**

- ABCx2 was hired by the Town of Superior and City of Louisville to study noise concerns related to RMMA and consider the various stakeholders involved and develop recommendations to mitigate noise.
- The consultant made recommendations to the FAA to look at ingress/egress routes to/from the north practice area and to encourage flights over less populated residential areas. The FAA said a regional solution would need to be vetted through a roundtable before any changes would be made to air traffic.
- The RMMA-CNR could recommend a test of alternative routing to see if it makes a difference to neighboring communities. There would need to be agreement from Air Traffic Control on what the test is and notice would need to be published for the test route. Currently there is not a coordinated effort that involves Air Traffic Control. Limited study was done on the alternative routes based on the consultant's budget. ABCx2 has a partner that could look more in-depth at potential areas that could be impacted by shifting the flight patterns.

The Airport Advisory Board (AAB) also shared the work recently completed on the airport mission and vision statements and goals. Roundtable members asked if the AAB has considered noise/environmental impacts in the process of making recommendations to the Jefferson County Commissioners for future growth. The AAB responded that development will be considered through that lens during the upcoming Strategic Business Plan process.

#### *May RMMA-CNR Meeting*

At the May 10 meeting, the RMMA-CNR head from flight schools regarding their use of the noise abatement procedures and an overview of the Part 150 Study from the FAA.

Major takeaways from the flight school discussion include:

- All flight schools at RMMA have incorporated the voluntary noise abatement procedures in their education program, including signage and weekly/monthly briefings. For those renting an aircraft, rules/procedures are conveyed before someone can take a plane off-site.
- Flight schools report that they have been working on updated noise abatement procedures for the last 2 years and have committed time to put measures in place. The procedures are voluntary, however, and there are some protocols that pilots still have to follow per FAA governance. The flight schools have found there are fewer people calling the front desk to report complaints. Additionally, not every plane that come/goes from RMMA belongs to one of the flight schools. While Air Traffic Control is supportive of the noise abatement procedures, its priority is safety.
- The flight schools have reported significant growth in the last 2 years. They try to monitor growth and use a waitlist to avoid overflowing the area with operations.

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 6 OF 10**

They also reported that more inexperienced pilots likely are not the issue since the noise abatement procedures are explained during training.

- The flight schools' fleet have a variety of aircraft with some louder than others (twin engine vs. single). They believe that newer aircraft would not make a difference in sound levels as the engines are the same and they are not allowed to modify the equipment per FAA regulations. Most aircraft already have mufflers and modifying those could reduce performance and result in safety issues.
- In regards to routing to the north practice area, the flight schools suggest avoiding the most populated residential areas when briefing students. There are many variables that can affect a pilot's ability to do so, however.
- Night flights cannot be restricted as pilots are required to clock a certain number of nighttime hours. Additionally, some pilots are only able to fly during these times.
- It would be difficult to change the touch and go pattern around the airport as the FAA has a standard procedure. Flight schools do try to spread out flights over the schedule and stagger to reduce impacts. The RMMA-CNR could explore certain flight paths and make a recommendation to the FAA.
- RMMA has been in talks with other airports and aviation organizations to try and establish collaboration around noise abatement procedures. It is difficult to measure success though.
- There are generally 70-80 days per year that pilots cannot fly due to weather. 6 am tends to be a busy time for flights as less expensive aircraft may be available and cannot fly later in the day.
- Landing fees may be difficult to implement as they have not been enacted for smaller airports like RMMA. It could also take time to get approval from the FAA.
- The long-term solution is technology. Electric aircraft may not produce as much noise. For the short-term, the RMMA-CNR should work on trying to find a route that is agreed upon and forward the recommendation to the FAA. This could potentially capture 80-90% of the flight traffic.
- The FAA determined that any specified route will need go through a roundtable to ensure regional agreement. This could take 1-2 years to be approved by the FAA.

Major takeaways from the FAA presentation include:

- The FAA estimates that a Part 150 Study for RMMA could cost between \$1-2 million. Jefferson County will have to submit the request to the FAA and then determine how that falls within the airport's Capital Improvement Program. The first 2 years of the program have already been determined, so it would likely occur at a later time. The FAA will seek guidance from Jefferson County on its priorities for the airport and its improvements.
- The Part 150 Study will develop noise exposure maps and look at what those maps shows us. Noise would have to exceed 65 dB DNL to be considered in

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 7 OF 10**

excess of acceptable noise levels. The noise model is based on a 24-hour average.

- Potential mitigation depending on noise levels also depends on the timeframe a house was built. If built after 1988, this would limit eligibility. For homes built prior to 1988, the FAA could provide resources for insulating homes and replacing windows. If the Part 150 Study does not show excess noise levels, it may be difficult to initiate changes through the FAA.
- Once a Part 150 Study is completed, it will have to be updated every 5-10 years, which has an associated cost. The Centennial Airport Community Noise Roundtable has been meeting for 20 years and completed a Part 150 Study, which has since been updated.
- In regards to timing, it could take 2-3 years to conduct the study, resulting in an overall period of 5-6 years before actual changes would be implemented.
- The FAA will see if there are any available noise contour maps for RMMA that were previously submitted as part of a master planning process. This is important as it would show noise exposure lines with decibels in neighboring communities. For areas that are located within the contours, there could be recommendations made to Jefferson County through a Part 161 Study, which would establish a program to review noise and access restrictions.
- The FAA is data-driven, so having the results of the Part 150 Study would be useful in regards to submitting any recommendations for procedural changes. At this time, there is no modeling to support any recommended changes.

In addition to the work completed above through the RMMA-CNR, the following items has been completed to-date in 2021:

- Staff created a resident email listserv and provides regular updates to interested citizens regarding RMMA-CNR meeting dates and other topics.
- At the March 2 meeting, Council directed staff not to pursue airport noise consultant services in 2021 and to continue work through the RMMA-CNR.
- On March 5, the City submitted comments regarding the FAA's recent summary of public research programs it sponsors on civil aircraft noise that would inform future airport noise policy (Docket No. FAA-2021-0037). Issues the letter highlighted include: discrepancies around noise modeling, lack of noise research for small aircraft with short-term, repeated, high-volume operations, air quality impacts and health/human impacts.
- In April, RMMA's AAB updated the airport's mission and vision statements and goals. Council liaisons and City staff closely followed this process and submitted recommended changes to further incorporate compatibility with surrounding areas and evaluation of noise and environmental impacts on surrounding communities. When these proposed revisions were not included, the City submitted a letter to the Jefferson Board of County Commissioners for further consideration. The role of the AAB is to advise the County Commissioners regarding airport matters.

**CITY COUNCIL COMMUNICATION**

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 8 OF 10**

- On May 6, RMMA announced that it would begin developing a Strategic Business Plan to guide investment and development decisions over the next 20 years. At the May 21 AAB meeting, the project consultants discussed the scope of work and plans for stakeholder engagement. The mission and vision statements and airport goals previously approved by the AAB will serve as a starting point for this effort. Council liaisons and staff will closely follow this process and provide input as needed. More details on the project can be found at <https://www.jeffco.us/4290/Strategic-Business-Plan>.

#### **PREVIOUS EFFORTS ON RMMA NOISE MITIGATION:**

The following work was completed in Phase I of the project in 2019:

- Complete baseline assessment to understand current conditions and identify opportunities for improvement. ABCx2 looked at airport facilities, airfield layout, airspace and flight procedures, annual operations, traffic levels and fleet mix, existing noise abatement program, land uses and zoning and complaint data.
- Conduct community engagement, including an online survey on the impact of airport noise and potential solutions and an open house to share draft strategies and solicit feedback from residents.
- Meet with the airport and FAA traffic control tower personnel and conduct a flight training forum to engage industry stakeholders and encourage participation in the process.
- Assist in the formation of the Airport Noise Task Force to vet potential solutions and keep efforts moving forward with airport staff and tenants.
- Develop updated noise abatement procedures with the Airport Noise Task Force to lessen the impact of aircraft activity on adjacent neighborhoods.
- Develop recommended strategies intended to reduce noise impacts on the communities.

Phase II of the project kicked off in 2020 in which the following work was completed:

- City/Town staff and the consultants held a prioritization workshop with Council/Board liaisons to identify priorities for the City/Town and strategies to pursue together in 2020 while staying within budget (see attachments).
- The consultants developed a detailed work plan based on the strategies that were prioritized by the City/Town at the workshop. The work plan includes objectives, action items, metrics, budget and estimated timeline.
- City/Town staff met with RMMA to discuss the strategies outlined in the work plan that require cooperation from the airport.
- Council liaisons met with RMMA along with City staff and the consultants to share concerns regarding airport operations and impacts.
- Staff continued to update the City's webpage for the airport (<https://www.louisvilleco.gov/residents/rocky-mountain-metropolitan-airport>) in an

**CITY COUNCIL COMMUNICATION**

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 9 OF 10**

effort to share information with the community. The City also partnered with ESRI to create a new storymap

(<https://storymaps.arcgis.com/stories/113bd2a2cc64408e937f5d712799457b>) to share information on airport operations and policies/procedures and illustrate community concerns.

- City staff worked with RMMA to convene meetings with Jefferson County, Boulder County, Broomfield, Westminster, Arvada, and Superior to begin the process to establish a Community Noise Roundtable (CNR) as recommended by FAA. The City and RMMA drafted bylaws and the intergovernmental agreement (IGA) to establish a CNR as recommended by the FAA. All parties signed off on the founding documents, appointed elected members, and the CNR has begun to meet.
- The City provided letters to the Jefferson County Commissioners regarding noise impacts and shared letters and emails from community.
- The consultants developed education/outreach materials for the airport to use with pilots, flight schools, airport tenants, air traffic control and the general public and organized a meeting with City/Town and airport staff to discuss implementation (see attachments).

The consultants provided a final project wrap-up report that is attachmented.

**FISCAL IMPACT:**

The upcoming budget amendment will include annual member fees due for the RMMA-CNR (\$3,600 annually). Additionally, the Roundtable may identify longer-term planning for needs in gaps and resources around airport impacts. For instance, the Roundtable may identify future funding needs to monitor noise and operations in airspace surrounding the airport, model potential flight paths over less populated areas, continued consultant support, etc. Funding for such items is not included in the City's budget. If additional resources are needed, staff will bring forward a budget amendment.

**PROGRAM/SUB-PROGRAM IMPACT:**

One of the objectives of the Public Information & Involvement Sub-Program is giving residents the opportunity to get involved and influence decision-making. This item from the 2020 Council Work Plan incorporates resident input and develops solutions to address concerns regarding airport noise. It also incorporates a collaborative approach with a regional partner to address an issue of mutual interest, which is a Critical Success Factor from the City's Strategic Plan.

**ATTACHMENT(S):**

1. Prioritized Strategy Matrix
2. Engagement/Outreach Materials
3. ABCx2 Project Wrap-up Report
4. Air Traffic Heat Map
5. 2020 RMMA Annual Noise Report

**SUBJECT: RMMA ROUNDTABLE UPDATE**

**DATE: JUNE 1, 2021**

**PAGE 10 OF 10**

**STRATEGIC PLAN IMPACT:**

<input type="checkbox"/>	 Financial Stewardship & Asset Management	<input type="checkbox"/>	 Reliable Core Services
<input type="checkbox"/>	 Vibrant Economic Climate	<input type="checkbox"/>	 Quality Programs & Amenities
<input checked="" type="checkbox"/>	 Engaged Community	<input type="checkbox"/>	 Healthy Workforce
<input type="checkbox"/>	 Supportive Technology	<input type="checkbox"/>	 Collaborative Regional Partner

**CITY COUNCIL COMMUNICATION**

#	Priority	Focus Area	Strategy	Work Completed	Next Steps	Level of Impact*	Probability of Implementation	Cost	Timeline	Approval Process	Lead
1	High	Flight operations, procedures & practices	Continued implementation of updated Noise Abatement Procedures to support voluntary compliance. This includes strategies to route aircraft away from residential areas; increasing altitude when near residential areas; discouraging nighttime operations; encouraging early turns; encouraging noise friendly departure route to practice area).	In late 2019, RMMA released updated noise abatement procedures for voluntary measures. This effort was led by ABCx2 on behalf of City/Town through the airport's Noise Task Force.	Conduct education and outreach with airport tenants and air traffic control personnel. Consider measures for compliance and impact on noise. May include flight tracking system.	High  Increase awareness of community concerns and updated Noise Abatement Procedures	High  Preliminary implementation complete	\$ (education & outreach campaign included in Phase II scope with ABCx2)  \$-\$ (costs associated with performance metrics and monitoring systems)  \$\$ (route design from ABCx2 - need to consider topography, aircraft performance, airspace, etc.)	Short to Medium-term	ABCx2 will work with RMMA to develop a pilot outreach/engagement program. Based on available budget, materials such as web content, social media, brochures, etc., may need to be developed either by ABCx2 as a separate task or by the Airport.	Consultant & City/Town staff (education & outreach)
2	High	Community outreach & engagement	Establish community roundtable	Jefferson County is leading effort to establish roundtable and contacting member agencies to set up initial meeting to discuss purpose, goals, bylaws, etc.	Establish guiding documents, select representatives, hire facilitator, identify potential solutions and submit recommendations to FAA for approval.  ABCx2 could assist with coordinating with Jefferson County on development to ensure that goals of City/Town will be incorporated.	High  A roundtable will enable regional collaboration among the airport, Jefferson and Boulder Counties and the surrounding cities and towns impacted both positively and negatively by the airport. This will also provide a forum for understanding community impacts and concerns, as well as opportunities to encourage compatibility.	High	\$ (community roundtable costs included in Phase II budget)	Medium to long-term	Coordination with Jefferson County and other participating organizations and jurisdictions.	City/Town staff
3	High	Industry outreach & engagement	Continue to work with airport's Noise Task Force to provide technical & subject matter expertise and advocate for City/Town priorities	Consultants worked with Noise Task Force to develop initial strategies.	Continue to work with Noise Task Force to promote City/Town priorities as outlined in the priority matrix for recommended strategies.	High  The Noise Task Force is made up of local industry experts with the influence and ability to encourage employees and customers to support the RMMA noise program. Support from this group has proven highly valuable in moving forward with operational recommendations.	High	\$ (work with Noise Task Force included in Phase II scope with ABCx2)	Short to medium-term	RMMA agrees to continue hosting the Noise Task Force.	Consultant

#	Priority	Focus Area	Strategy	Work Completed	Next Steps	Level of Impact*	Probability of Implementation	Cost	Timeline	Approval Process	Lead
4	High	Flight operations, procedures & practices	Consider mandatory requirements as outlined in updated Noise Abatement Procedures through Community Roundtable. This includes strategies to route aircraft away from residential areas; increasing aircraft altitudes.	Strategies included in updated noise abatement procedures (see #1).	Propose required rerouting of flight paths; increasing of aircraft altitudes; noise friendly departure route to practice area  If implemented, measure impact on noise.	High  Increase pilot awareness of noise impacts associated with overflight of residential areas and support mandatory rerouting from these areas.	Medium - rerouting of flight paths, increasing altitudes  Low - noise friendly departure route to practice area  Preliminary implementation completed	\$ (community roundtable costs included in Phase II budget)  \$-\$ (costs associated with performance metrics and monitoring systems)  \$\$ (route design from ABCx2 - need to consider topography, aircraft performance, airspace, etc.)	Medium to long-term	Vet proposed changes through Community Roundtable & submit recommendations to FAA for approval.	Consultant & City/Town staff (Community Roundtable)
5	High	Flight operations, procedures & practices	Collect data on operations, noise, complaints and resolutions and work with airport to address ongoing issues. This includes researching noise monitoring/flight tracking systems.	N/A	Work with airport to share additional details on operations, noise, complaints and resolutions to establish transparency and build trust with the community.  Gain better understanding of monitoring/tracking systems (i.e. cost, baseline data, benchmarking).	High  Additional data/transparency would create accountability, potentially address ongoing issues and help identify increases or decreases in noise over time.	Medium - depends on airport response	\$\$\$\$ (not currently budgeted for)	Short to long-term	RMMA would have to agree to share data and consider monitoring/tracking system	Consultant & City/Town staff
6	High	Land Use Planning, Zoning & Development	Review/comment on planned airport development, including Master Plan Updates to support development that is compatible with neighboring communities. Ensure transparency and community engagement is included in processes.	City/Town has been added to list of neighboring communities to be notified of future Master Plan updates by airport.  Beyond a Master Plan process, Jefferson County Planning Department only notifies jurisdictions within 2 miles of project.  Superior is within RMMA influence areas and should be contacted regarding any updates to their Master Plan.	Explore expansion of Jefferson County Planning Department notifications to include City/Town. Also plan to respond to future Master Plan updates.	High  Informed land-use planning can reduce/avoid future non-compatible development by either limiting development in areas highly exposed to aircraft noise/overflights or by requiring notification to prospective home-buyers of the potential impacts.	Depends on RMMA response to comments	\$ (City/Town staff resources)	Short to medium-term	Jefferson County/RMMA	City/Town staff

#	Priority	Focus Area	Strategy	Work Completed	Next Steps	Level of Impact*	Probability of Implementation	Cost	Timeline	Approval Process	Lead
7	Medium	Industry outreach & engagement	Include updated Noise Abatement Procedures in flight training curriculum for new students/license certifications	In late 2019, RMMA released updated Noise Abatement Procedures (see #1).	The consultants will work with the airport's Noise Task Force to develop content and incorporate the noise abatement procedures in the flight training curriculum.	Medium  Training of both flight instructors and pilots will reinforce the importance of flying in a community-friendly manner and ensure awareness of specific measures in place at RMMA.	High	\$ (work with Noise Task Force included in Phase II scope with ABCx2)	Short-term	RMMA agrees to promote noise abatement procedures and expanded education & outreach.	See #1
8	Medium	Industry outreach & engagement	Include updated Noise Abatement Procedures in flight instructor briefings	In late 2019, RMMA released updated Noise Abatement Procedures (see #1).	The consultants will work with the airport's Noise Task Force to incorporate the noise abatement procedures in flight instructor briefings.  ABCx2 suggests increasing frequency of briefings & expanding content.	Medium  Training of both flight instructors and pilots will reinforce the importance of flying in a community-friendly manner and ensure awareness of specific measures in place at RMMA.	High	\$ (work with Noise Task Force included in Phase II scope with ABCx2)	Short-term	RMMA agrees to promote noise abatement procedures and expanded education & outreach.	See #1
9	Medium	Industry outreach & engagement	Include noise abatement in air traffic controller briefings (not formal instruction or training, which would require FAA approval)	In late 2019, RMMA released updated Noise Abatement Procedures (see #1).	The consultants will work with the airport's Noise Task Force to incorporate the noise abatement procedures in traffic controller briefings.	Medium  Air traffic controller (ATC) briefings help ensure ATC is aware of the noise program measures and support pilot requests consistent with the update Noise Abatement Procedures.	Medium	\$ (work with Noise Task Force included in Phase II scope with ABCx2)	Short-term	RMMA agrees to promote noise abatement procedures and expanded education & outreach.	Consultant
10	Medium	Community outreach & engagement	Expand City web content about airport, noise and contact information for City, Town and airport	Staff has created webpages that include contact information for the airport and noise complaints, the updated noise abatement procedures, etc.	Staff has partnered with ESRI to create a story map that identifies the airport layout, approach corridors, traffic areas, complaints, flight patterns, etc.  ABCx2 to review map & provide data before it's published.	Medium  Community outreach can expand transparency and help the public better understand airport operations, flight patterns and noise. This is also helpful for prospective home-buyers when choosing where to live, enabling informed decision-making and consideration of their sensitivity to aircraft	High	N/A (ESRI is the City's current GIS provider and completing this work free of charge)	Short-term	N/A	City/Town staff

#	Priority	Focus Area	Strategy	Work Completed	Next Steps	Level of Impact*	Probability of Implementation	Cost	Timeline	Approval Process	Lead
11	Medium	Community outreach & engagement	Expand airport's website to include community section for addressing noise issues and provide noise program information	Airport has updated website to include community section for addressing noise issues and noise program information	Ongoing	Medium  Similar to Measure #7 above. Information provided by the airport further expands transparency and demonstrates the Airport and Jefferson County's commitment to protecting residents' quality of life.	High	N/A	N/A	N/A	See #1
12	Medium	Regional Collaboration	Establish planning meetings with City/Town, Boulder County, Jefferson County and airport to discuss development plans, community concerns, etc. This could be accomplished through Community Roundtable.	Jefferson County is leading effort to establish roundtable and contacting member agencies to set up initial meeting to discuss purpose, goals, bylaws, etc.	See #2	Medium  Informed land-use planning can reduce/avoid future non-compatible development by either limiting development in areas highly exposed to aircraft noise/overflights or by requiring notification to prospective home-buyers of the potential impacts.	Depends on all parties	\$ (community roundtable costs included in Phase II budget)	Medium to long-term	Discuss development plans, community concerns, etc. through Community Roundtable.	City/Town staff
13	Medium	Regional Collaboration	Collaborate with Congressional delegation	City/Town staff has engaged with the Congressional delegation to discuss airport noise issues and provide feedback for potential legislative action.	Continue to work with Congressional delegation and monitor Federal/State legislation.	Low  The airport, FAA and Jefferson County are all operating within federal requirements and the noise exposure levels associated with RMMA are below the federal threshold for "significant impact". Combining that with the local residential development around RMMA, it seems federal and state intervention will be less effective than a local, collaborative approach.	High	\$ (City/Town staff resources)	Ongoing	Council/Board approval of legislative positions.	City/Town staff

#	Priority	Focus Area	Strategy	Work Completed	Next Steps	Level of Impact*	Probability of Implementation	Cost	Timeline	Approval Process	Lead
14	Low	Industry outreach & engagement	Expand information on airport website to clarify noise-sensitive areas and share details on updated Noise Abatement Procedures	Airport has updated website to include community section for addressing noise issues and noise program information, including map of typical traffic pattern operations and updated Noise Abatement Procedures	See #12	Low Informing pilots of the updated Noise Abatement Procedures and encouraging participation.	High	\$ (education & outreach campaign included in Phase II scope with ABCx2)	Short-term	RMMA agrees to promote noise abatement procedures and expanded education & outreach.	See #1
15	Low	Land Use Planning, Zoning & Development	Consider existing/future noise exposure & flight patterns when addressing land use planning	The City currently does not do this for all development but can consider it if City Council identifies it as a priority.  The Town currently includes Airport Influence Areas, and sends development referrals to RMMA as appropriate. RMMA referrals include recommendations on disclosures to buyers/tenants in areas where airport noise impacts are anticipated.	N/A	Low (City/Town primarily planned or built out)  Informed land-use planning can reduce/avoid future non-compatible development by either limiting development in areas highly exposed to aircraft noise/overflights or by requiring notification to prospective home-buyers of the potential impacts.	Depends on direction from Council/Board	N/A	N/A	Land use code update by City Council/Town Board.	City/Town staff
16	Low	Land Use Planning, Zoning & Development	Enact zoning/code requirements for non-compatible development in Airport Influence Area and/or Airport Critical Zones	The City is not located within the Airport Influence Area and/or Airport Critical Zones. As a result, Louisville does not plan to pursue this.  Could restate language provided for #19 here, but I don't think Town has any interest in restricting development based on proximity to the airport. As part of review process, staff works to mitigate all potential noise impacts, most frequently noise related to proximity to HWY 36. We could require construction-related improvements to better insulate building interiors, but we don't have the same tools for air noise that we do for roadways, where sound walls can also abate outdoor noise	N/A	Low (City/Town primarily planned or built out)  Informed land-use planning can reduce/avoid future non-compatible development by either limiting development in areas highly exposed to aircraft noise/overflights or by requiring notification to prospective home-buyers of the potential impacts.	Depends on direction from Council/Board	N/A	N/A	Land use code update by City Council/Town Board.	City/Town staff

#	Priority	Focus Area	Strategy	Work Completed	Next Steps	Level of Impact*	Probability of Implementation	Cost	Timeline	Approval Process	Lead
17	Low	Land Use Planning, Zoning & Development	Coordinate local zoning/development cases with airport to understand potential impacts	Airport recently requested review of GDP for Redtail Ridge in Louisville even though it is outside of the airport's influence zone. Airport provided comments and requested an aviation agreement with the developers, and notified staff that it does not need to review any other plans unless Redtail Ridge changes significantly. City staff does not plan to forward any other referrals to the airport.  As related above, Town referrals are sent to RMMA when airport influence areas or known aviation	N/A	Medium  Informed land-use planning can reduce/avoid future non-compatible development by either limiting development in areas highly exposed to aircraft noise/overflights or by requiring notification to prospective home-buyers of the potential impacts.	Depends on all parties	N/A	N/A	N/A	City/Town staff
18	Low	Land Use Planning, Zoning & Development	Update website to include Airport Influence Area and flight paths/patterns	Staff has created webpages that include contact information for the airport and noise complaints, the updated noise abatement procedures, etc.	See #11	Medium  Adding information including the Airport Influence Area and flight paths/patterns inform residents and prospective residents of where to typically expect aircraft overflights to occur. Residents should expect high levels of aircraft activity within the Airport Influence Area and where flight paths/patterns are indicated thus helping manage expectations and encouraging transparency.	High	Short-term	N/A	Jefferson County/RMMA	City/Town staff
19	Low	Industry outreach & engagement	Share updated brochures for updated Noise Abatement Procedures	In late 2019, RMMA released updated Noise Abatement Procedures (see #1).	Complete	Medium  This outreach will help inform both local pilots and visiting pilots of the RMMA noise program. It is also another reminder of the importance of flying in a community-friendly manner and how pilots can reduce their impacts.	High	\$ (education & outreach campaign included in Phase II scope with ABCx2)	Short-term	RMMA agrees to promote noise abatement procedures and expanded education & outreach.	See #1

#	Priority	Focus Area	Strategy	Work Completed	Next Steps	Level of Impact*	Probability of Implementation	Cost	Timeline	Approval Process	Lead
20	Low	Industry outreach & engagement	Install on-airport signage for updated Noise Abatement Procedures	Two signs installed on-airport.	Complete	Low  Increases awareness of the importance of flying in a community-friendly way and serves as another reminder as pilots enter the flightline.	High	N/A	N/A	N/A	See #1

\*Level of impact could include reduction in noise exposure, reduction in overflights and/or increased distance between aircraft and homes

# INDUSTRY

Pilots, Flight Schools and  
Airport Tenants

# Introduction





## Who was here first...

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**"I suppose I'll be the one  
to mention the elephant in the room."**

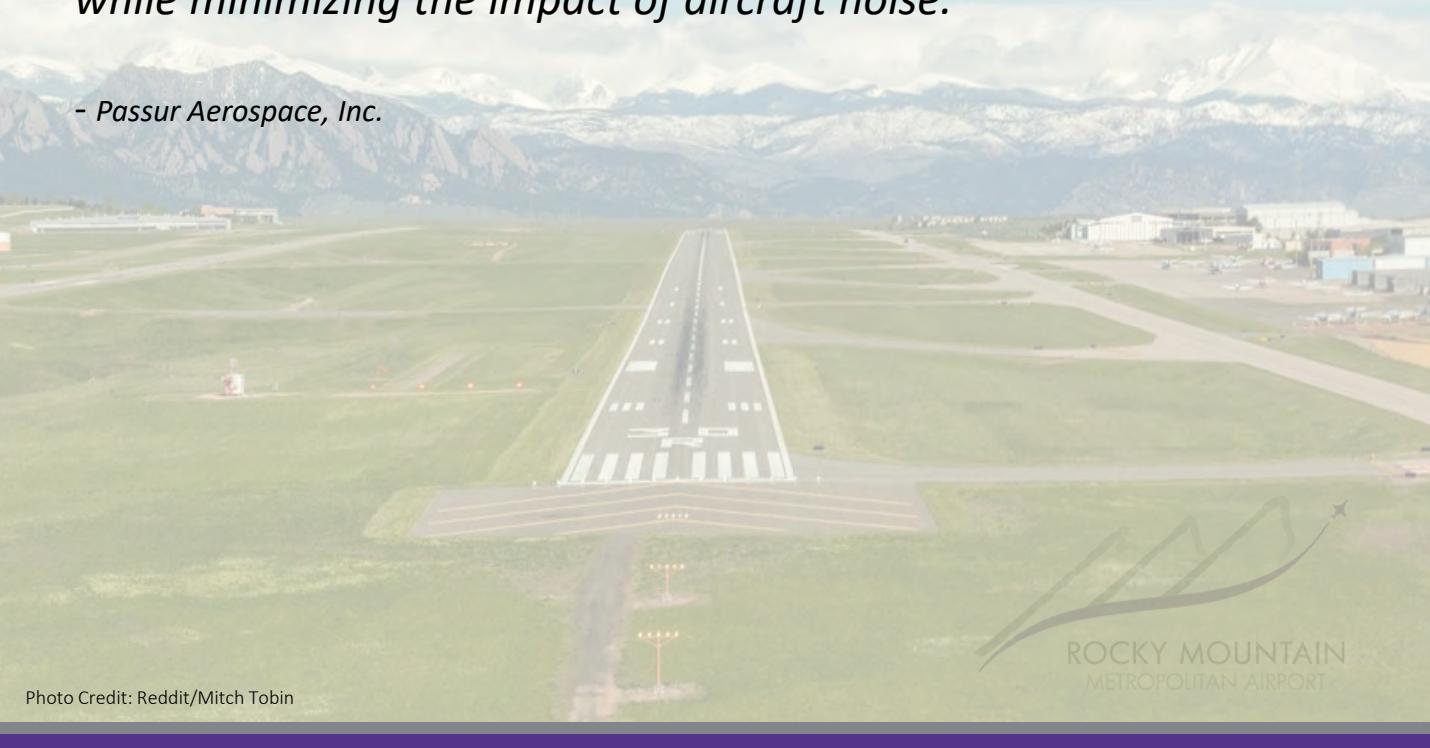




## Our Role

*“Airports want to work with their aircraft operators and their communities to provide a safe and efficient airport environment while minimizing the impact of aircraft noise.”*

- Passur Aerospace, Inc.

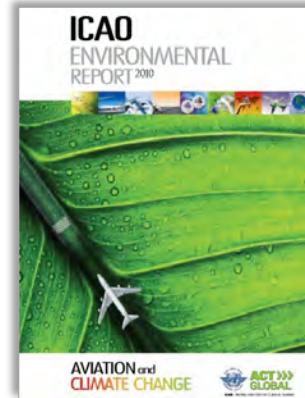
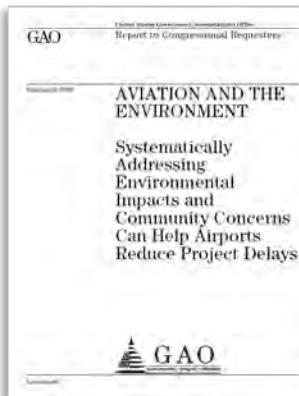




# Why Should We Care?

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“Although aircraft being produced today are 75% quieter than those manufactured 50 years ago, aircraft noise remains the **most significant cause of adverse community reaction related to the operation and expansion of airports worldwide.**”



“Airports that anticipate and effectively address community concerns ... are better positioned both to **reduce the environmental impacts** that are of most concern to the community and to **minimize the likelihood of project implementation delays.**”

ROCKY MOUNTAIN  
METROPOLITAN AIRPORT



## Example - Legislative Response to Community Opposition

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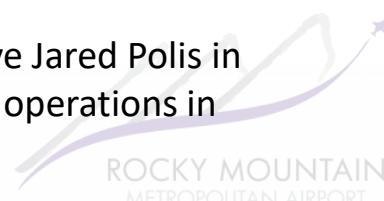
Opposition builds to USA Airport noise legislation changes

May 5, 2020

“The **Aircraft Noise Reduction Act** introduced by Neguse in December 2019 would allow the owner or operator of a general aviation airport to restrict the number and type of aircraft operations for compensation or hire occurring at the airport, including flights originating or landing at the airport, and the dates and times of such operations. The amendment requires that the airport takes into account input from local communities when making decisions.”

- Previous attempt similar legislation was included in the FAA Reauthorization Act of 2017
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Source: Business Airport International (<https://www.businessairportinternational.com/features/feature-airport-noise-legislation.html>)





## Noise Complaints



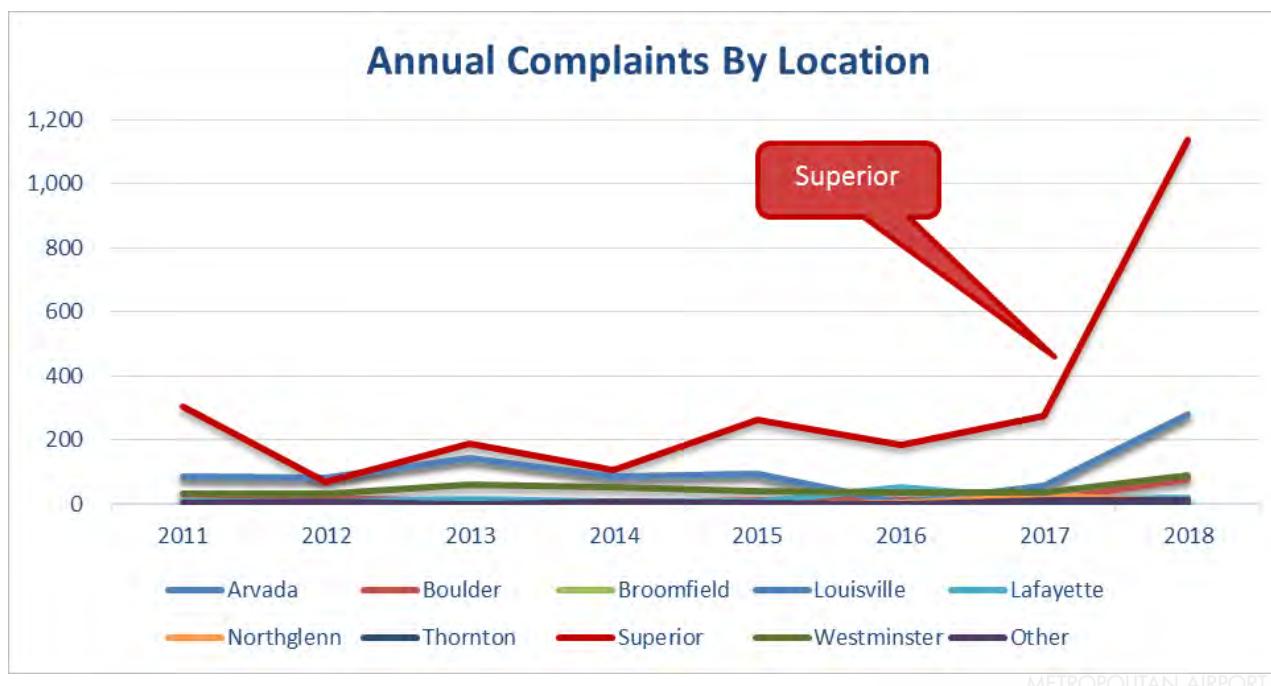
*Consistent growth in both aircraft operations and noise complaints.*





## Noise Complaints – By Community

*The majority of submissions consistently originate in Superior and primarily, the Rock Creek Community which is overflowed by closed-traffic operations and touch-and-goes.*

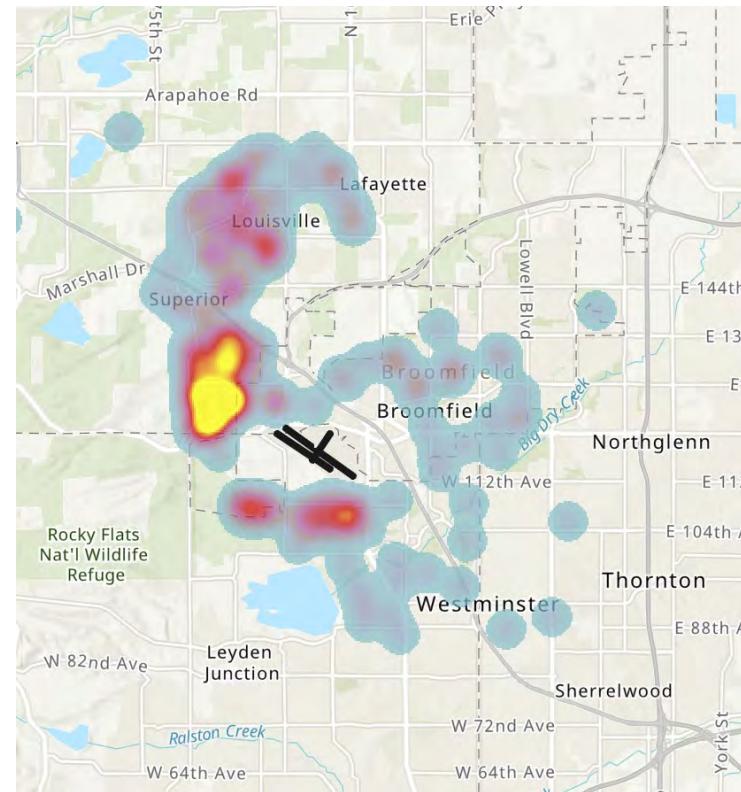


METROPOLITAN AIRPORT



## Complaints by Location (2019)

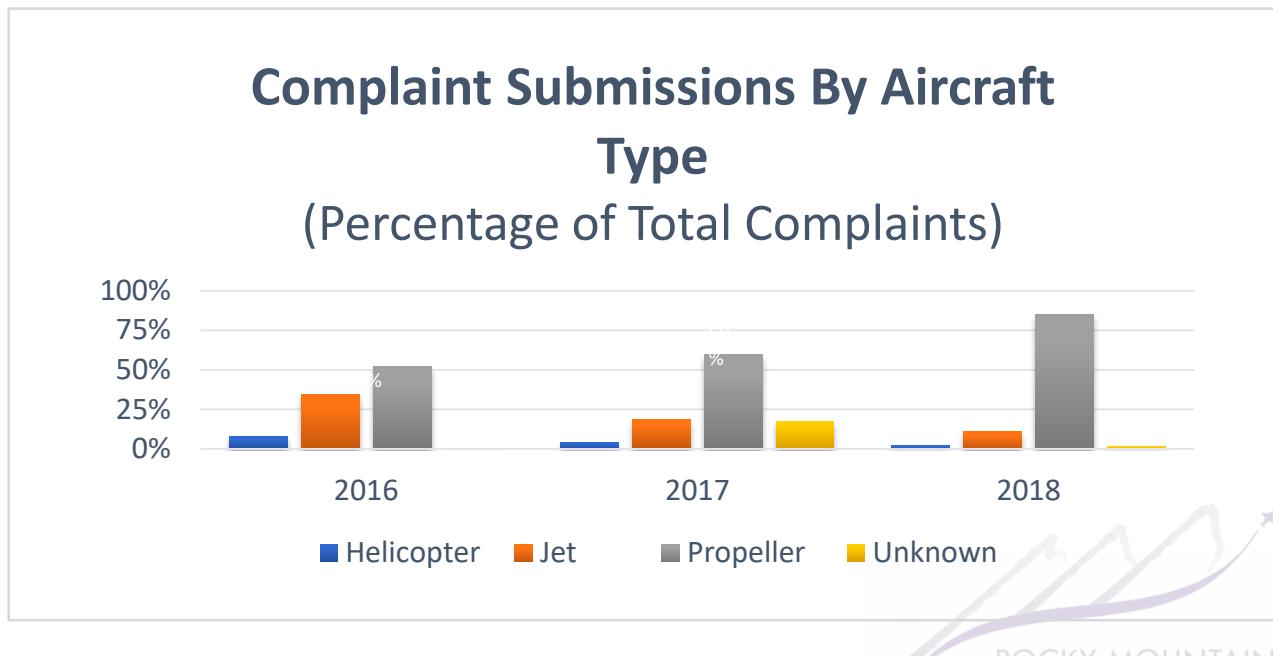
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## Complaints by Aircraft Type

*The majority of noise complaints are attributed to propeller operations.  
Most often, flight training and touch-and-go operations.*



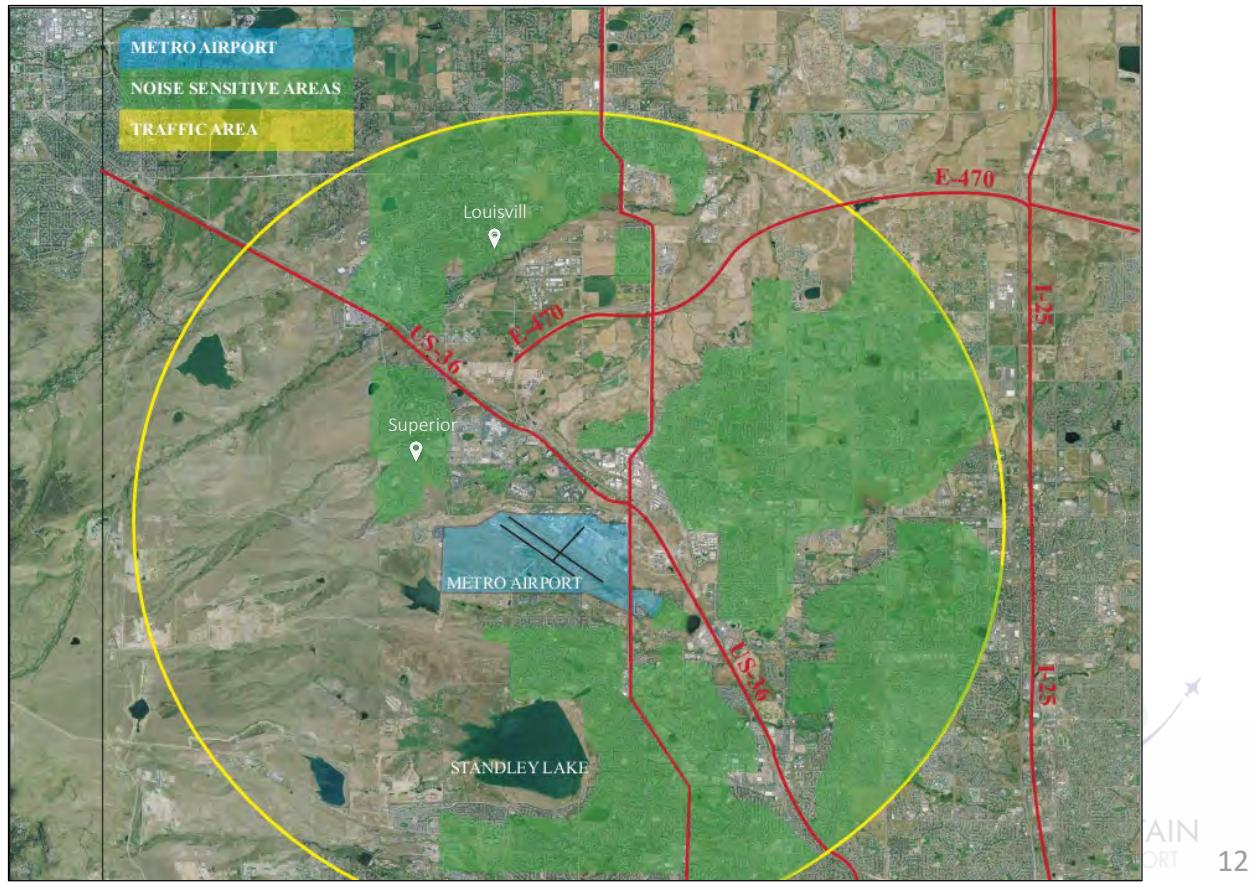
## Overview of the RMMA Fly Quiet Program



11

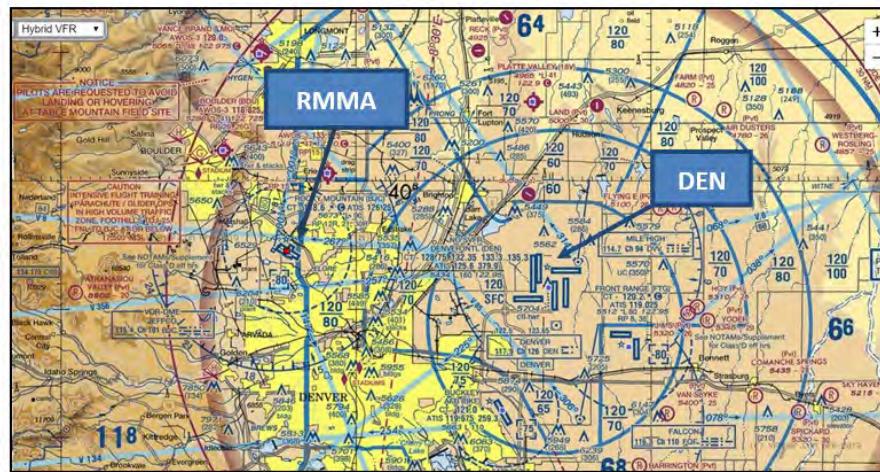


# Noise Sensitive Areas



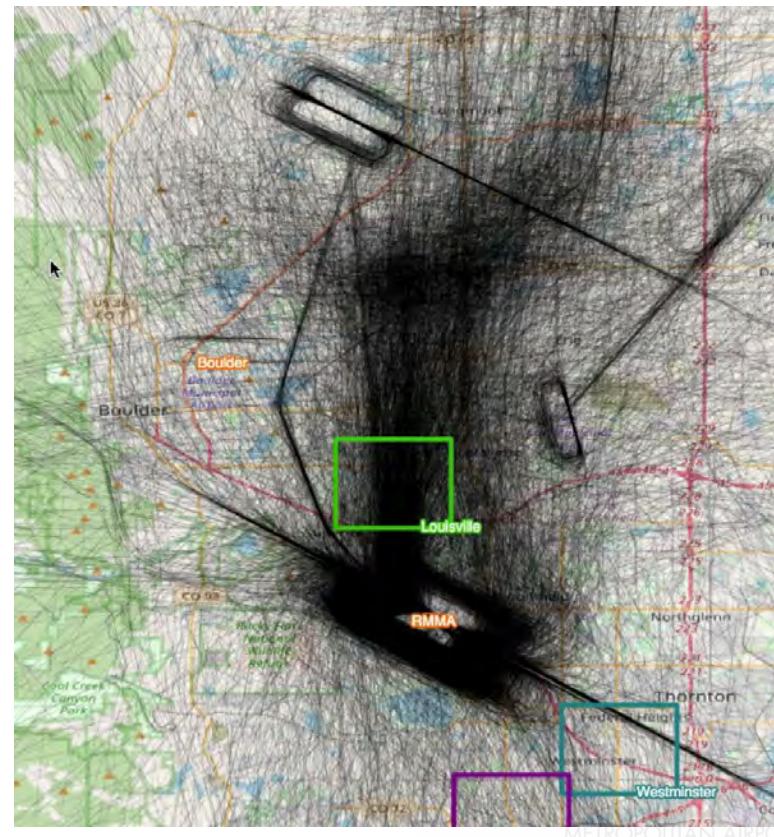
# Congested Airspace

- RMMA is located 20 miles west of Denver International Airport.
- DEN's airspace lies east of RMMA and above RMMA, limiting the flexibility air traffic controllers have when managing the airspace around RMMA
- There is also terrain to the west, which further limits use of the airspace.
- This results in most traffic approaching from and departing to the north or south.



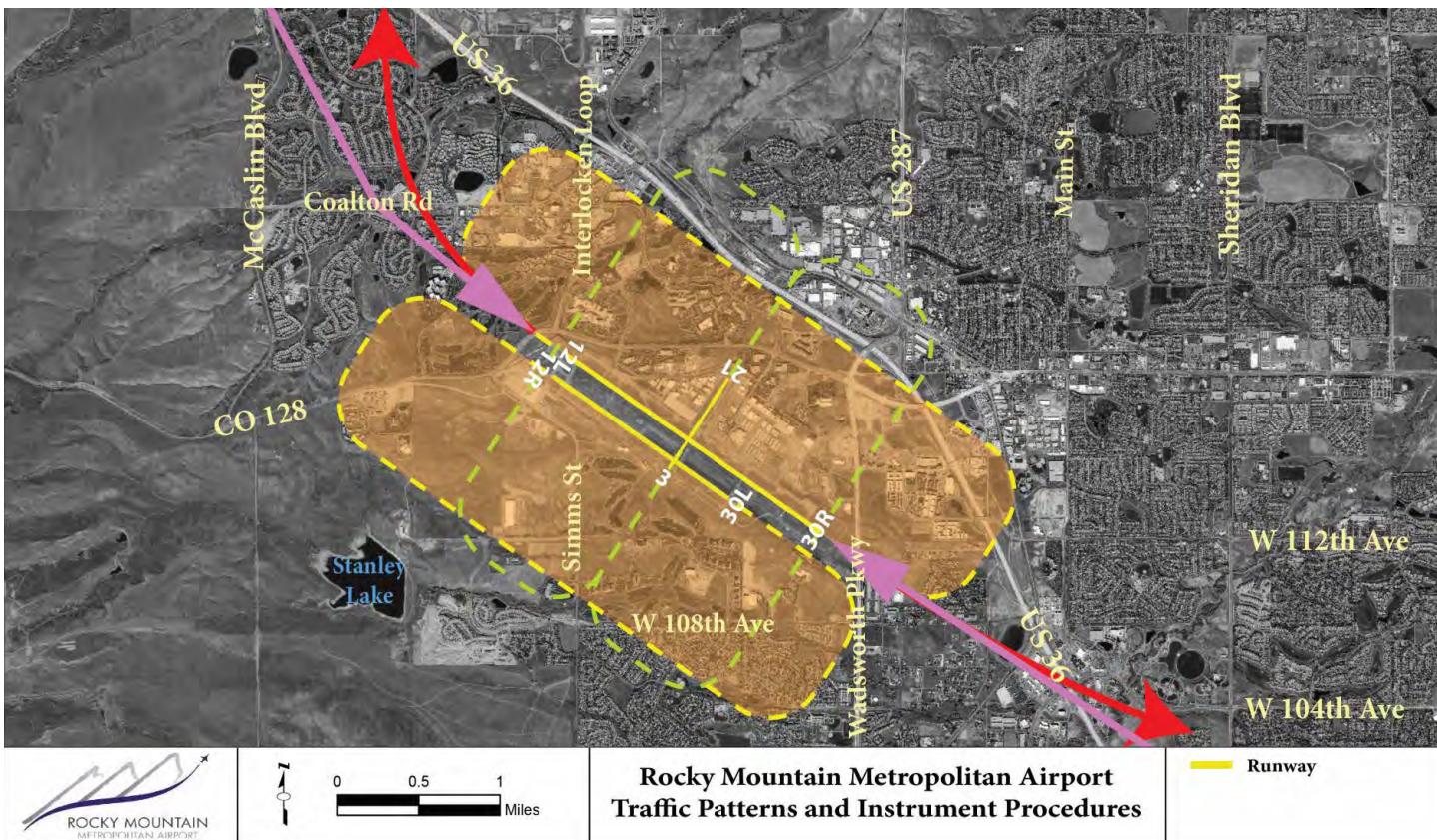
# Flight Activity

- Flight activity during September 2020.
- Due to limited use of airspace, the majority of flights go north over Superior and Louisville.

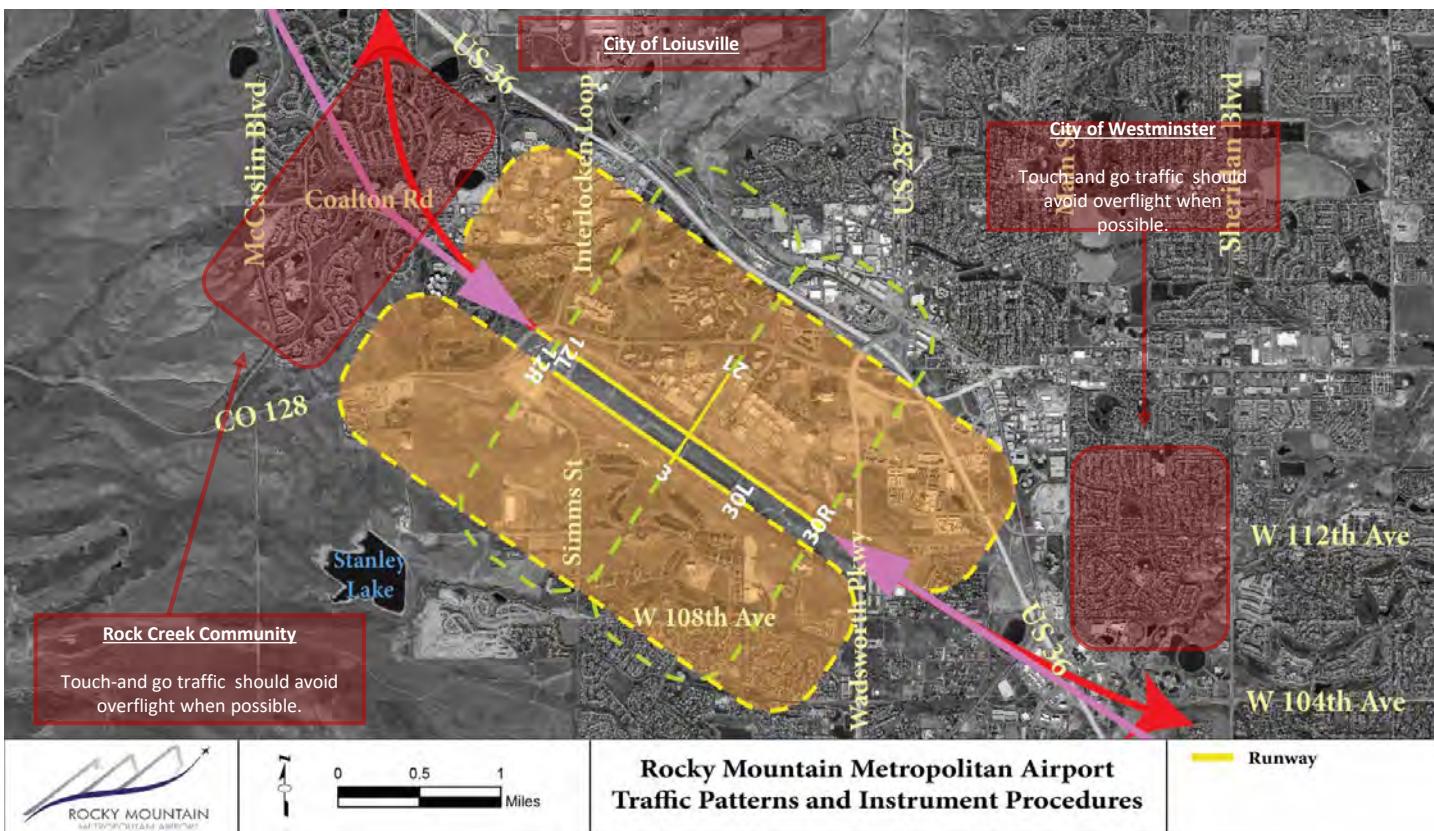




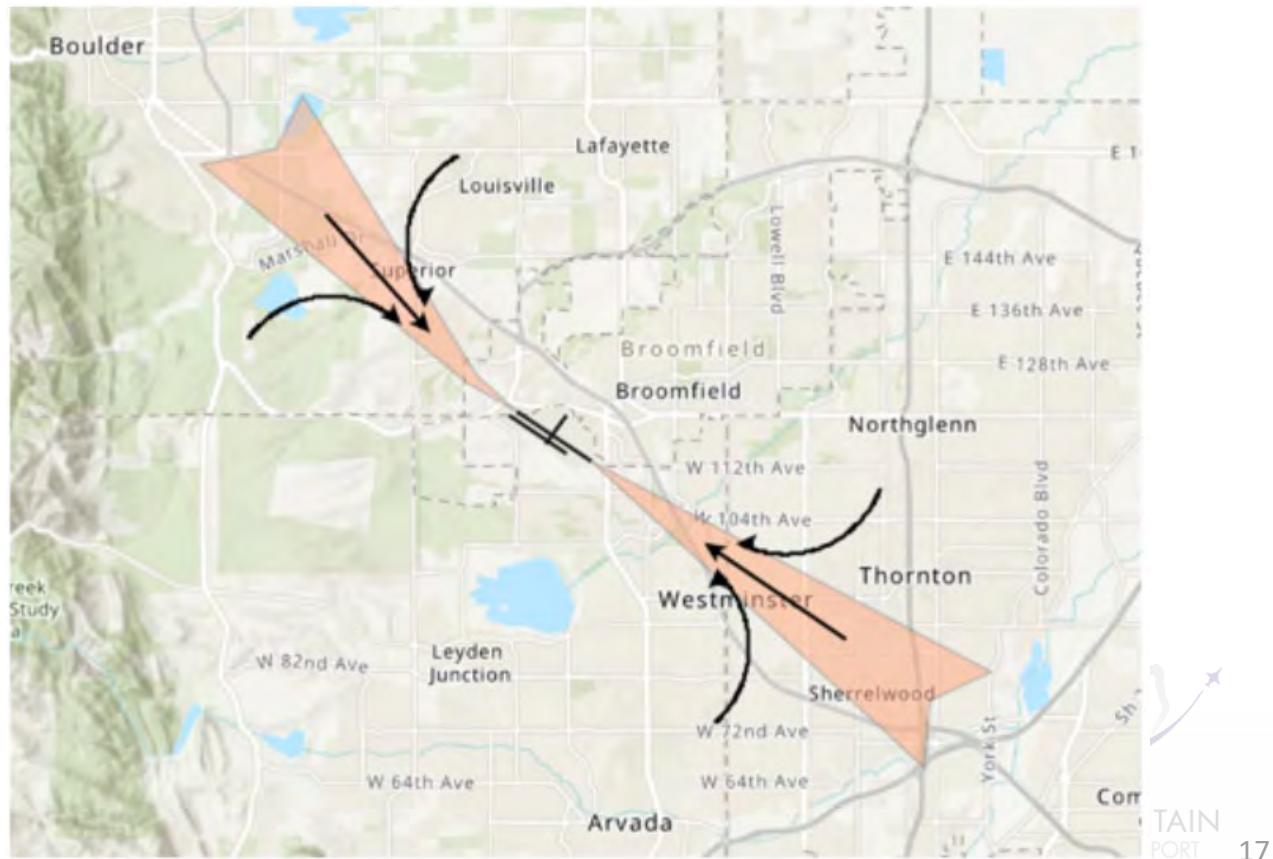
# Airport Traffic Patterns



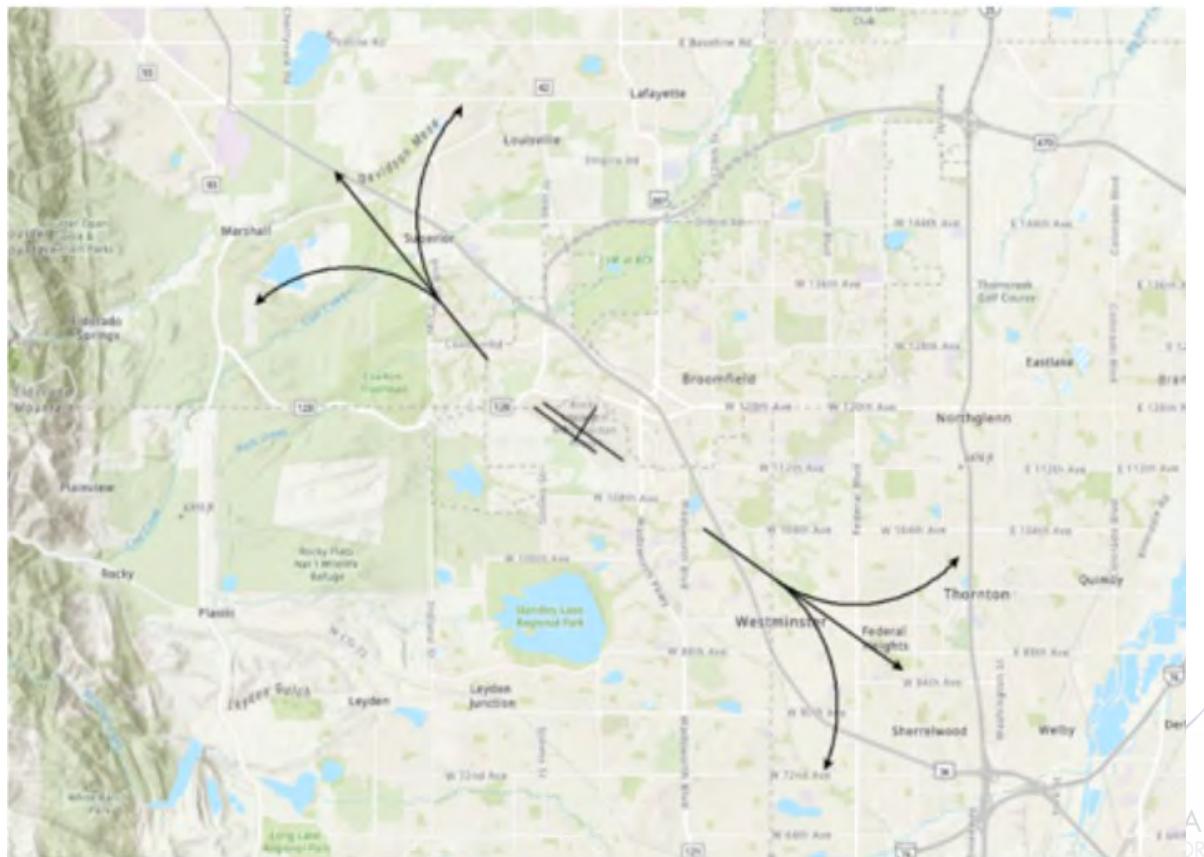
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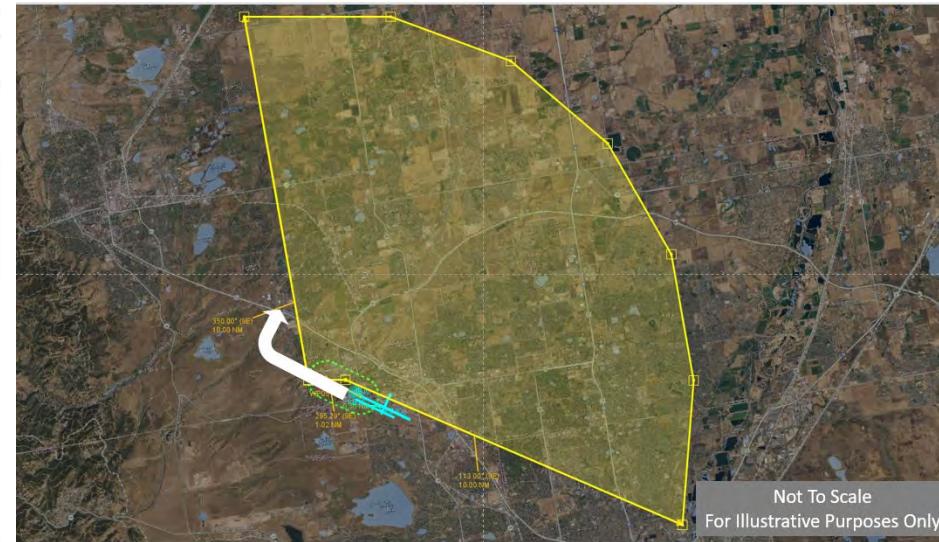
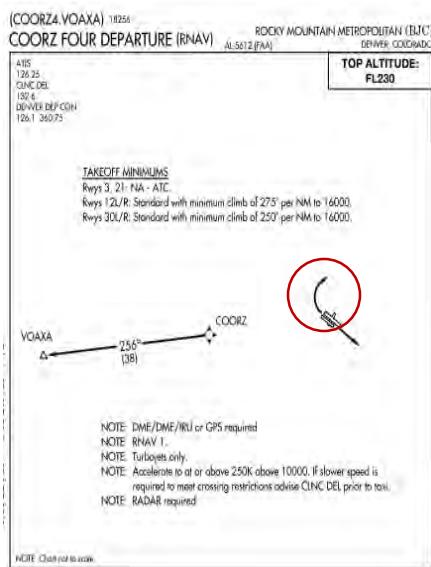
# Generalized VFR Approach Paths



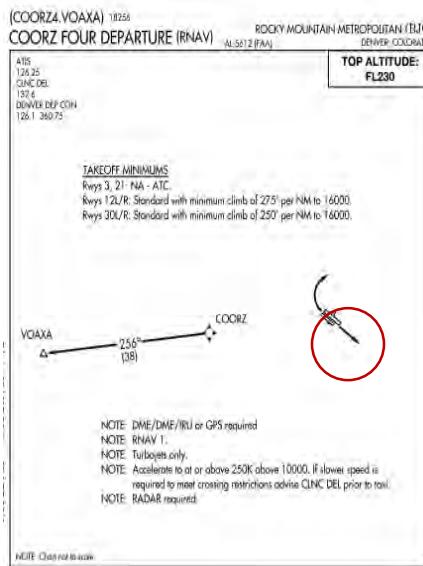
# Generalized VFR Departure Paths



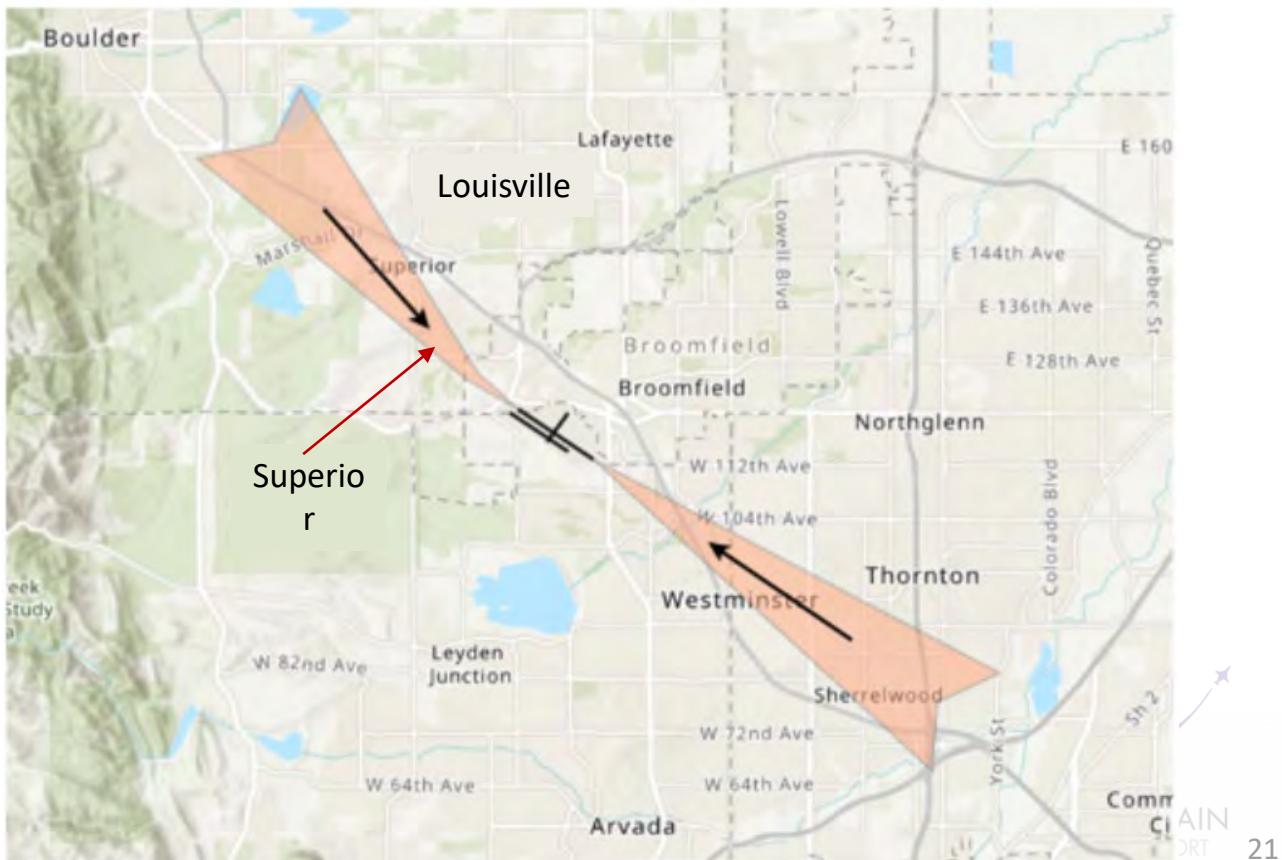
# Standard Instrument Departures – 30L/R



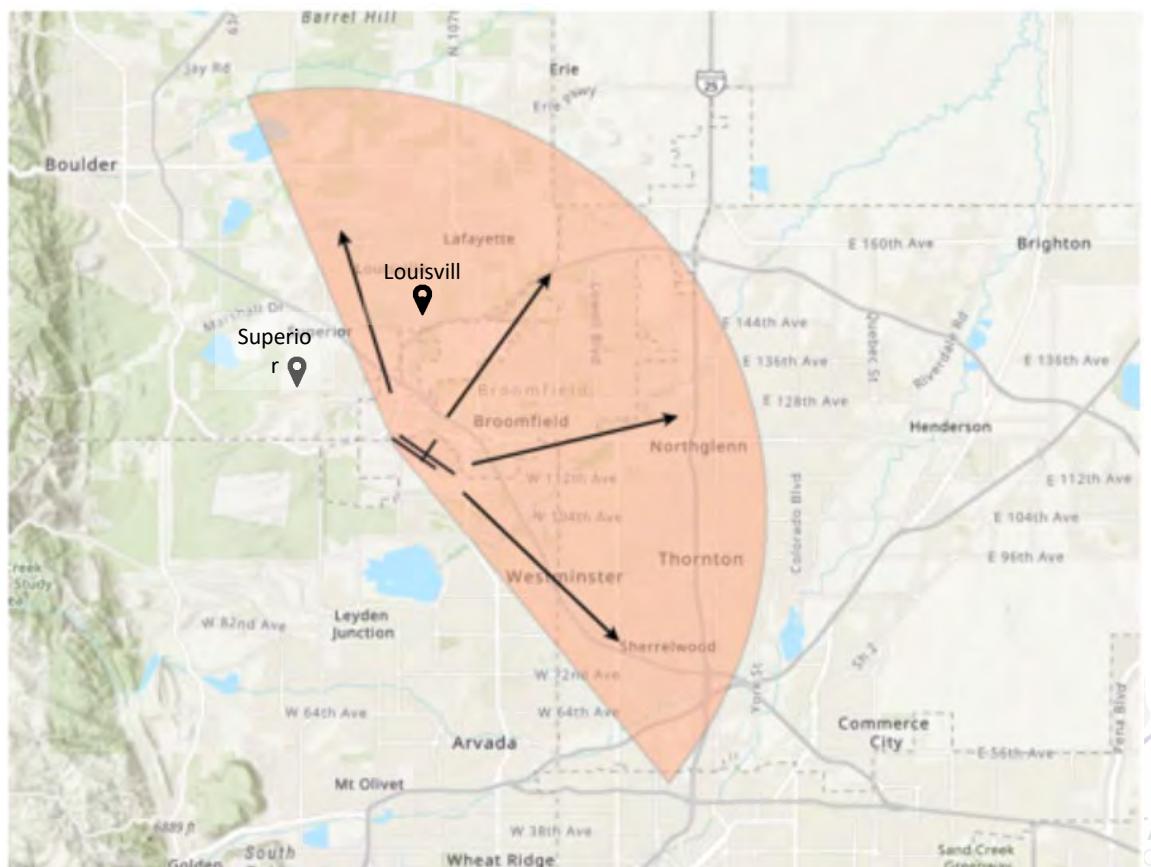
# Standard Instrument Departures – 12L/R



# Generalized IFR Approach Paths



# Generalized IFR Departure Paths



# Typical Routes to/from the North Practice Area





## Fly Quiet Program - Overview

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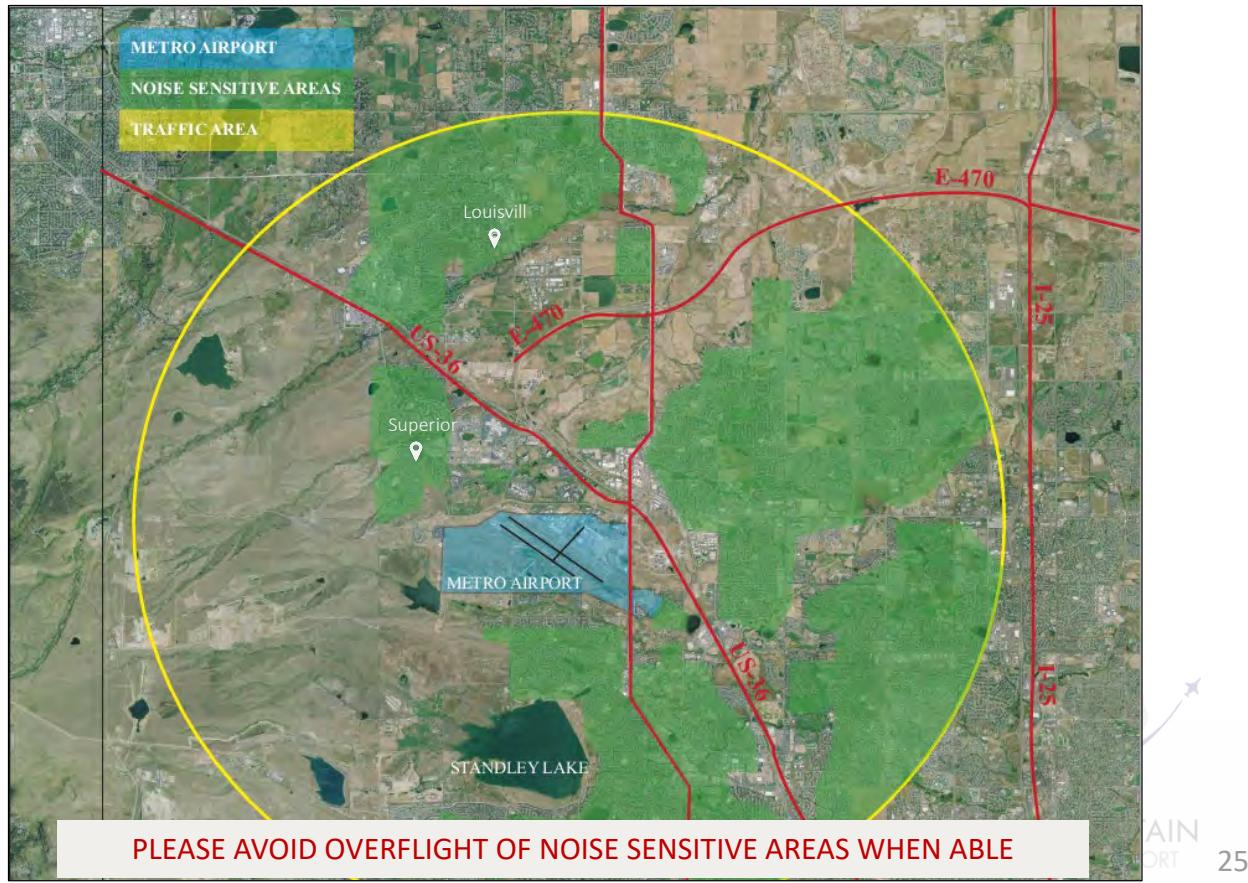
- RMMA is surrounded by residential communities. As operations at RMMA have increased over the past few years, aircraft overflights and noise are a growing concern for residents.
- The RMMA Fly Quiet Program includes recommended procedures and practices to help minimize the negative impacts of aircraft operations on surrounding communities.

---

**Note:** The RMMA Fly Quiet Program includes recommended procedures and practices intended to reduce aircraft noise impacts in surrounding communities. Program recommendations are not intended to supersede the responsibility of the pilot-in-command for compliance with all applicable Federal Aviation Regulations, air traffic control instructions, and aircraft operating parameters included in the Aircraft Operations Manual.



# Noise Sensitive Areas



# Fly Quiet Program – Recommended Practices

---

**On take-off, climb out using best angle of climb (Vx).**

This enables the aircraft to climb as high as possible before leaving the airport perimeter and reduce noise impacts.

**Reduce RPM when possible.**

Lower propeller speeds produce less noise.

**Fly standard or higher glide path. Remain at or above the VASI.**

Shallow approaches increase noise exposure to neighbors below.

**Overfly major road corridors and/or open space when able.**

When possible, avoid overflight of residential neighborhoods.



## Fly Quiet Program – Recommended Practices

---

**Runway 30R is designated the primary, calm-wind runway**

Westerly prevailing winds favor 30 the majority of the time.

**No intersection departures**

Using the full length of the runway is both safer and helps gain more altitude before leaving the airport perimeter.

**Maintain pattern altitude of 6,500' for single engine aircraft and 7,000' for twins/turboprops/jets**

**Engine maintenance run-ups are prohibited between 10:00 p.m. and 6:00 a.m. except in an emergency**

**RMMA Flight Schools discourage departures after 10:00 PM**

This is a voluntary effort to reduce nighttime noise.

# Industry Recommendations





# Cessna Aircraft

*Increased emphasis on improving quality of our environment requires renewed effort on the part of all pilots to minimize the effect of airplane noise on the public.*

*We, as pilots, can demonstrate our concern for the environmental improvement, by application of the following suggested procedures, and thereby tend to build public support for aviation:*

- *When able, pilots operating under VFR conditions over recreational and park areas, and other noise-sensitive areas should make every effort to fly not less than 2000 feet above the surface, conditions permitting.*
- *During departure from or on approach to an airport, climb after take-off and descent for landing should be made so as to avoid prolonged flight at low altitude near noise-sensitive areas.*

*Adapted from from Cessna 172N Pilot Operating Handbook, 1978*





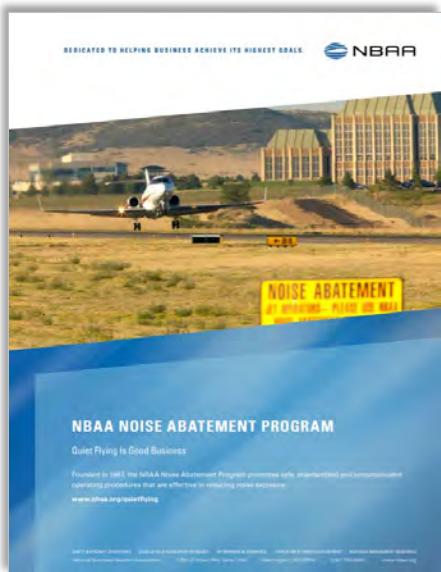
# NBAA Noise Abatement Program

- Recognizing the importance of helping airports remain good neighbors, the National Aviation Business Association created their noise abatement program in 1967.
- Encouraging aircraft operators to understand the impacts aviation can have on communities and the impact community opposition can have on aviation.
- Recommendations for flight crews include:
  - Be aware of the destination airports' noise abatement programs
  - Utilize their company's recommended departure/arrival profiles or those recommended by the aircraft manufacturer
  - When airport or aircraft-specific procedures are unavailable, NBAA provides recommended noise abatement procedures suitable for any aircraft type and airport operating environment.



# NBAA Noise Abatement Program

- The NBAA Noise Abatement Program also encourages collaboration, education, and outreach among flight crews, airport operators, and air traffic control facilities.
- “Effective aircraft noise management requires a collaborative effort between aircraft operators, ATC and airport operators. Minimizing noise impacts is in the best interest of all stakeholders.”



*For more information:* <http://www.nbaa.org/quietflying>





# AOPA Noise Awareness Steps

- Flying between 10 p.m. and 6 a.m. should be avoided whenever possible.
- If practical, avoid noise-sensitive areas. Make every effort to fly at or above 2,000 feet over such areas when overflight cannot be avoided.
- 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.
- 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 the lowest practical RPM setting will reduce aircraft noise substantially.
- On takeoff, gain altitude as quickly as possible without compromising safety. Begin takeoffs at the start of a runway, not at an intersection.
- Use the PAPI. This will indicate a safe glide path and allow a smooth, quiet descent to the runway.
- Familiarize yourself and comply with airport noise abatement procedures.

# AOPA Noise Awareness Steps (Cont'd)

- 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 50 feet 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.
- If possible, do not adjust the propeller control for flat pitch on the downwind leg; instead, wait until short final. This practice not only provides a quieter approach, but 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.
- Perform stalls, spins, and other practice maneuvers over uninhabited terrain.

*Note: These are general recommendations. Some may not be advisable for every aircraft in every situation. No noise reduction procedure should be allowed to compromise flight safety.*

# Other Recommendations and Best Practices

- Familiarize yourself with the aircraft-specific noise abatement procedures published by the aircraft manufacturer. These are typically included in the Pilot Operating Handbook.
- When departing on Runways 12R-30L and 12L-30R, initiate crosswind turn as soon as able.
- When transitioning to/from practice areas, maintain the highest possible altitude over residential and other noise-sensitive areas.
- Keep crosswind and base-turns as close to the airport as possible.
- Minimize the use of reverse thrust when able. Use the full runway for landing.
- Avoid touch and go activity between 10 PM and 7 AM.



# Local and Regional Collaboration



# Collaboration with Local Partners (Industry)

**All stakeholders play a role in helping RMMA remain a good neighbor.**

Industry collaborations include working with airport tenants, business, flight schools, and users to encourage awareness and voluntary compliance with the RMMA Fly Quiet operational recommendations. Industry engagement includes:

- Flight School and Student Training
- RMMA Air Traffic Control Tower Briefings
- RMMA Tenant Briefings
- Collaboration with National Business Aviation Association, Colorado Aviation Business Association, Aircraft Owners and Pilots Association and Colorado Pilots Association
- RMMA Aviation Noise Task Force
- Collaboration with other airports around the region



# Collaboration with Local Partners (Community)

**All stakeholders play a role in helping RMMA remain a good neighbor.**

Community and municipal collaborations include:

- Engaging residents to answer questions and encourage awareness of flight operations, flight patterns, and aircraft noise in the area.
- Encouraging municipal and county governments and land-use planning authorities to encourage development that is compatible with existing and future flight patterns and aircraft noise exposure.
- Ongoing collaboration with local county and municipal governments to understand and address resident concerns.
- Establishment of Airport Noise Roundtable to encourage collaboration between Jefferson County (Airport Operator) and surrounding towns, cities, and counties.
- Working with real estate agents and prospective home-buyers and residents to ensure an awareness of potential aircraft noise concerns.

# Summary

Aircraft noise is the greatest community impact for residents living near the airport.

Aircraft noise is a growing concern nationwide, resulting in increasing community annoyance and opposition to aviation.

With your help, we can reduce community impacts, while maintaining safe operations.

Please help RMMA remain a good neighbor and member of the regional community!





# THANK YOU!

*Your support of our noise abatement efforts is appreciated.*

□ (303) 271-4874

✉ info@flyrmma.com

🌐 <https://www.jeffco.us/airport>



INDUSTRY

Air Traffic Control



## Who was here first...

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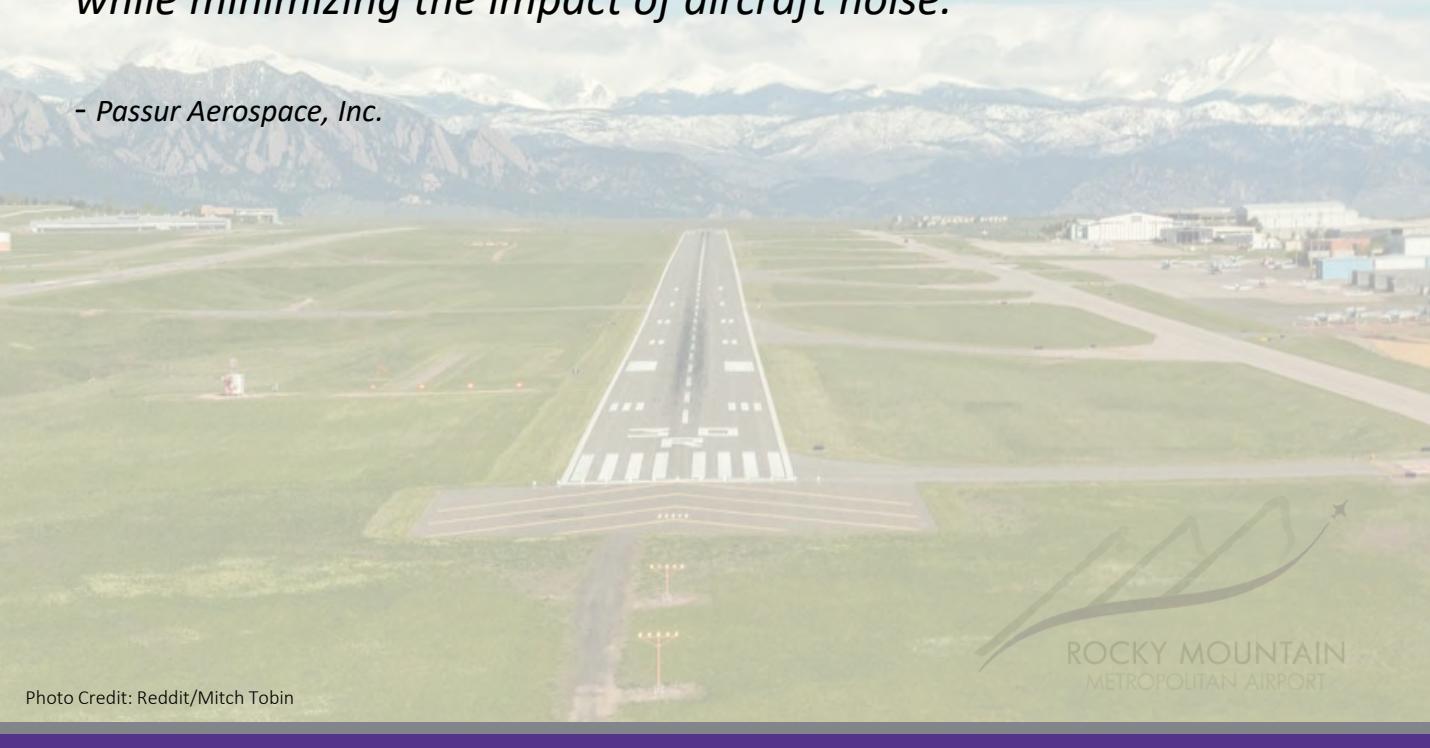




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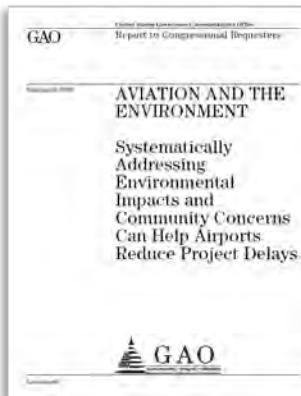
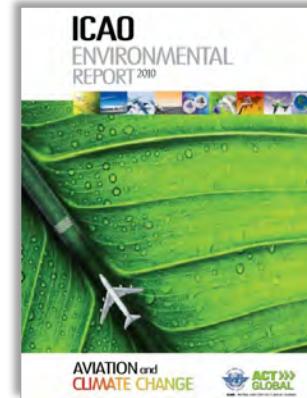




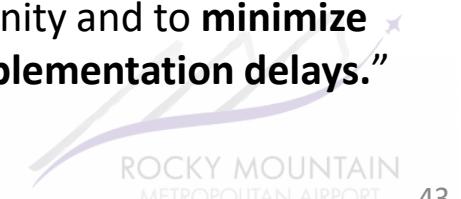
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## Noise Complaints



*Consistent growth in both aircraft operations and noise complaints.*





## Noise Complaints – By Community

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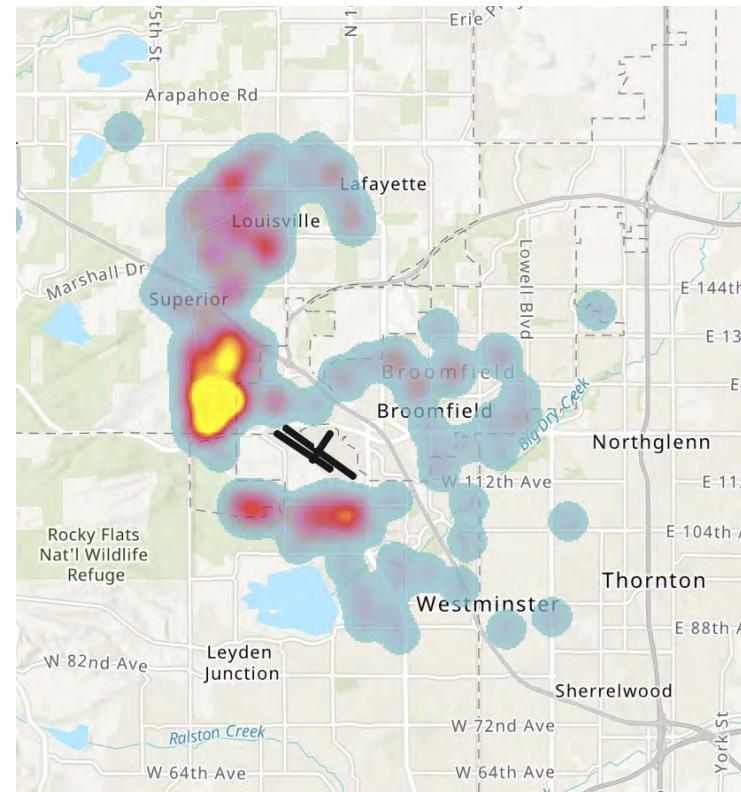
METROPOLITAN AIRPORT

46



## Complaints by Location (2019)

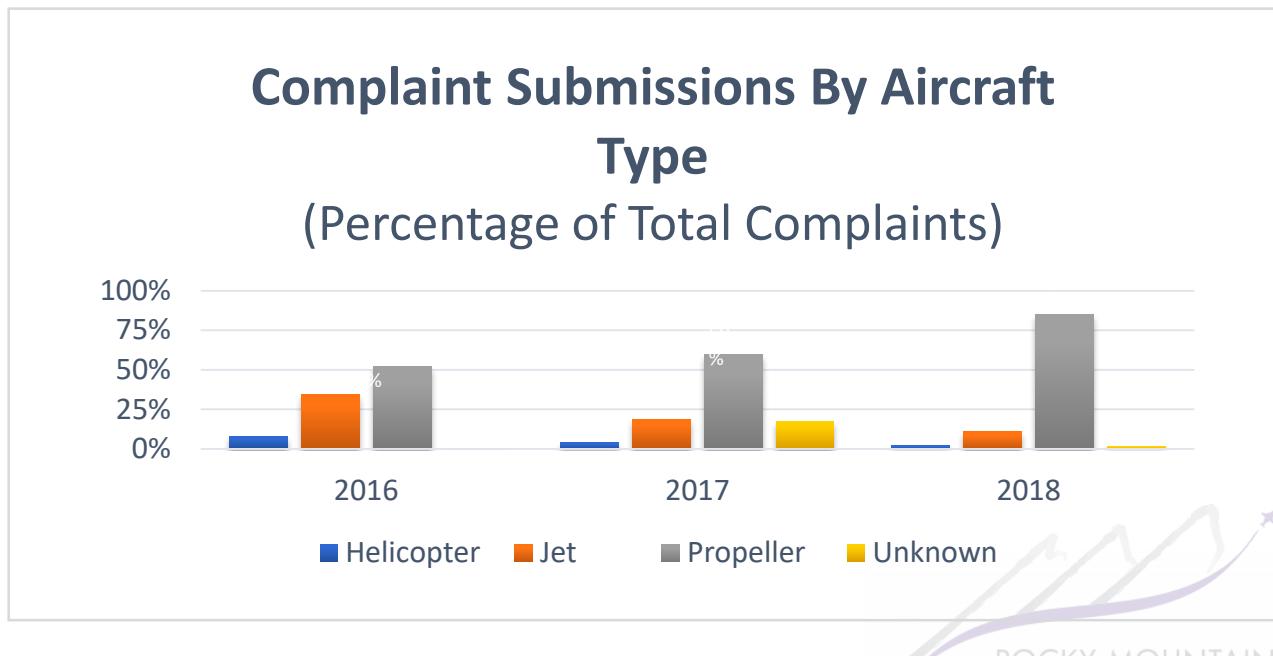
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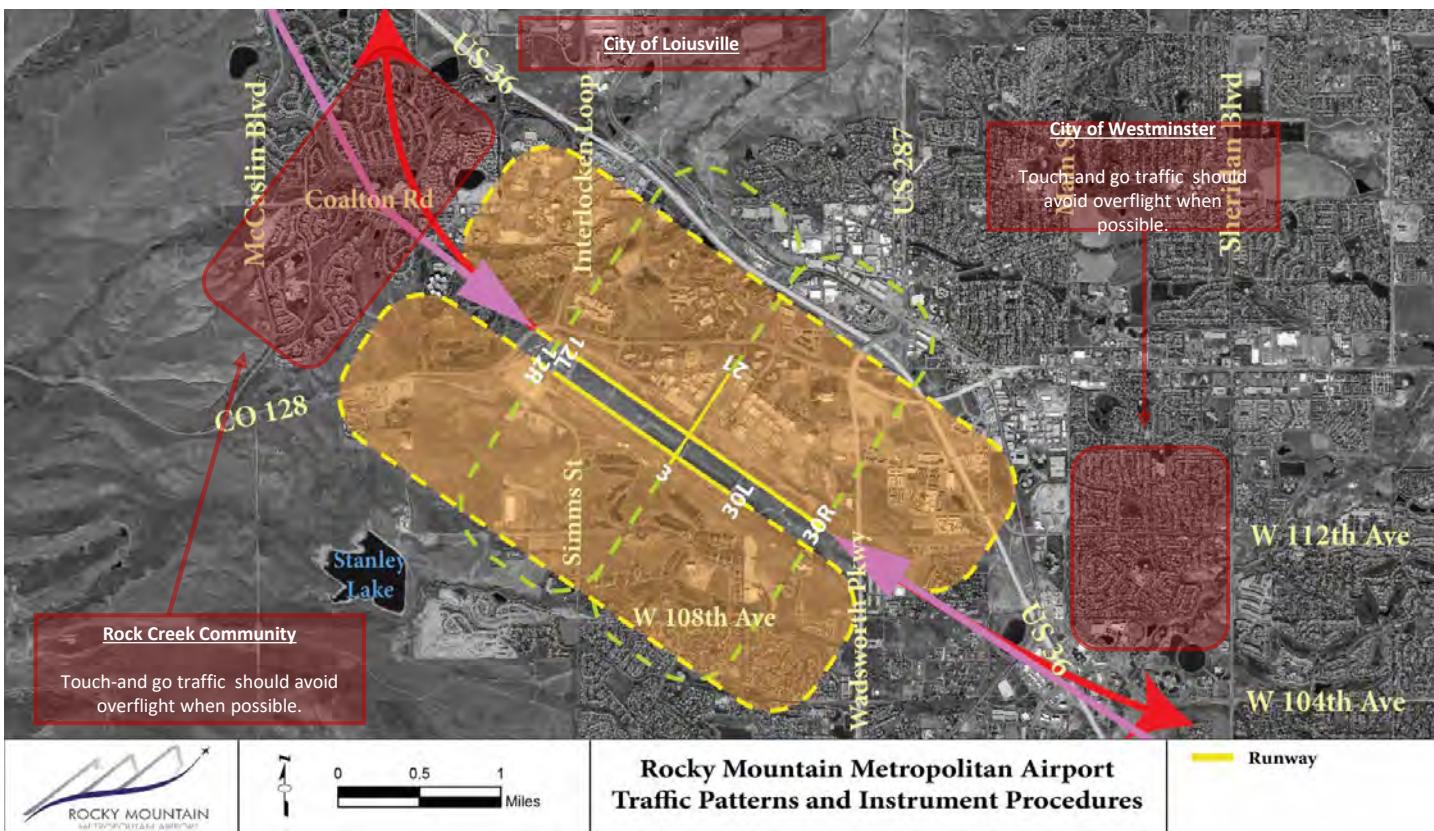


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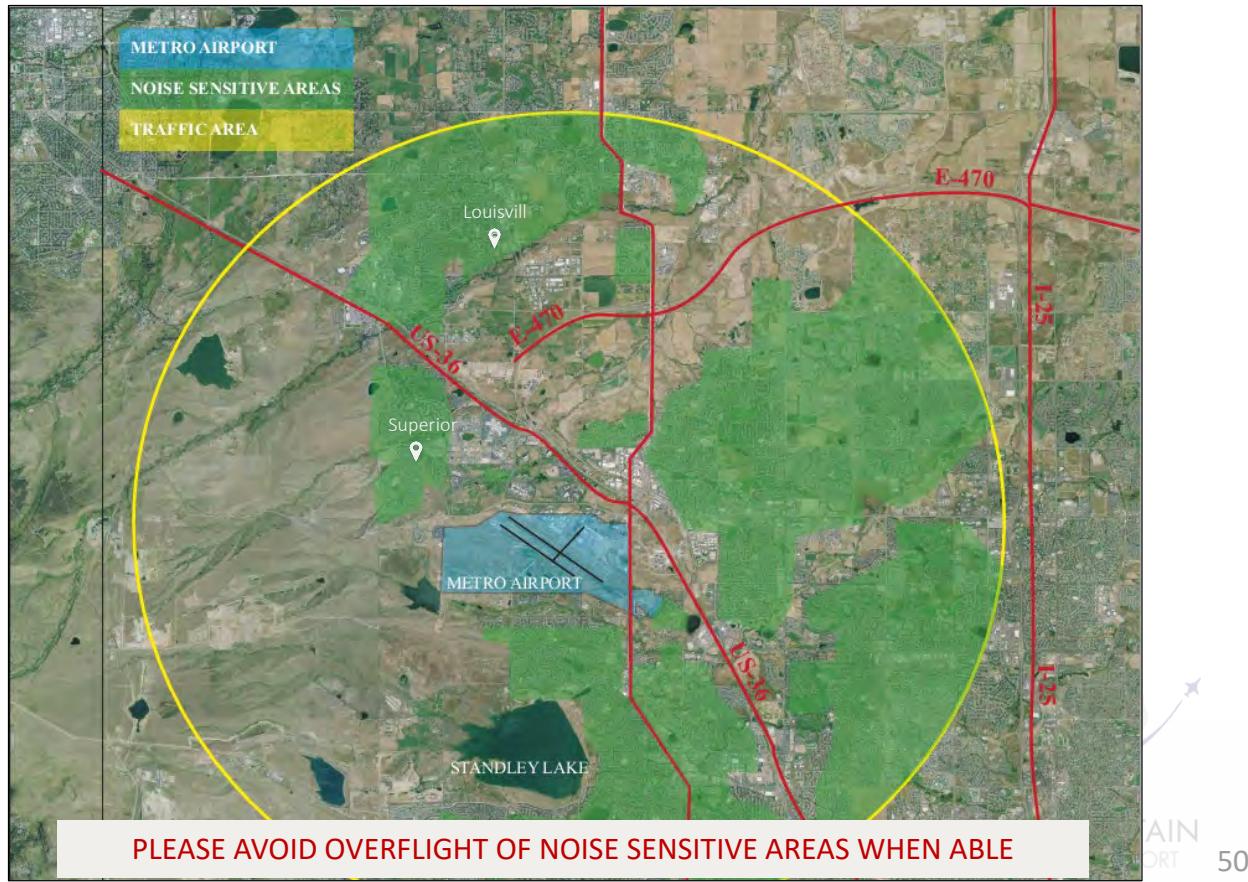


# Airport Traffic Patterns





# Noise Sensitive Areas



## Overview of the RMMA Fly Quiet Program



51



## Fly Quiet Program - Overview

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*Adapted from from Cessna 172N Pilot Operating Handbook, 1978*





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- On takeoff, gain altitude as quickly as possible without compromising safety. Begin takeoffs at the start of a runway, not at an intersection.
- Use the PAPI. This will indicate a safe glide path and allow a smooth, quiet descent to the runway.
- Familiarize yourself and comply with airport noise abatement procedures.

# Other Recommendations and Best Practices

- Familiarize yourself with the aircraft-specific noise abatement procedures published by the aircraft manufacturer. These are typically included in the Pilot Operating Handbook.
- When departing on Runways 12R-30L and 12L-30R, initiate crosswind turn as soon as able.
- When transitioning to/from practice areas, maintain the highest possible altitude over residential and other noise-sensitive areas.
- Keep crosswind and base-turns as close to the airport as possible.
- Minimize the use of reverse thrust when able. Use the full runway for landing.
- Avoid touch and go activity between 10 PM and 7 AM.



# Local and Regional Collaboration



# Collaboration with Local Partners (Industry)

**All stakeholders play a role in helping RMMA remain a good neighbor.**

Industry collaborations include working with airport tenants, business, flight schools, and users to encourage awareness and voluntary compliance with the RMMA Fly Quiet operational recommendations. Industry engagement includes:

- Flight School and Student Training
- RMMA Air Traffic Control Tower Briefings
- RMMA Tenant Briefings
- Collaboration with National Business Aviation Association, Colorado Aviation Business Association, Aircraft Owners and Pilots Association and Colorado Pilots Association
- RMMA Aviation Noise Task Force
- Collaboration with other airports around the region



# Collaboration with Local Partners (Community)

**All stakeholders play a role in helping RMMA remain a good neighbor.**

Community and municipal collaborations include:

- Engaging residents to answer questions and encourage awareness of flight operations, flight patterns, and aircraft noise in the area.
- Encouraging municipal and county governments and land-use planning authorities to encourage development that is compatible with existing and future flight patterns and aircraft noise exposure.
- Ongoing collaboration with local county and municipal governments to understand and address resident concerns.
- Establishment of Airport Noise Roundtable to encourage collaboration between Jefferson County (Airport Operator) and surrounding towns, cities, and counties.
- Working with real estate agents and prospective home-buyers and residents to ensure an awareness of potential aircraft noise concerns.

# Summary

Aircraft noise is the greatest community impact for residents living near the airport.

Aircraft noise is a growing concern nationwide, resulting in increasing community annoyance and opposition to aviation.

With your help, we can reduce community impacts, while maintaining safe operations.

Please help RMMA remain a good neighbor and member of the regional community!





# THANK YOU!

*Your support of our noise abatement efforts is appreciated.*

□ (303) 271-4874

✉ info@flyrmma.com

🌐 <https://www.jeffco.us/airport>

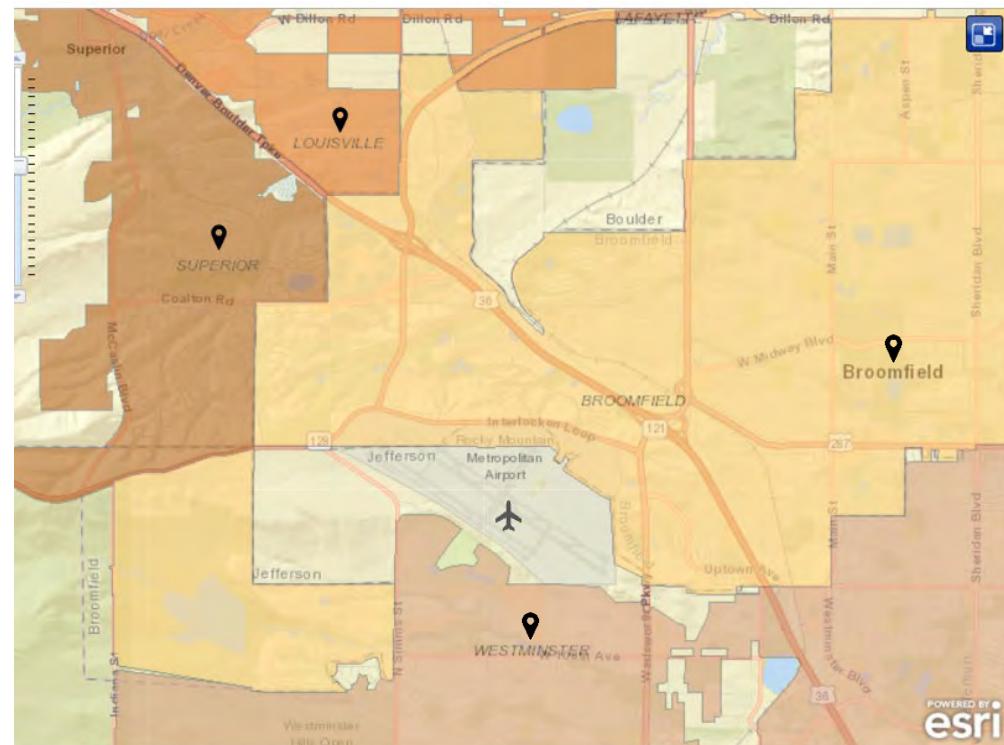


COMMUNITY

General Public

# Location

- RMMA is located on the northern boundary of Jefferson County
- RMMA is surrounded by cities and towns with noise-sensitive/residential areas including:
  - Broomfield to the north & east
  - Superior and Louisville to the northwest
  - Westminster to the south





# History, Governance, and Role

- The airport opened in 1960.
- Owned and operated by Jefferson County.
  - Jefferson County is governed by a Board of County Commissioners which provides strategic direction to the airport.
  - An Airport Advisory Board provides input to the Commission and airport management.
- Originally named Jefferson County Airport. Name changed in 2006 to Rocky Mountain Metropolitan Airport (RMMA) reflecting the larger role in supporting the metro region.
- Officially, RMMA is classified as a “Reliever Airport”
  - As a reliever airport, RMMA’s role within the National Airspace System is to relieve congestion at Denver International by providing access for general aviation.
- RMMA provides local access to the National Airspace System. This includes flight training, business aviation, emergency services, and staging for forest firefighting operations.

# Airport Operations and Noise Complaints





## Noise Complaints



*Consistent growth in both aircraft operations and noise complaints.*





## Noise Complaints – By Community

*The majority of submissions consistently originate in Superior and primarily, the Rock Creek Community which is overflowed by closed-traffic operations and touch-and-goes.*

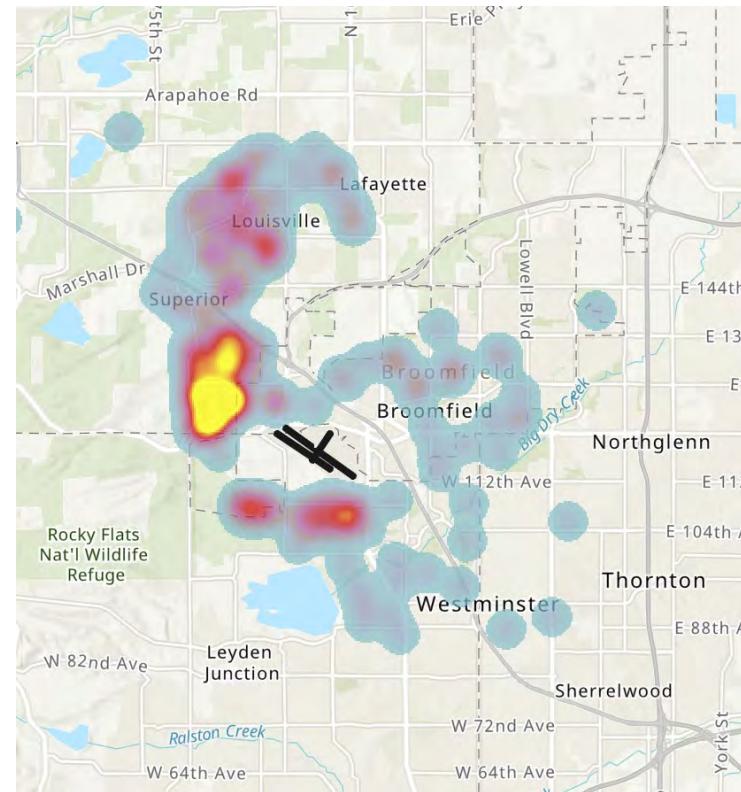


METROPOLITAN AIRPORT

70

## Complaints by Location (2019)

- *The majority of complaints (year over year) originate in locations adjacent to runway ends. (Portions of Superior and Westminster)*
- *Complaints north of airport (around Louisville) primarily associated with overflights to/from the North Practice Area*





# What Happens If I Call with a Concern or Complaint?

1. Noise complaint/question/concern is submitted.
2. Submission is reviewed by staff.
3. All submissions are recorded in complaint database.
4. All submissions are investigated.
5. If the investigation results in identification of a violation of FAA regulations or deviation from RMMA voluntary noise abatement program recommendations, the aircraft operator (or airport tenant/flight school) may be notified.
6. If requested, a response is provided.



*Note: Complaints with incomplete information, profanity, harassment, etc., are not logged.*

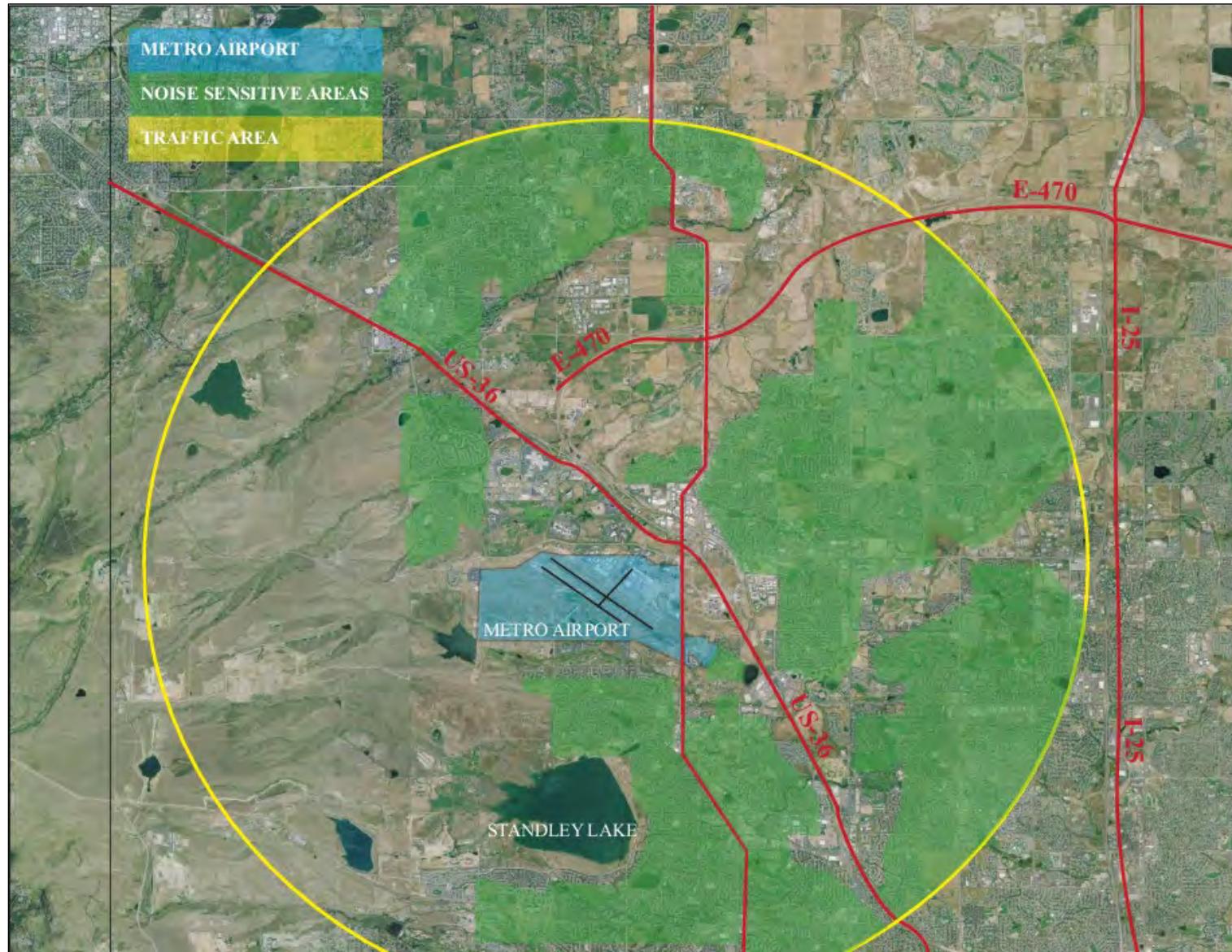


# Operations and Airspace





# Noise Sensitive Areas





# Congested Airspace

- RMMA is located 20 miles west of Denver International Airport.
- DEN's airspace lies east of RMMA and above RMMA, limiting the flexibility air traffic controllers have when managing the airspace around RMMA
- There is also terrain to the west, which further limits use of the airspace.
- This results in most traffic approaching from and departing to the north or south.



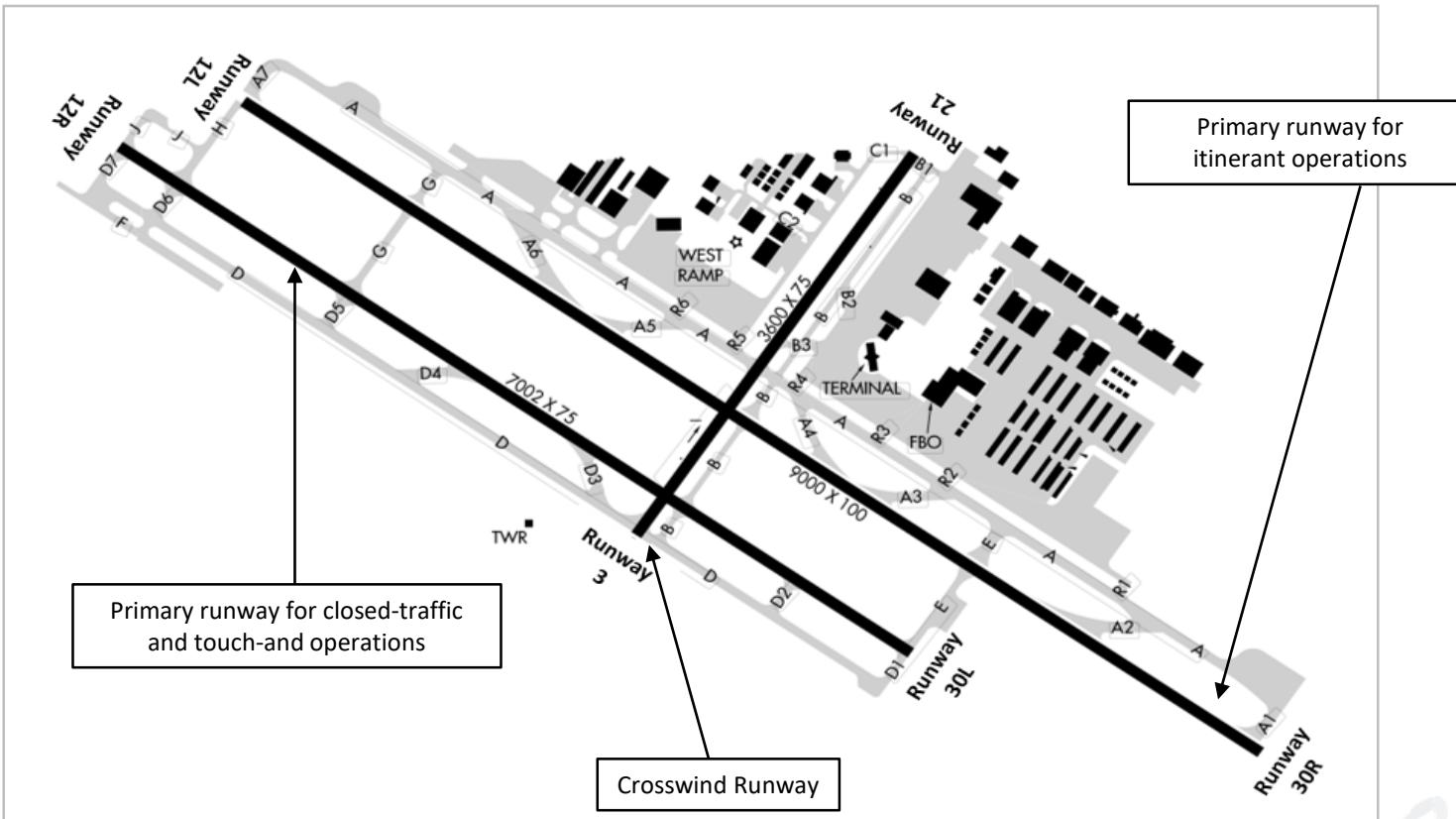
ROCKY MOUNTAIN  
METROPOLITAN AIRPORT

# Airport Operations 101



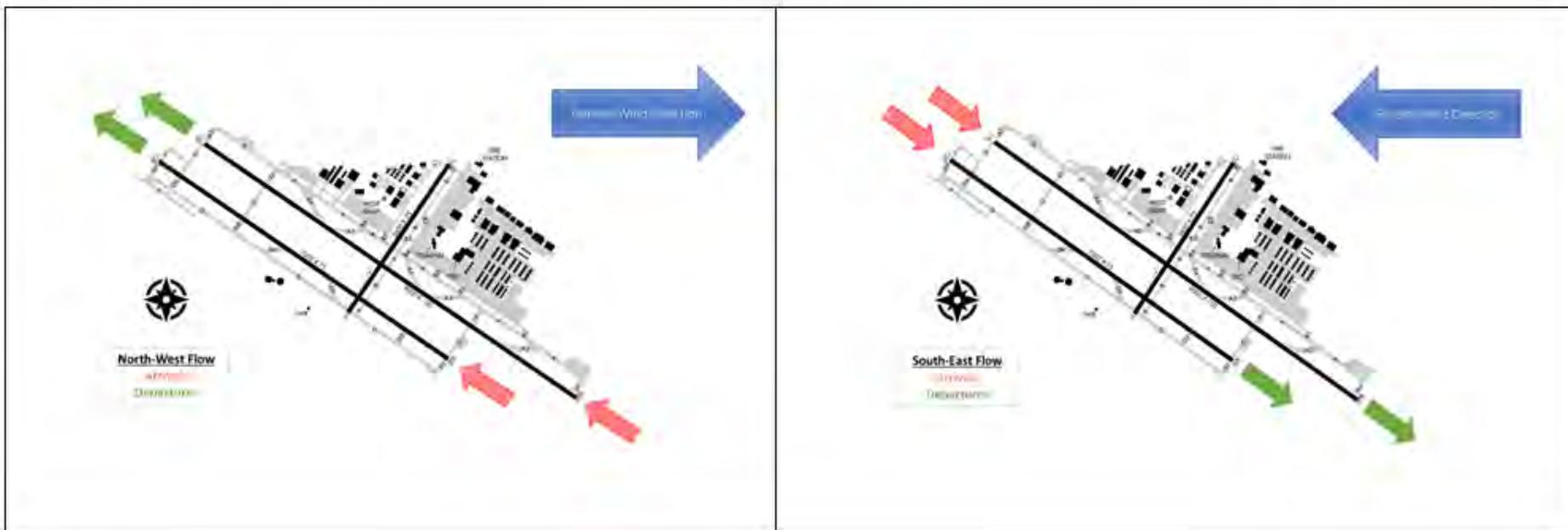


# Airport Layout



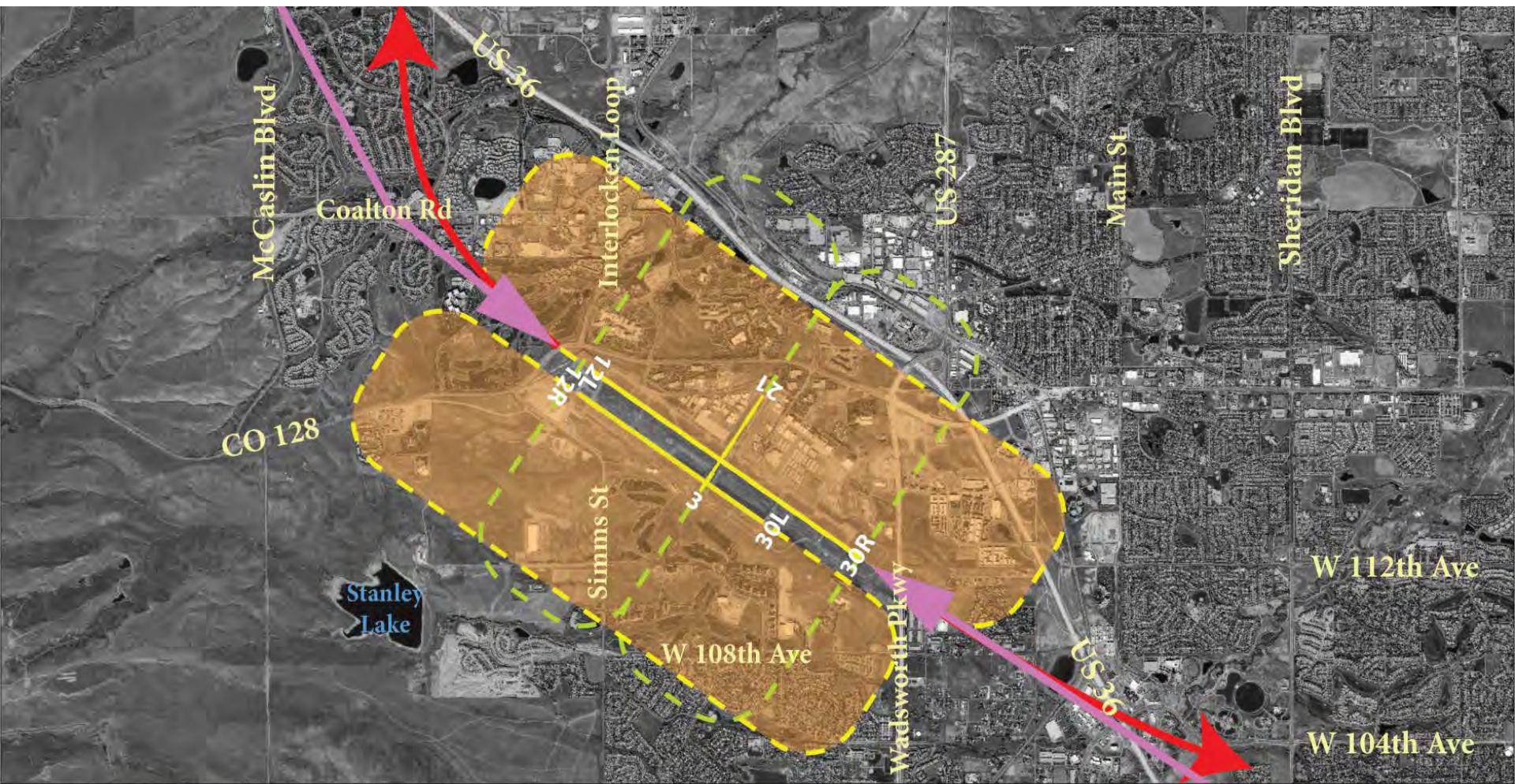
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# Operational Flows





# Airport Traffic Patterns

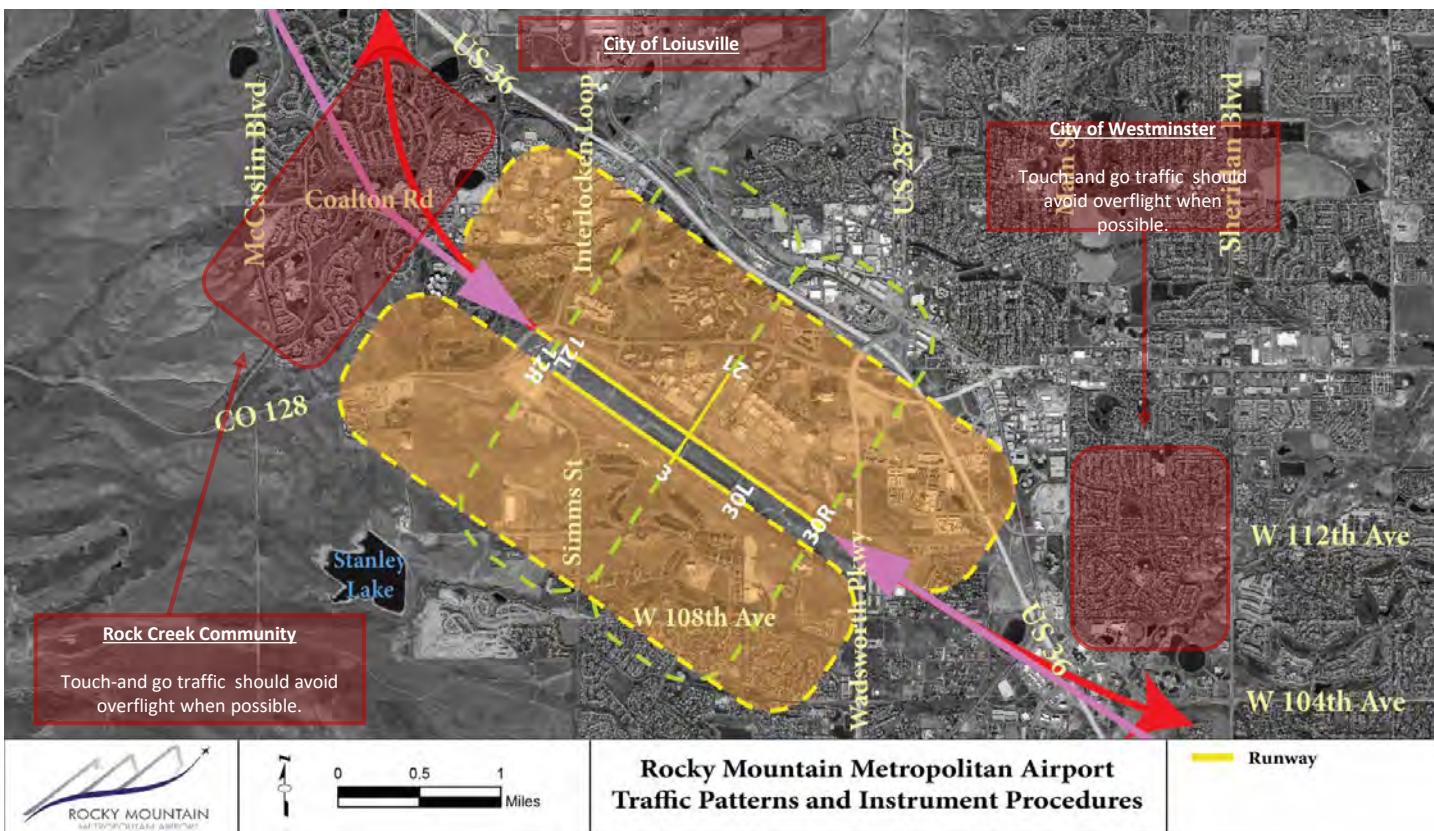


0 0.5 1  
Miles

**Rocky Mountain Metropolitan Airport  
Traffic Patterns and Instrument Procedures**

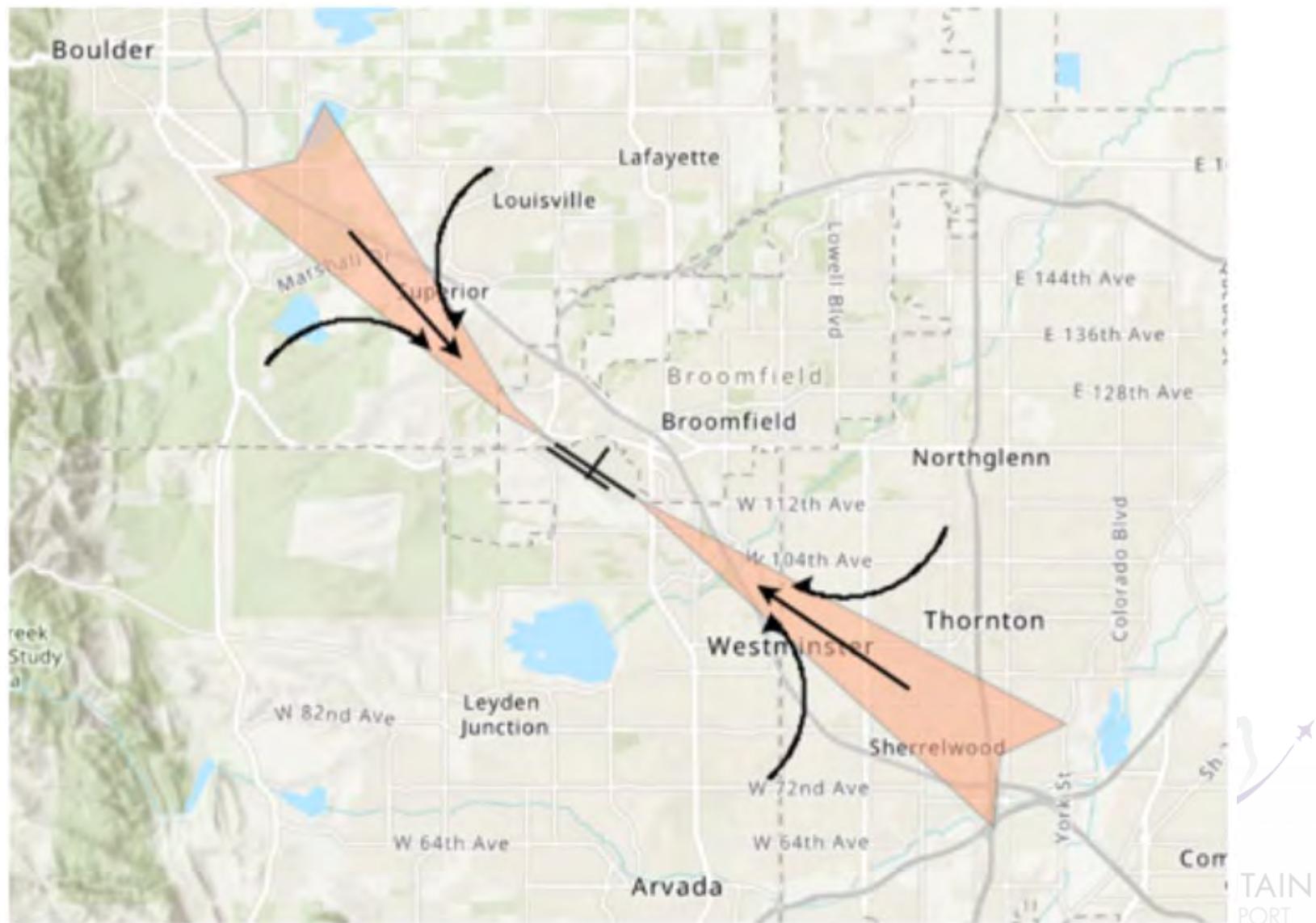
Runway

# Airport Traffic Patterns



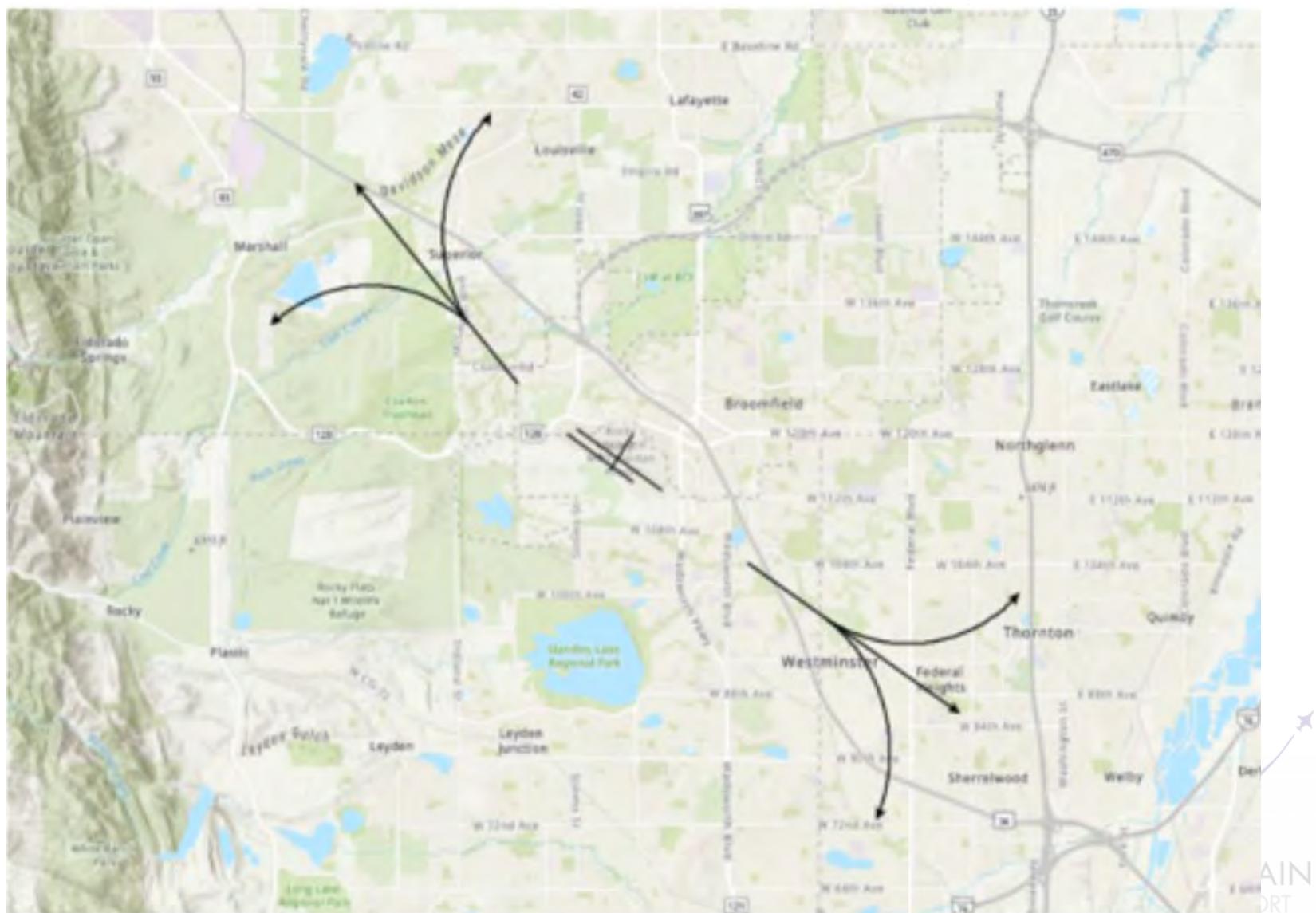


# Generalized VFR Approach Paths





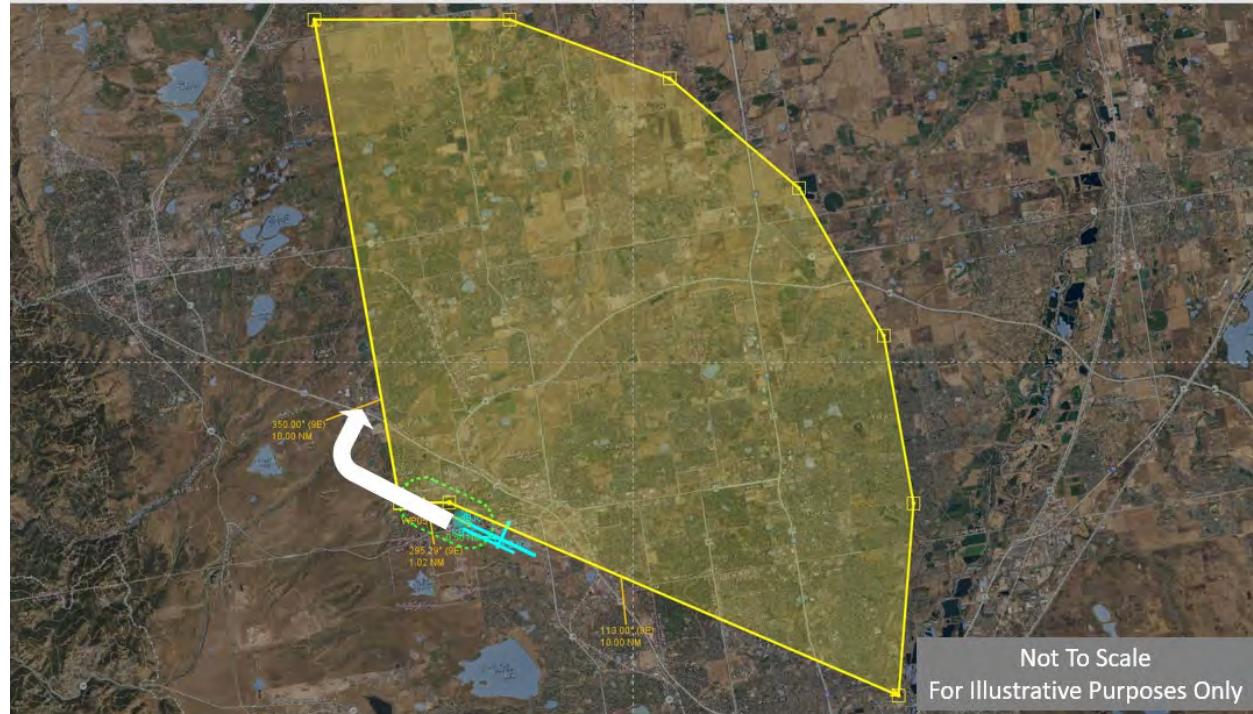
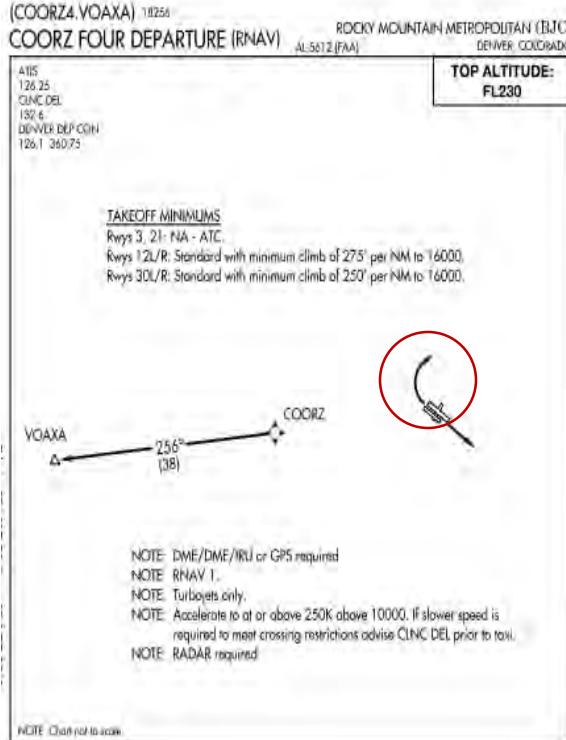
# Generalized VFR Departure Paths



AIR  
PORT



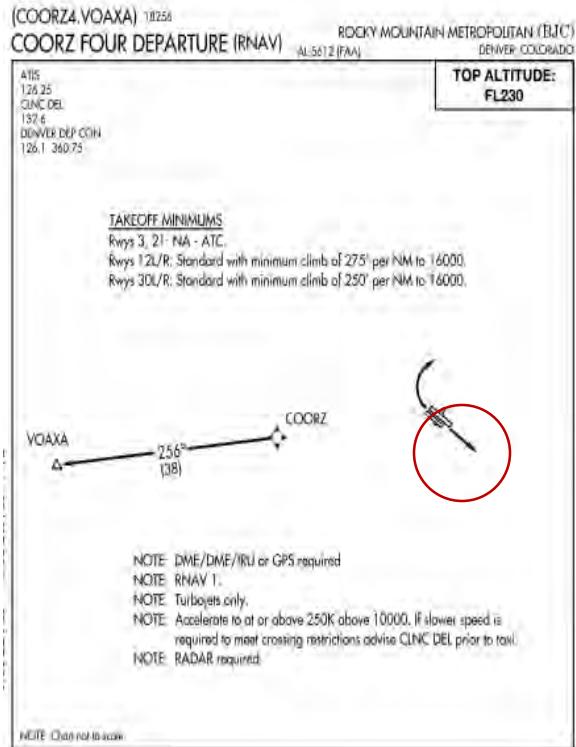
# Standard Instrument Departures – 30L/R



ROCKY MOUNTAIN  
METROPOLITAN AIRPORT



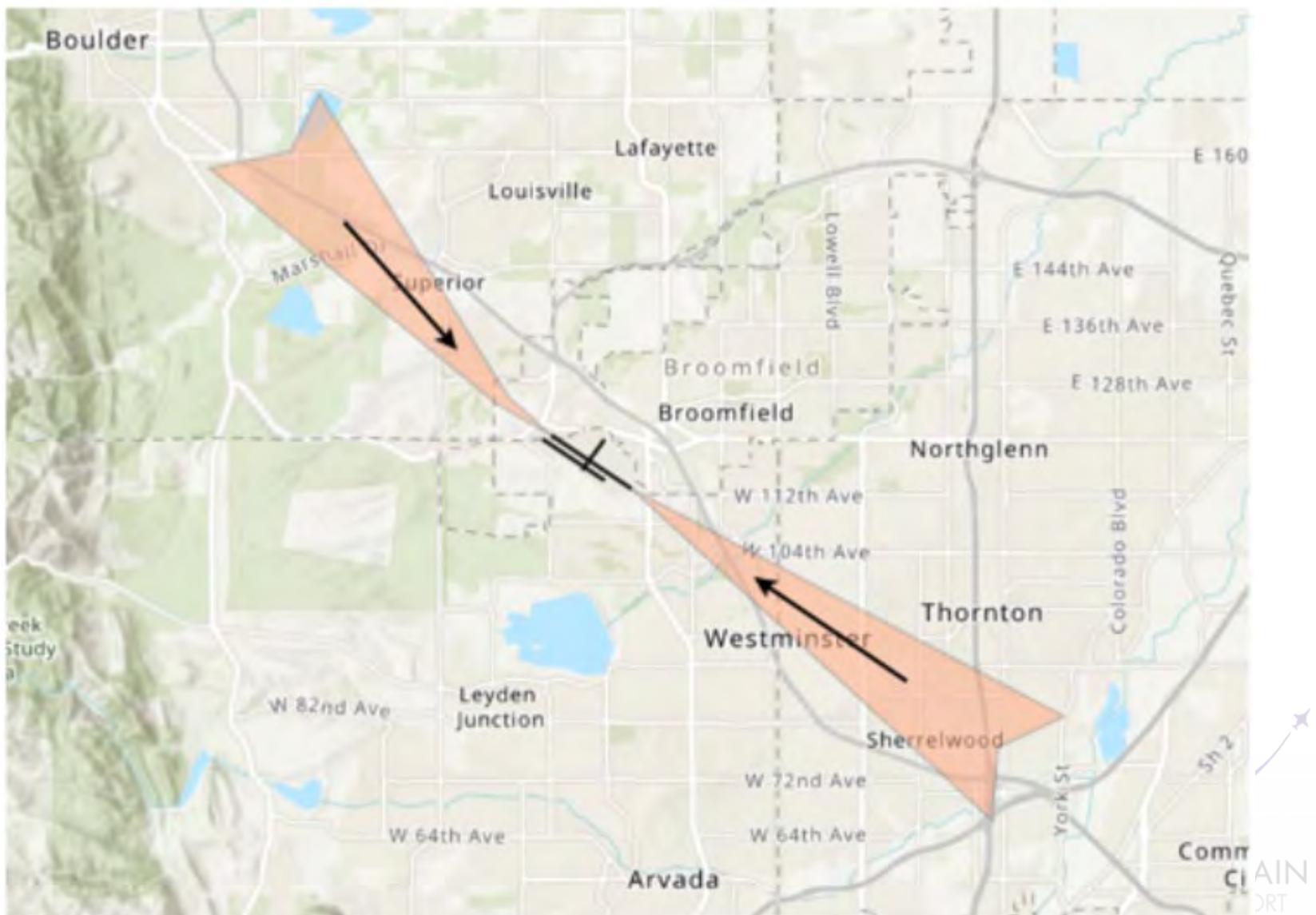
# Standard Instrument Departures – 12L/R



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METROPOLITAN AIRPORT

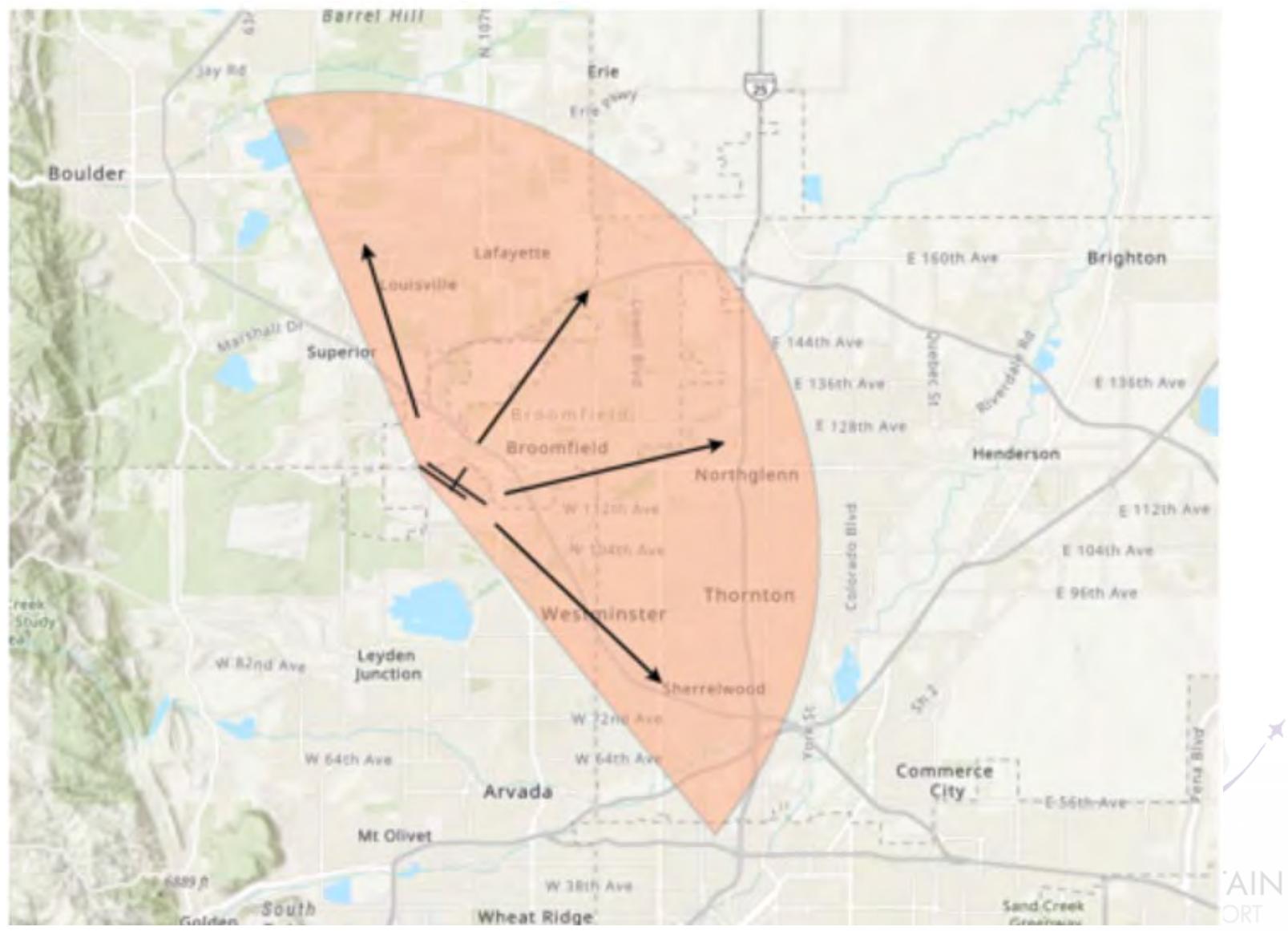


# Generalized IFR Approach Paths



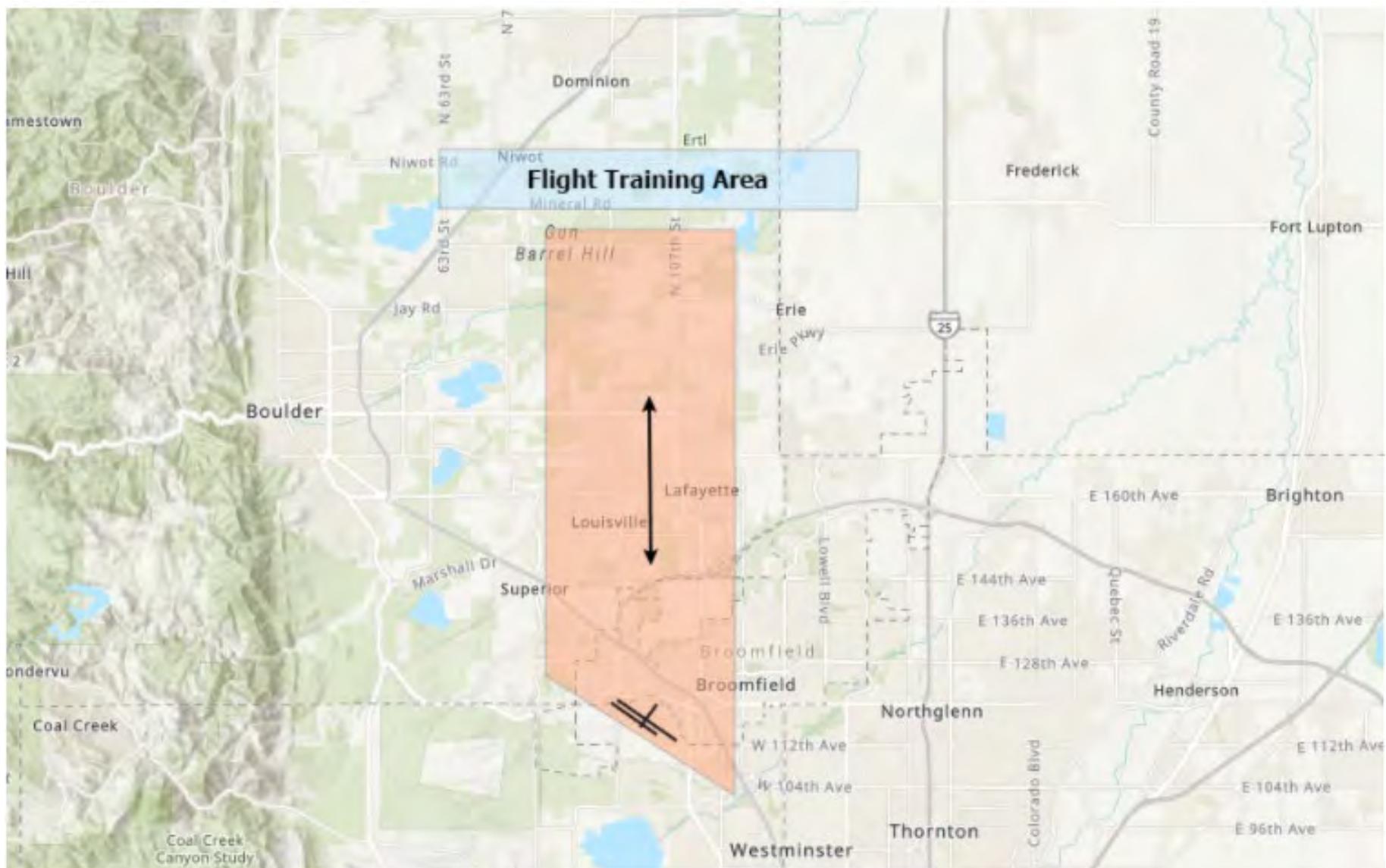


# Generalized IFR Departure Paths





# Typical Routes to/from the North Practice Area



# Airport Traffic Patterns



North-West Flow



South-East West Flow

- Airport traffic patterns are standardized and consistent at airports nationwide
- Operations outside the standard pattern require air traffic control authorization
- Traffic patterns may be tighter/closer-in when operational conditions allow



# Predominant Aircraft Types at RMMA

## Single Engine (Propeller)



## Multi-Engine (Propeller)



## Jet



ROCKY MOUNTAIN  
METROPOLITAN AIRPORT

# Roles, Responsibilities, and Authority





# Our Role

*“Airports want to work with their aircraft operators and their communities to provide a safe and efficient airport environment while minimizing the impact of aircraft noise.”*

- Passur Aerospace, Inc.



# Roles and Responsibilities (Per Federal Policy)

The Aviation Noise Abatement Policy of 1976 summarized the responsibilities of various stakeholders related to aircraft noise. The following slides are adapted from the policy.

- *Federal Government*
- *Airport Operators*
- *State & Local Governments and Planning Agencies*
- *Airlines and Aircraft Operators*
- *Air Travelers and Shippers*
- *Residents and Prospective Residents*



# Roles and Responsibilities – *Federal Government*

---

The ***Federal Government*** has the authority and responsibility to....

- Controls aircraft noise exposure through establishing maximum allowable noise levels for aircraft operated in the United States
- Supports research into noise reduction and noise abatement technologies.
- Management of the air traffic control system and navigable airspace in ways that minimize noise impact on residential areas consistent with the highest standards of safety.
- Establishment of noise abatement flight procedures
- Provides funding and technical assistance to airport operators for compatibility planning, noise abatement, and noise mitigation.

# Roles and Responsibilities – *Airport Operators*

---

Airport Operators are primarily responsible for...

- Planning and implementing actions designed to reduce the effect of noise on residents of the surrounding area.
- Airport actions can include:
  - Optimal site location and improvements in airport design
  - Noise abatement ground procedures<sup>1</sup>
  - Land acquisition
  - Restrictions on airport<sup>2</sup> use that do not unjustly discriminate against any user, impede the federal interest in safety and management of the air navigation system, or unreasonably interfere with interstate or foreign commerce.

<sup>1</sup> Airport operators have no authority over airspace or aircraft in-flight

<sup>2</sup> Airports' authority to impose access restrictions was severely limited by the Aircraft Noise and Capacity Act (1990)



# **Roles and Responsibilities –**

## ***State & Local Governments and Planning Agencies***

---

***State & Local Governments and Planning Agencies must provide for ...***

Land use planning and development, zoning, and housing regulation that will limit the uses of land near airports to purposes compatible with airport operations.



# **Roles and Responsibilities –**

## *Air Carriers and Aircraft Operators*

---

The **Air Carriers and Aircraft Operators** are responsible for ...

- Retirement, replacement, or retrofit of older jets that do not meet federal noise level standards.
- Scheduling and flying airplanes in a way that minimizes the impact of noise on people.



# **Roles and Responsibilities – Air Travelers and Shippers**

---

## ***Air Travelers and Shippers ...***

Should bear the cost of noise reduction, consistent with established federal economic and environmental policy that the adverse environmental consequences of a service or product should be reflected in its price.



# **Roles and Responsibilities -**

## *Residents and Prospective Residents*

---

### ***Residents and Prospective Residents ...***

- Should be aware of the potential effects of aircraft operations and noise in the community and the impact on their quality of life when choosing where to live.
- Should seek to understand the aircraft noise problem and what steps can be taken to minimize its effect on people.
- Individual and community responses to aircraft operations and noise vary. Some individuals may not be affected while others in the same area may feel significantly affected.



# RMMA Fly Quiet Program





# Fly Quiet Program - Overview

- RMMA is surrounded by residential communities. As operations at RMMA have increased over the past few years, aircraft overflights and noise are a growing concern for residents.
- The RMMA Fly Quiet Program includes recommended procedures and practices to help minimize the negative impacts of aircraft operations on surrounding communities.

**Note:** The RMMA Fly Quiet Program includes recommended procedures and practices intended to reduce aircraft noise impacts in surrounding communities. Program recommendations do not supersede the responsibility of the pilot-in-command for compliance with all applicable Federal Aviation Regulations, air traffic control instructions, and aircraft operating parameters included in the Aircraft Operations Manual.

# Fly Quiet Program – Recommended Practices

**On take-off, climb out using best angle of climb (Vx).**

This enables the aircraft to climb as high as possible before leaving the airport perimeter.

**Reduce RPM when possible.**

Lower propeller speeds produce less noise.

**Fly standard or higher glide path. Remain at or above the VASI.**  
Shallow approaches increase noise exposure to neighbors below.

**Overfly major road corridors and/or open space when able.**

When possible, avoid overflight of residential neighborhoods.

# Fly Quiet Program – Recommended Practices

**Runway 30R is designated the primary, calm-wind runway**  
Westerly prevailing winds favor 30 the majority of the time.

## No intersection departures

Using the full length of the runway is both safer and helps gain more altitude before leaving the airport perimeter.

**Maintain pattern altitude of 6,500' for single engine aircraft and 7,000' for twins/turboprops/jets**

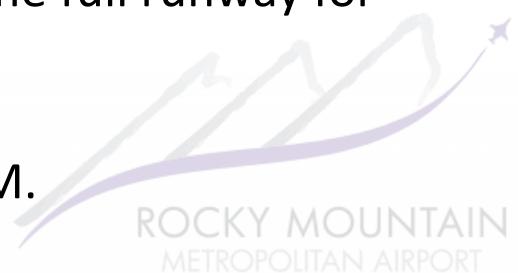
**Engine maintenance run-ups are prohibited between 10:00 p.m. and 6:00 a.m. except in an emergency**

**RMMA Flight Schools discourage departures after 10:00 PM**

This is a voluntary effort to reduce nighttime noise.

# Other Recommendations and Best Practices

- Familiarize yourself with the aircraft-specific noise abatement procedures published by the aircraft manufacturer. These are typically included in the Pilot Operating Handbook.
- When departing on Runways 12R-30L and 12L-30R, initiate crosswind turn as soon as able.
- When transitioning to/from practice areas, maintain the highest possible altitude over residential and other noise-sensitive areas.
- Keep crosswind and base-turns as close to the airport as possible.
- Minimize the use of reverse thrust when able. Use the full runway for landing.
- Avoid touch and go activity between 10 PM and 7 AM.



# How is Noise Program Information Disseminated?

- ✓ Flight School Briefings
- ✓ Air Traffic Controller Briefings
- ✓ Airport Tenant Meetings
- ✓ Airfield Signage
- ✓ Brochures, Posters and Placards
- ✓ Airports Facility Directory
- ✓ Pilot Workshops and Briefings
- ✓ Noise Task Force Briefings
- ✓ Webinars

ROCKY MOUNTAIN METROPOLITAN (BJC)(KBJC) 9 NW UTC-7(-6DT) N39°54.53' W105°07.03'

5673 B ARFF Index—See Remarks NOTAM FILE BJC

HWY 12L-30R: H9000X100 (ASPH-GRVD) S-65, D-105, 2S-95,  
2D-150 PCN 31 F/D/W/T HIRL

HWY 12L: REIL, PAPI(P4L)—GA 3.0° TCH 41°, 1.0% down.

HWY 30R: MALSR, PAPI(P4L)—GA 3.0° TCH 52°, Rgt tfc. 1.1% up.

HWY 12R-30L: H7002X75 (ASPH-GRVD) S-47, D-61  
PCN 18 F/D/W/T MIRL 1.1% up NW

HWY 12R: REIL, PAPI(P2L)—GA 3.0° TCH 40°, Rgt tfc.

HWY 30L: REIL, PAPI(P2L)—GA 3.0° TCH 41°.

HWY 03-21: H3600X75 (ASPH) S-40, D-45, 2D-65 MIRL 0.4% up S

HWY 03, PAPI(P2L)—GA 3.0° TCH 30°.

HWY 21, PAPI(P2L)—GA 3.0° TCH 40°, Rgt tfc.

**RUNWAY DECLARED DISTANCE INFORMATION**

HWY 03: TORA-3600 TODA-3600 ASDA-3600 LDA-3600

HWY 12L: TORA-9000 TODA-9000 ASDA-9000 LDA-9000

HWY 12R: TORA-7002 TODA-7002 ASDA-7002 LDA-7002

HWY 21: TORA-3600 TODA-3600 ASDA-3600 LDA-3600

HWY 30L: TORA-7002 TODA-7002 ASDA-7002 LDA-7002

HWY 30R: TORA-9000 TODA-9000 ASDA-9000 LDA-9000

SERVICE: S4 FUEL 100LL JET A 0X1, 2, 3, 4 **LGT** When twr closed ACTIVATE MIRL Rwy 03-21, and Rwy 12R-30L, HIRL Rwy 12L-30R, MALSR Rwy 30R, PAPI Rwy 03, Rwy 21, Rwy 12L, Rwy 12R, Rwy 30L, and Rwy 30R and REIL Rwy 12L, Rwy 12R and Rwy 30L—CTAF.

**AIRPORT REMARKS:** Attended continuously. 100LL self svc. Birds and other wildlife on and in/ovf rwy's. Watch for wildlife on or near rwy's. Helicopters arr/dep from rwy's and twys. Pilots are requested to avoid fit over Standley Lake blo 8000' MSL. Jeffco VOR 150° 3.0 DME due to nesting eagles. Class II ARFF Index A, 24 hr PPR for unscheduled air carrier ops with more than 30 passengers seats call 720-352-0395. ARFF Index B also avbl PPR ctc apt 720-352-0395. **Voluntary noise abatement procedure in effect ctc noise office 303-271-4850 U.S. Customs user fee apt. Twy C1 and Twy D only marked with reflectors. North terminal ramp slope exceeds FAA recommended stds. Flight Notification Service (ADCUS) avbl. NOTE: See Special Notices—Extensive Helicopter Flight Training. USAF 306 FTG Flight Training Areas, Vicinity of Colorado Springs and Pueblo Colorado.**

Airport Facilities Directory



Airfield Signage

Rev. 12/2015

**COMMUNITY FRIENDLY FLYING AT RMMA**

**RECOMMENDED NOISE ABATEMENT PROCEDURES**

**Expanded and Explained:**

- **Climb out at best angle of climb (Vx).** This ensures that aircraft are as high as possible before leaving the airport perimeter.
- **Reduce RPM when safe.** Lower propeller speeds produce less noise.
- **Fly standard or higher glide path.** Shallow approaches expose neighborhoods to additional noise.
- **Overfly major road corridors and/or open space when able.** Absent ATC instructions to the contrary, choosing routing that avoids residential neighborhoods lessens the impact of aviation operations on surrounding communities.
- **Runway 30R is designated the primary, calm-wind runway.** Westerly prevailing winds favor 30 the majority of the time.
- **No intersection departures.** Using the full length of the runway is both safer and ensures aircraft are as high as possible before leaving the airport perimeter.
- **Maintain pattern altitude of 6,500' for single engine aircraft and 7,000' for twins/turboprops/jets.**
- **No engine maintenance run-ups between 10:00 p.m. and 6:00 a.m. except in an emergency.**

Flight schools, located on field, have voluntarily stopped departures in the evening hours beginning at 10:00 p.m. local time. Aircraft from the flight schools shall not depart after this, excepting when required to do so for currency or training in accordance with federal regulations.

The Rocky Mountain Metropolitan Airport has developed these recommended noise abatement procedures in an effort to be responsive to the concerns of our neighbors. The purpose of these procedures is to minimize the impact of aircraft operations at RMMA on the surrounding communities.

Brochures, Posters, & Placards

ROCKY MOUNTAIN METROPOLITAN AIRPORT

# Local and Regional Collaboration

# Collaboration with Local Partners (Industry)

**All stakeholders play a role in helping RMMA remain a good neighbor.**

Industry collaborations include working with airport tenants, business, flight schools, and users to encourage awareness and voluntary compliance with the RMMA Fly Quiet operational recommendations. Industry engagement includes:

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- Establishment of Airport Noise Roundtable to encourage collaboration between Jefferson County (Airport Operator) and surrounding towns, cities, and counties.
- Working with real estate agents and prospective home-buyers and residents to ensure an awareness of potential aircraft noise concerns.



# THANK YOU!

-  (303) 271-4874
-  info@flyrmma.com
-  <https://www.jeffco.us/airport>



## ABCx2 Project Close Out Report

The City of Louisville and The Town of Superior

January 15, 2021

### Introduction

The communities around Rocky Mountain Metropolitan Airport (RMMA) were experiencing increased impacts associated with aircraft overflights to and from the airport. The Town of Superior contacted ABCx2 requesting help addressing the growing noise impacts. In addition to reducing aircraft noise, from the Town's perspective, a "successful outcome" required the opportunity for residents to feel "heard" and that the process of developing policies and procedures for noise reduction to be based directly on community input.

In 2018, ABCx2 initiated a 3-Phase Project to help the Town of Superior and the City of Louisville address the growing community concerns. The project phases included: 1) Baseline Assessment, 2) Strategy Development, and 3) Implementation and Monitoring.

*Note: ABCx2 initiated work for the Town of Superior in November of 2018 and the City of Louisville joined the effort in early 2019.*

### Table of Contents

Introduction.....	1
Phase I – Baseline Assessment .....	2
Phase II – Strategy Development.....	3
Phase III – Implementation and Monitoring .....	4
Highlighted Outcomes from Phase I – III.....	5
Tasks Completed and Deliverables.....	6
Phase I.....	6
Phase II .....	6
Phase III .....	6
Timeline .....	7
Attachments .....	9

### ABCx2, LLC

## Phase I – Baseline Assessment

Phase I began with identifying the critical local and regional stakeholders including impacted communities, neighborhoods, homeowner associations, etc., local government officials and staff, airport management and staff, flight schools and other airport tenants, and air traffic control personnel. Phase I included initial stakeholder engagement to ensure an understanding of stakeholders' interests, priorities, and constraints, as well as establishing working relationships with these key stakeholder groups.

Phase I also included an assessment of the baseline conditions including the airport facilities, airspace, traffic patterns, flight procedures, fleet mix, existing noise abatement programs, and land-use/zoning around the airport and in proximity to predominant flight corridors.

At the completion of the baseline assessment, a summary report was provided, detailing the findings across the range of issues covered and provided the foundation for the Strategy Development conducted in Phase II of the project.

Stakeholder engagement was an important part of Phase I. A number of public meetings and workshops were conducted in an effort to collect community input through all phases of the project. Public outreach was also important to keep residents informed of the project progress. Public engagement in Phase I included public briefings to the Superior Board of Trustees during which public input was submitted to the Board. The project team also worked one-on-one with a number of residents while on-site, as well as through email and telecons.

Community engagement was a priority for Phase I and as important community engagement was to this effort, most strategies identified require the support of industry partners, particularly the Airport, aircraft operators, and FAA Air Traffic Control. Collaboration between the Town of Superior/City of Louisville and the Airport were minimal at the start of this project and establishing and encouraging ongoing collaboration was an important goal of this effort. Meetings with the Airport and airport tenants were conducted to introduce the ABCx2 team and the project. Based on ABCx2's recommendation, a Noise Task Force was developed to enable discussions among all industry stakeholders including RMMA management and staff, flight schools, fixed based operators and other airport tenants, and air traffic control. While developed to support this effort and collaboration among industry stakeholders, the Task Force continues to meet, exploring ways to expand and improve the RMMA Noise Abatement Program.

## ABCx2, LLC



## Phase II – Strategy Development

Phase II of this project focused on development of strategies to address the core issues identified during Phase I. Phase II community engagement efforts included development of two community surveys, one hosted by the Town of Superior and a second hosted by the City of Louisville. These surveys were intended to solicit community input regarding aircraft noise impacts and supplemented the data collected through the process of the baseline assessment. In addition to the survey, a community workshop was held at Louisville City Hall in July 2019. After a project briefing by the ABCx2 team, a question-and-answer session followed, allowing residents to ask questions, make comments, and provide recommendations.

Community input from the public comments and the online surveys were used during the work done in the Phase II – Strategy Development. Additionally, each of the community comments was responded to by the ABCx2 team. At the completion of Phase II, the consulting team submitted summary report with over 50 strategy recommendations arranged into five (5) categories:

- Flight Procedures, Practices, and Policies
- Community Outreach and Engagement
- Industry Outreach and Engagement
- Land-Use Planning and Development
- Regional Collaboration

Several of the recommendations identified in the Flight Procedures, Practices, and Policies that were discussed by the RMMA Task Force and implemented. These included encouraging best angle of climb when departing, avoiding overflight of residential communities, flying over major roadways or open space and when residential overflight cannot be avoided, and flying as high as possible to minimize noise impacts on the ground. Additionally, based on community concerns related to nighttime noise associated with flight training activity in particular, RMMA flight schools have agreed to discourage students from departing RMMA after 10:00 PM.



## Phase III – Implementation and Monitoring

Phase III is nearing completion. Under the direction of Superior and Louisville, scoping for Phase III focused on development of an Engagement Plan and materials to enable engagement of industry stakeholders and community stakeholders in an effort to implement the remaining recommendations.

Briefing materials were developed in the form of PowerPoint slide decks with content that can be used for in-person briefings and workshops, virtual briefings, and webinars, adapted for the web, or used in print materials. Six distinct audiences were identified, each with their own materials. Industry materials include 1) Pilots, Flight Schools and Airport Tenants and; 2) Air Traffic Control. Community-focused materials include: 1) General Public; 2) Impacted Communities and Homeowners' Associations; 3) Local Governments and Land-Use Authorities, and; 4) Prospective Homebuyers and Renters.

Industry engagement will be led by the Airport. Briefing materials are intended for use in engaging RMMA pilots, flight schools, local and itinerant pilots, aviation associations including Aircraft Owners and Pilots Association (AOPA), National Business Aviation Association (NBAA), and Colorado Aviation Business Association (CABA). Community engagement efforts will be shared by both the Airport and local municipalities.

The engagement materials were reviewed by Superior and Louisville and Airport staff. Comments and recommended revisions were addressed, and the materials were finalized. The last step in this task will be a final meeting with the Airport to discuss deployment and use of the materials.

## ABCx2, LLC

## Highlighted Outcomes from Phase I – III

- The Airport established the RMMA Noise Task Force for ongoing identification, evaluation, and implementation of strategies to reduce aircraft noise impacts.
- Expanded pilot education and outreach efforts.
- Airport hosting quarterly meetings with flight schools, air traffic control, and industry task force to discuss/address noise issues.
- Voluntary nighttime curfew has been adopted by RMMA Flight Schools
- Establishment of Airport Noise Roundtable
- Expanded noise abatement program incorporating operational measures recommended by ABCx2 including:
  - Noise abatement signage on airfield encouraging pilots to:
    - Avoid disturbing surrounding residential areas if practical by:
      - Climbing initially at Vx (Best Angle of Climb)
      - Reducing RPM when safe
      - Flying standard of higher glide path
      - Overflying major road corridors and/or open space when able.
    - Publishing a Noise Abatement Brochure as a handout to pilots (See Attached)

**ABCx2, LLC**



## Tasks Completed and Deliverables

### Phase I

- Completed baseline assessment
- Identified core issues
  - Flight training operations
  - Closed traffic operations
  - Operations between the North Practice Area and RMMA
  - Lack of collaboration between Airport and Superior/Louisville
- Clarified history of Rock Creek development, avigation easements, etc.
- Initial Public Workshop

### Phase II

- Based on Baseline Assessment, identified portfolio of strategies to address core issues
- Community Surveys
  - Louisville – Community Survey
  - Superior – Community Survey
- Louisville Community Feedback Workshop
- Strategy Prioritization Workshop
  - Louisville and Superior Staff
  - Liaisons from Superior Board of Trustees and Louisville City Council

### Phase III

- Prioritization of Strategies
- Airport Noise Storyboard (Community Engagement)
- Encouraged/Facilitated engagement between Airport Staff, Town/City Staff, and Elected Officials
- Collaboration with pilots, flight schools, airport, to encourage pilot and flight school engagement
- Development of Outreach and Engagement Programs for Industry and Public/Community
- Voluntary restraint from flying overnight
- Engaged AOPA, NBAA and CABA

**ABCx2, LLC**

## Timeline

- Project Kick-Off Telcon (Superior Staff) – 11/2/2018
- Respond to Superior Q&A – 11/7/18
- Review of Airport RMMA Noise Reports 2012-2016 - 11/8/18
- Review of Superior Resident Comments from August 2018 – 11/15/18
- Review of RMMA Rules & Regulations – November 2018
- Review of Airport Master Plan – November 2018
- Initial Review of RMMA Fly Quiet Program – 11/19/18
- TARGETS - Initial Notional SID RWY 30R – 11/23/18
- Review of RMMA Statistics – 11/25/18
- Public Meeting: Superior Board of Trustee Briefing 11/27/18
- Superior Phase I Work Plan – October 2018-January 2019
- Aviation Agreement Research – February 2019
- Review of Sustainable Aviation Resource Guide – 2/13/19
- First Meeting with Airport and Flight Schools 2/19/19
- Superior/Louisville Phase IA Work Plan – February-March 2019
- TARGETS – Notional SIDs for RMMA 3/22/2019
- Review of OPSNET Traffic Count Data for 2009-2018 – March-April 2019
- Development of FAQs – March-April 2019
- Review of Flight Tracks – 4/16/19
- Q&A for RMMA Tower Manager – 4/23/19
- Baseline Report – 5/11/19
- Public Meeting: Superior Board of Trustees Meeting – 5/13/19
- Initial Engagement Plan – 5/31/19
- Project Status Reports – April-July 2019
- Louisville Community Survey – June-July 2019
- Public Meeting: Superior Board of Trustee Meeting – 7/22/19
- Louisville Community Feedback Workshop – 7/24/19
- ABCx2 Notional VFR Routs to/from Practice Areas 8/8/19
- Superior – Community Survey – August-September 2019
- Final Report – Strategy Recommendations – 9/27/2019
- Final Report – Survey Comments and Responses – 9/27/2019
- Public Meeting: Joint Study Session – Superior/Louisville/ABCx2 – 9/30/19
- Letter to Superior/Louisville – Comments from Joint Study Session – 10/14/19
- Strategy Development – November 2019

**ABCx2, LLC**

- Aircraft Noise Reduction Act – Airport List – Task Order – 1/24/20
- Public Meeting: Strategy Prioritization Workshop 5/4/20
- RMMA Telcon 6/23/20
- Telcon (Zoom) with Superior/Trustee Ryan – 7/9/20
- Landing Fees Research Task – 7/14/20
- Telecon (Zoom) with Airport Liaisons – 7/17/20
- ABCx2 Progress Report 7/20/20
- Prioritized Strategy Matrix Informal Elements – Milestones 7/20/20
- Zoom with Louisville Council and Airport 7/30/20
- Project Budget Review 8/11/20
- Noise Task Force Meeting 8/28/20
- ERSI Story Map – June-October 2020
- Work Plan Updates – July-October 2020
- Project Planning Playbook - 11/2/20
- Development of Engagement Materials/Slides – October-December 2020
- Progress Reports – July-November 2020
- Virtual Meeting (Zoom) – Review of Engagement Materials/Slides 12/21/20
- RMMA Round Table – First Meeting – January 2021
- Project Close-Out Report – January 2021

## ABCx2, LLC



## Attachments

### ABCx2, LLC

info@abcx2.com



162 Brittany Lane, Senoia, GA 30276



[www.abcx2.com](http://www.abcx2.com)



# COMMUNITY FRIENDLY FLYING AT RMMA

## RECOMMENDED NOISE ABATEMENT PROCEDURES

### Expanded and Explained:

- **Climb out at best angle of climb (Vx).** This ensures that aircraft are as high as possible before leaving the airport perimeter.
- **Reduce RPM when safe.** Lower propeller speeds produce less noise.
- **Fly standard or higher glide path.** Shallow approaches expose neighborhoods to additional noise.
- **Overfly major road corridors and/or open space when able.** Absent ATC instructions to the contrary, choosing routing that avoids residential neighborhoods lessens the impact of aviation operations on surrounding communities.
- **Runway 30R is designated the primary, calm-wind runway.** Westerly prevailing winds favor 30 the majority of the time.
- **No intersection departures.** Using the full length of the runway is both safer and ensures aircraft are as high as possible before leaving the airport perimeter.
- **Maintain pattern altitude of 6,500' for single engine aircraft and 7,000' for twins/turboprops/jets.**
- **No engine maintenance run-ups between 10:00 p.m. and 6:00 a.m. except in an emergency.**

Flight schools, located on field, have voluntarily stopped departures in the evening hours beginning at 10:00 p.m. local time. Aircraft from the flight schools shall not depart after this, excepting when required to do so for currency or training in accordance with federal regulations.

The Rocky Mountain Metropolitan Airport has developed these recommended noise abatement procedures in an effort to be responsive to the concerns of our neighbors. The purpose of these procedures is to minimize the impact of aircraft operations at RMMA on the surrounding communities.

# The Noise Abatement Checklist

Avoid disturbing/overflying residential areas if practical by:

- Climbing initially at Vx
- Reducing RPM when safe
- Flying standard or higher glide path
- Overflying major road corridors and/or open space when able

Your cooperation with noise abatement, when able, is appreciated.



Note: The above procedures are recommended for arrivals and departures at RMMA. They are not intended to supersede the responsibility of the pilot for compliance with FARs, ATC clearances and operating parameters of the Aircraft Operations Manual.

ALL recommended procedures are at the pilot's discretion, consistent with safety and ATC instructions. **SAFETY ALWAYS COMES FIRST!**



@flyRMMA

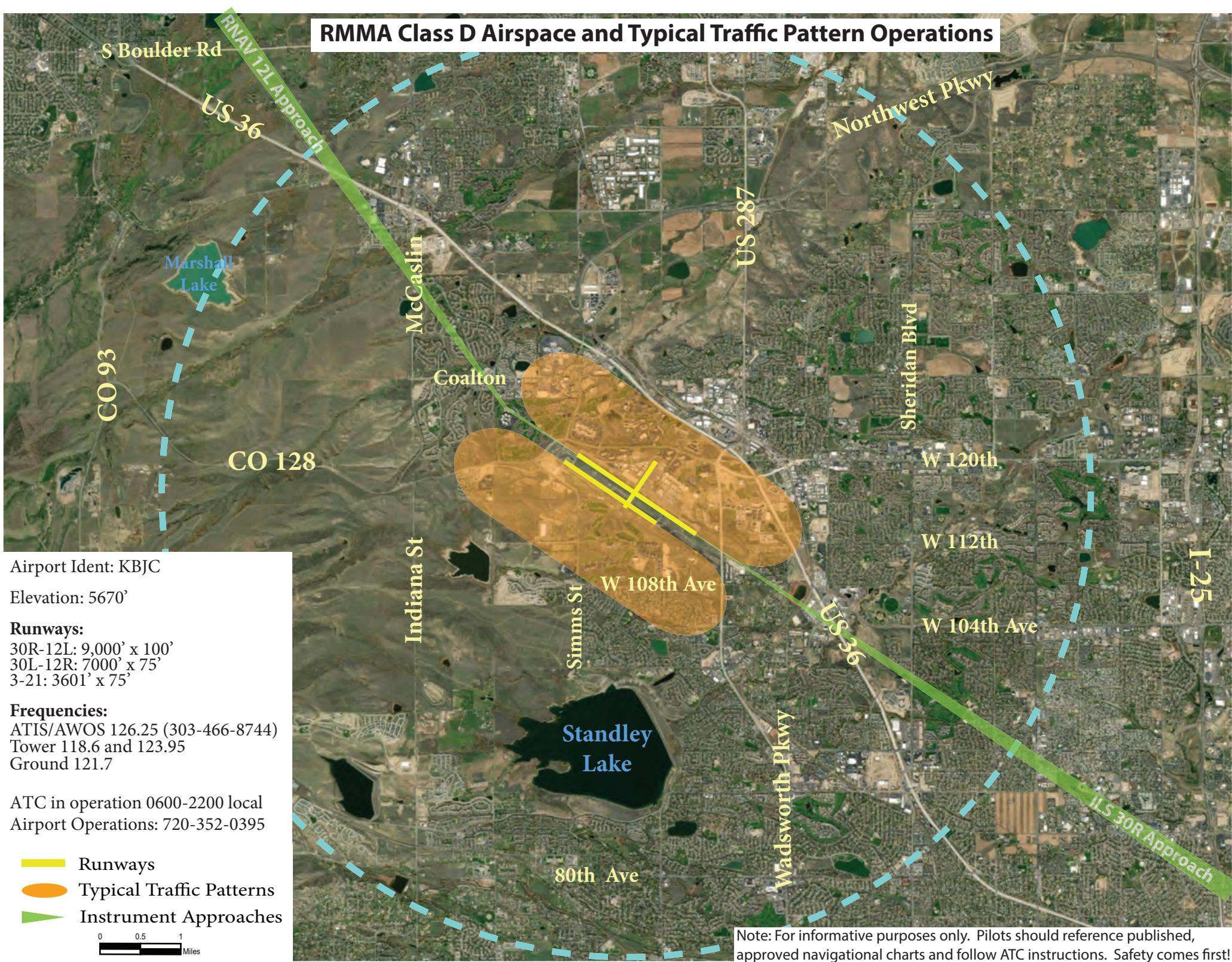


ROCKY MOUNTAIN  
METROPOLITAN AIRPORT

11755 Airport Way, Broomfield, CO 80021  
303-271-4850

[www.flyRMMA.com](http://www.flyRMMA.com)

# RMMA Class D Airspace and Typical Traffic Pattern Operations



November 2018

## Friendly Flying

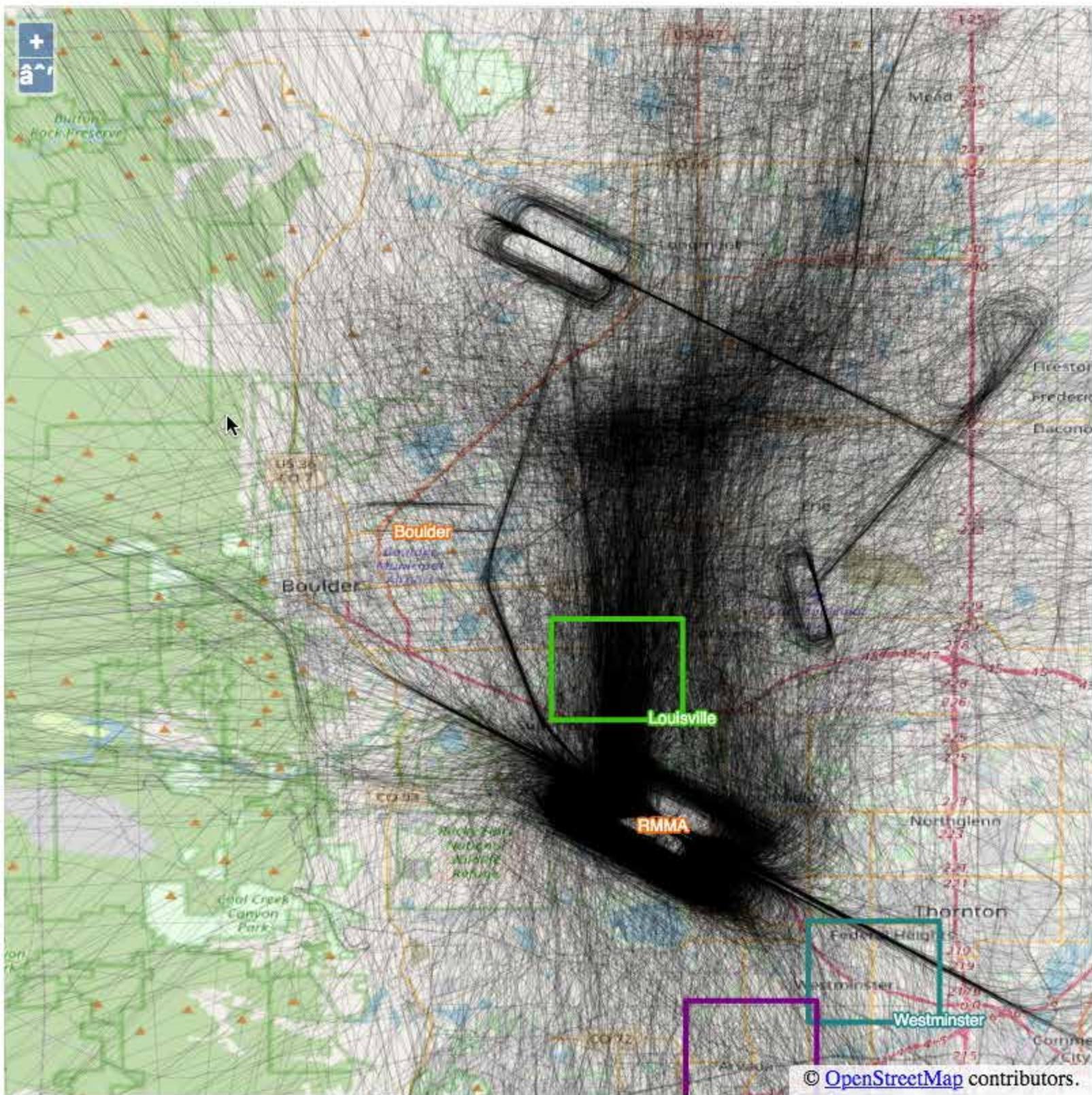
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- Please avoid flying over noise-sensitive areas when practical.
- Engine maintenance run-ups are not allowed between 10 p.m. and 6 a.m., except in an emergency.
- Please fly high and tight patterns, not low approaches. Follow the PAPI
- Maintain pattern altitude of 6,500 feet for singles and 7,000 feet for twins, jets, and helicopters.
- No intersection takeoffs.
- Runway 30R is designated the “calm wind runway” under the recommended noise abatement procedures

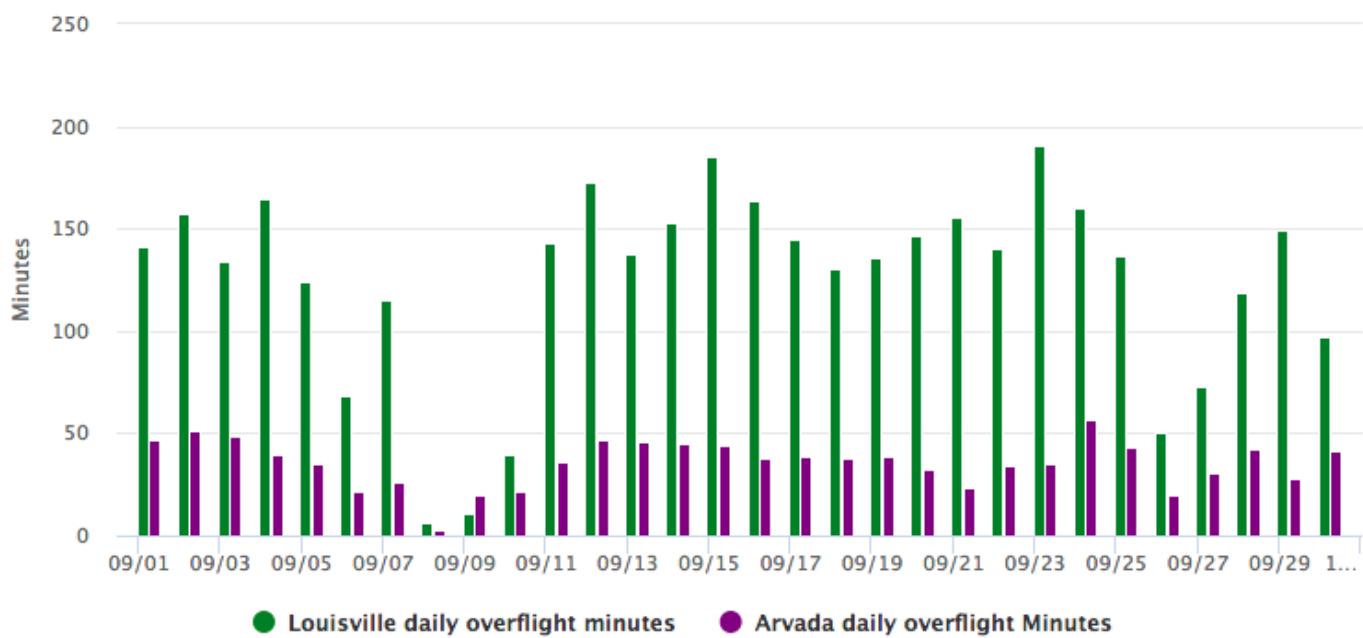
November 2020

- **Climb out at best angle of climb (Vx).** This ensures that aircraft are as high as possible before leaving the airport perimeter.
- **Reduce RPM when safe.** Lower propeller speeds produce less noise.
- **Fly standard or higher glide path.** Shallow approaches expose neighborhoods to additional noise.
- **Overfly major road corridors and/or open space when able.** Absent ATC instructions to the contrary, choosing routing that avoids residential neighborhoods lessens the impact of aviation operations on surrounding communities.
- **Runway 30R is designated the primary, calm-wind runway.** Westerly prevailing winds favor 30 the majority of the time.
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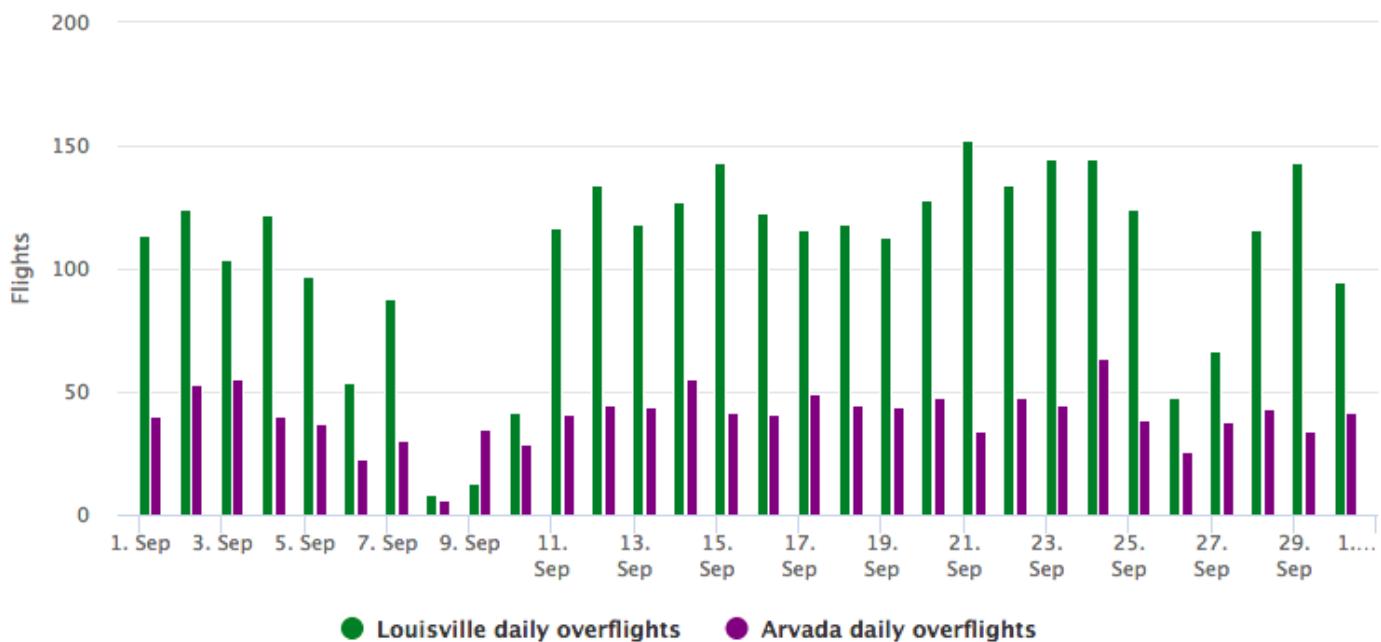
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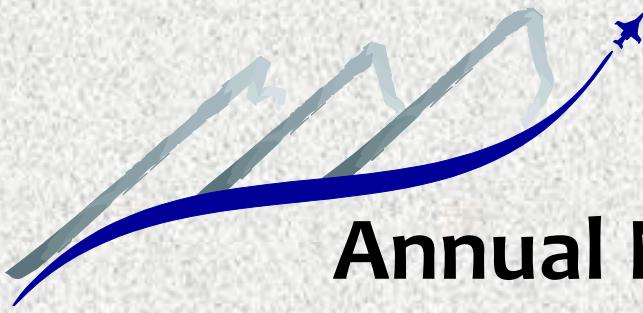


## RMMA Overflight Minutes Per Day



## RMMA Flights Per Day





# ROCKY MOUNTAIN METROPOLITAN AIRPORT

## Annual Noise Report

### 2020

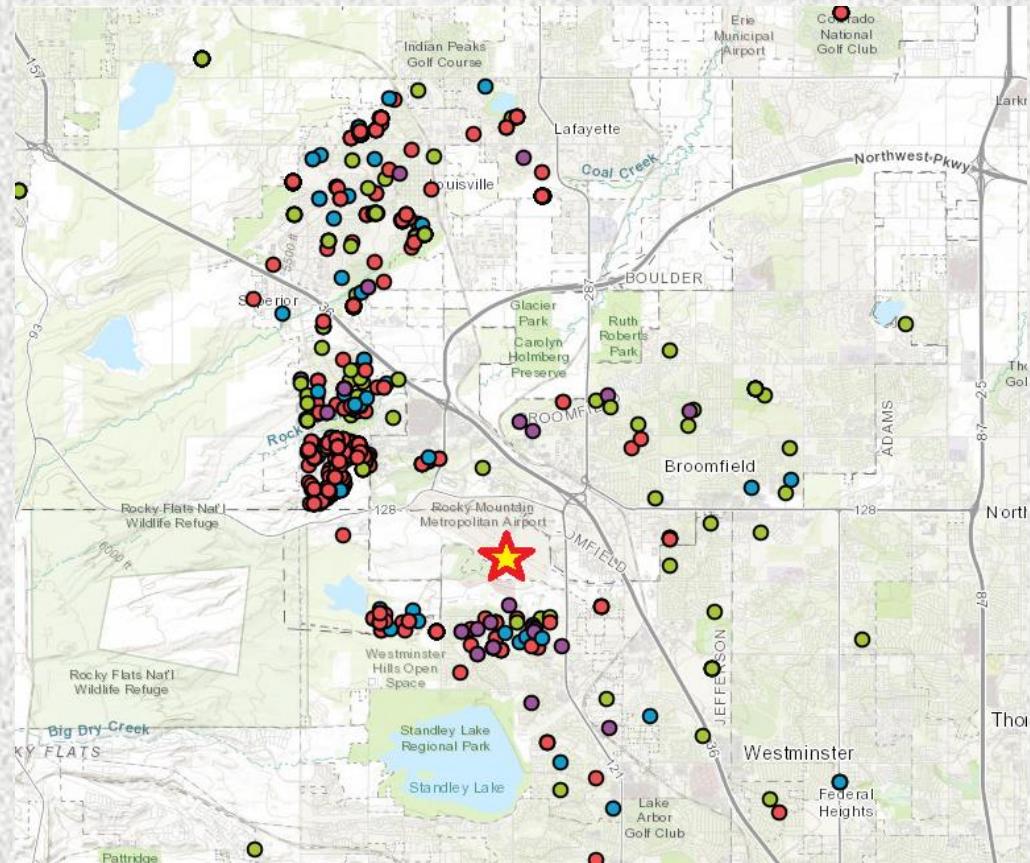
#### Introduction

With the intent to minimize the impact of aircraft noise on the surrounding communities, Rocky Mountain Metropolitan Airport developed this report focusing on information collected from the noise complaint hotline (303) 271-4874 and on our website at [www.flyrmma.com](http://www.flyrmma.com). The statistical information contained in this report is made available to pilots, airport users, and surrounding communities via the Airport's website, and is updated quarterly.

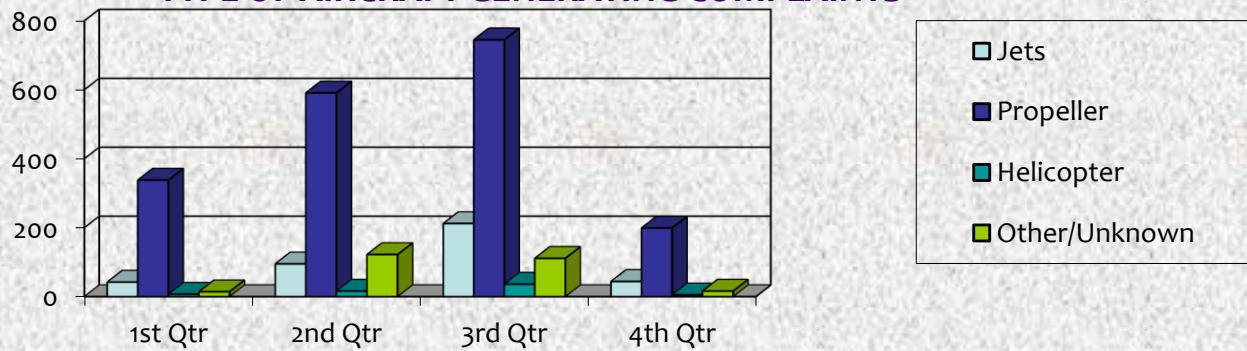
City	Quarterly Complaints					Household Complaints				
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Total YTD	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Total YTD
Arvada	0	15	2	2	19	0	7	1	2	9
Boulder	39	71	109	12	231	2	9	16	5	25
Broomfield	22	39	99	39	199	12	26	40	14	70
Louisville	24	151	222	33	430	7	48	74	11	105
Lafayette	0	4	9	4	17	0	4	7	2	12
Littleton	2	2	4	27	35	1	2	3	1	6
Erie	0	0	1	7	8	0	0	1	1	1
Superior	242	392	293	63	990	23	84	73	22	144
Westminster	58	115	320	63	556	6	54	101	19	138
Other	15	34	47	17	113	2	9	18	6	29
<b>Total</b>	<b>402</b>	<b>824</b>	<b>1106</b>	<b>267</b>	<b>2599</b>	<b>53</b>	<b>243</b>	<b>334</b>	<b>83</b>	<b>539</b>

	Annual 2019	Annual 2020
Aircraft Operations	192,475	189,512
Noise Complaints	2000	2599

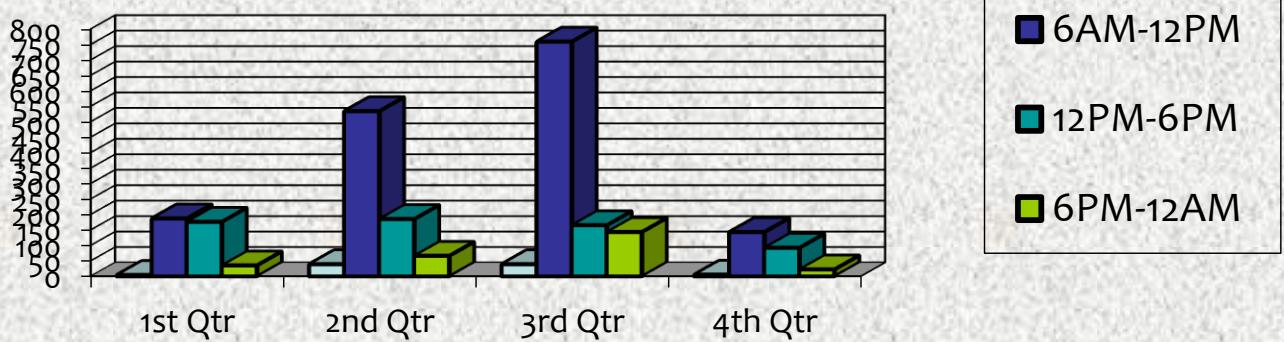
## LOCATION OF 2020 NOISE COMPLAINTS IN RELATION TO AIRPORT



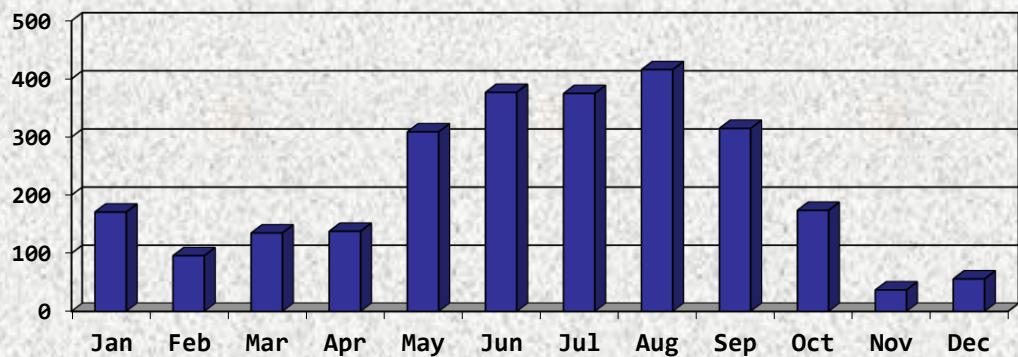
### TYPE OF AIRCRAFT GENERATING COMPLAINTS



### TIME OF NOISE COMPLAINT



## NOISE COMPLAINTS BY MONTH



## AIRCRAFT OPERATIONS BY MONTH

