CITY OF LONGMONT COLORADO

AIRPORT MONITORING SYSTEMS

NOISE PROGRAM ASSESSMENT

Recommendations

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MONITORING
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CITY OF
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COLORADO

Contents

Introduction

Based on the findings of the baseline assessment, which included engagement with residents, pilots, flight schools, and aviation organizations, including the Aircraft Owners and Pilots Association (AOPA), as well as input gathered through the community survey, opportunities were identified to further refine, expand, and strengthen the airport's existing Voluntary Noise Abatement Program (VNAP).

While the airport's existing program demonstrates a comprehensive and well-established approach to noise management compared with many peer general aviation airports, the intent of the baseline assessment was, in part, to identify how the program could be further refined, expanded, and strengthened to improve its effectiveness and stakeholder engagement. The opportunities and recommendations contained in this report are intended to support that objective.

Collectively, these recommendations are designed to:

- Enhance existing noise program elements aimed at reducing overflight of noise-sensitive areas, combined with reducing noise level and lowering noise exposure when residential overflight is unavoidable.
- Increase pilot awareness of the VNAP and encourage greater voluntary participation.
- Strengthen community outreach, transparency, and trust.
- Enable data-driven analyses, decision-making, and improved public understanding of airport operations.
- Enhance collaboration between airport users, local government, and surrounding communities.
- Promote long-term program credibility and continuous improvement.
- Further demonstrate the airport's commitment to transparent, data-driven program management that serves both the aviation community and surrounding neighborhoods.

Operational Recommendations

Objective: Identify strategies to minimize overflight of residential and other noise-sensitive areas to reduce community noise exposure and improve operational compatibility.

Incorporate and Encourage AOPA Noise Awareness Steps

Publish and encourage conformance with the Aircraft Owners and Pilots Association (AOPA) Noise Awareness Steps. As a nationally recognized organization representing and supporting the general aviation community, AOPA is a credible source of pilot guidance, and its recommendations are more likely to be accepted and adopted by general aviation pilots. A partial list is included below. The complete list is included in Appendix I.

The AOPA Noise Awareness Steps

- Consider using a reduced power setting if flight must be low because of cloud cover or overlying controlled airspace or when approaching the airport of destination. Propellers generate more noise than engines; flying with a lower RPM setting will reduce aircraft noise.
- Familiarize yourself and comply with your airport's noise abatement procedures.
- Avoid low-level, high-powered approaches, which not only create high noise impacts but also limit options in the event of engine failure.
- If practical, avoid overflying noise-sensitive areas. Make every effort to fly at or above 2,000 feet AGL over such areas when overflight cannot be avoided.
- Encourage stalls, spins, and other practice maneuvers to be conducted over water or other uninhabited areas where operationally safe and practical. This revision would replace the existing reference to "performing aerobatic maneuvers over houses" with clearer language intended to reduce public confusion, frustration, and complaints.

Assess Community Impacts of RWY 11 and RWY 29 Patterns for Touch-and-Goes

Conduct a land use analysis identifying residential and noise-sensitive land uses around the airport. Federal and state regulations typically classify noise sensitive uses to include residential development, educational facilities, healthcare facilities, places of worship, and recreational/public spaces.

Evaluate the traffic patterns for Runways 11 and 29 and compare the noise impacts associated with each. This analysis should specifically assess touch-and-go operations in relation to surrounding land uses, considering both the extent and density of residential development. The intent is to confirm whether, under existing conditions, Runway 29 produces the lowest overall level of community impacts. The analysis should go beyond "standard traffic patterns," which may not reflect actual conditions. The analysis should account for actual operating conditions, including wind, traffic volume, and aircraft mix, to provide an accurate and complete picture of traffic pattern shape and size, runway utilization, and community impacts.

This evaluation will require a detailed assessment of airport operations, flight activity, and surrounding land uses. The City should consider retaining a consultant with expertise in airport operations, noise analysis, and GIS to conduct this analysis and develop objective, data-driven findings.

Existing Airport Monitoring System data, ADS-B flight tracking, and other operational analytics could serve as the basis for the analysis by documenting actual runway utilization, traffic pattern geometry, aircraft mix, and training activity. Unlike standard traffic patterns, these data reflect actual operating conditions, including variations in wind, traffic demand, and pilot behavior, providing a more accurate representation of aircraft overflight locations.

Identify Visual Landmarks for Arrivals and Departures

Visual landmarks should be identified for pilots to help avoid overflight of noise-sensitive areas. For example, the VNAP may recommend that pilots departing Runway 11 initiate a left turn upon reaching 500

feet AGL or before reaching Outrig Storage, a clearly visible landmark. Visual landmarks [may] be used to designate preferred patterns that minimize overflight of residential areas. In the case of Runway 11, this could avoid overflight of residential areas and downtown Longmont. Visual landmarks can help identify locations that pilots are encouraged to overfly, avoid, or use as turning points. These may apply to close-in operations such as arrivals, departures, and closed-traffic-pattern operations (i.e., touch-and-goes) and may support the development of preferential routing to and from the airport, as described in the next section.

Preferential Routing and Reporting Points

Explore opportunities to establish preferential routes to and from regional practice areas to reduce overflight of downtown and dense residential neighborhoods. Preferential routes are typically designed to follow open space, major roadways, industrial corridors, or other less noise-sensitive areas and can be defined using headings, waypoints, and turn or reporting points tied to recognizable landmarks or GPS coordinates.

Altitude-Based Noise Mitigation

Incorporate altitude-based noise mitigation measures that encourage pilots, when operationally safe and practical, to remain at or above 2,000 feet AGL (as an example) over dense residential areas when overflight cannot be avoided. When on final approach, pilots should remain at or above the Visual Approach Slope Indicator (VASI) glide slope and within 10 degrees of the extended runway centerline when within four nautical miles of the runway. For departures, pilots should maintain runway heading until reaching a specified minimum altitude or an identified visual landmark before initiating turns.

Congested Traffic Pattern Management

Vance Brand Airport experiences one of the highest levels of flight training activity among Colorado's general aviation airports, leading to periods of traffic pattern congestion that can result in repetitive aircraft

noise and overflights of nearby neighborhoods. Additionally, as the number of aircraft in the traffic pattern increases, the pattern grows, pushing overflights further out from the airport.

A review of comparable Colorado airports found no formal policies defining traffic pattern congestion or limiting the number of aircraft conducting closed traffic simultaneously. Towered airports manage peak demand through air traffic control sequencing, coordination with flight schools, and local operating practices. As a non-towered airport, Vance Brand has an opportunity to implement a collaborative, voluntary approach that complements the existing Voluntary Noise Abatement Program (VNAP).

A voluntary congestion management program could include recommended traffic pattern occupancy thresholds, monitoring using ADS-B and Airport Monitoring System (AMS) data, coordination with flight schools to adjust training schedules or relocate repetitive pattern work during peak periods, and operator notifications when congestion levels are elevated. Participation could be reinforced through voluntary recognition programs and performance reporting.

Stakeholder discussions suggested that six to eight aircraft conducting simultaneous touch-and-go operations could serve as an initial threshold for evaluation. Any threshold should be developed collaboratively with airport users to ensure it is operationally feasible and supported by the flight training community.

Because any mandatory limit on traffic pattern occupancy could be considered an access restriction, the program should remain voluntary and education-based. Development through a Technical Advisory Group (TAG) representing flight schools, aviation organizations, and other stakeholders would help build consensus, encourage pilot participation, and align safety, operational, and community compatibility objectives.

Conformance Monitoring and Analytics

Objectives: Integrate flight tracking and operational analytics to monitor aircraft operator participation and conformance with the Voluntary Noise Abatement Program.

Flight Tracking and Operations Analytics

The implementation of flight analytics platforms enables the airport to evaluate operational trends, monitor adherence to recommended procedures, and gain deeper insight into how aircraft activity patterns change over time. More importantly, these tools provide a shared, objective foundation of operational data that supports productive communication among airport users, residents, elected officials, and regulatory partners.

By transforming operational information into accessible, measurable data, the airport can shift discussions away from isolated anecdotes and toward evidence-based analysis and longitudinal trends. This approach supports improved VNAP conformance, more informed decision-making, and stronger public confidence in airport governance and operational stewardship. It also helps evaluate program efficacy in shaping public perceptions, understanding, and overall sentiment.

Benefits of Flight Tracking and Operations Analytics

Flight tracking and advanced operations analytics enable the airport to continuously monitor and evaluate operational activity using objective flight data. Leveraging ADS-B surveillance, weather data, geospatial mapping, and operational reporting provides a detailed understanding of how aircraft operate within and around the airport environment.

For Vance Brand Airport, these enable evaluation not only of operational activity but also of how specific operational behaviors align with community goals and VNAP objectives. Flight path tracking identifies where various types of aircraft operate most frequently, runway utilization data reveal operational distribution patterns, and time-of-day analytics highlight periods of concentrated activity.

Analytics systems go beyond data collection by transforming operational information into actionable insights. By identifying patterns, trends, and deviations, airport and city leadership can gain clearer insight into the factors influencing operational outcomes, how best to use limited time, budget, and staff for

maximum impact, and whether mitigation strategies or procedural recommendations are producing desired outcomes.

This analytical capability also supports more proactive and informed airport management. Rather than responding only after concerns escalate, airport staff can identify emerging operational trends early, monitor changes over time, and engage stakeholders using credible, data-supported information.

Improved VNAP Conformance

One of the most significant advantages of operational analytics is the ability to translate VNAP objectives into measurable operational performance indicators. While planning frameworks often establish broad goals related to compatibility, safety, and mitigation of community impacts, analytics systems provide the operational visibility needed to assess whether those goals are achieved in practice. Furthermore, key operators can view their own performance in near real time without additional effort from airport staff.

At Vance Brand Airport, flight-tracking systems quantify adherence to recommended operational procedures, including preferred departure corridors, runway utilization practices, altitude-attainment expectations, and voluntary noise-abatement guidance. This creates a practical mechanism for monitoring operational conformance over time.

The ability to identify recurring deviations or concentrated operational patterns is particularly valuable. Rather than assuming noncompliance or relying on isolated observations, airport leadership evaluates actual operational data to determine where procedural education, pilot outreach, or operational adjustments are needed.

Analytics also support continuous improvement by allowing the airport to establish operational baselines, implement mitigation strategies, and objectively evaluate results. This creates a measurable feedback loop that strengthens accountability while helping ensure that operational initiatives remain aligned with VNAP objectives and community expectations.

Over time, this evidence-based approach improves both operational consistency and stakeholder confidence in the airport's commitment to responsible management practices.

VNAP Performance Dashboards and Leaderboards

VNAP performance dashboards (or leaderboards) will promote good airmanship, encourage participation in the VNAP, and incentivize conformance by providing a mechanism for public recognition for high performers. This information would be shared publicly, highlighting the performance of both industry stakeholders and the community.

The existing flight tracking and operations analytics platform at Vance Brand Airport can be configured to associate specific aircraft (by N-number) with the based airport, flight school, flying club, etc. This functionality enables participation and conformance analysis for both local and visiting operators, as well as evaluation of participation levels for individual flight schools or flying clubs. This information is critical for recognizing high-performance and engagement opportunities for lower-performing groups.

The intent would be to motivate participation by offering public (including community) recognition and by demonstrating to the community VNAP conformance efforts by aircraft operators, flight schools, and other organizations. "High" performance would be reported publicly, including the organization (i.e., flight school). Lower performers would be reported for internal use only, and that information would be used to engage operators to understand why they are underperforming and help them improve.

Establish Performance Metrics

Flight tracking and VNAP conformance analytics provide the opportunity for "measures of success." Questions such as: How effective is the VNAP? How many touch-and-goes occur during quiet hours (currently 8 PM- 8 AM) this year versus last year? How much of the time is the "preferred runway" used? These are common questions raised by both residents and city leadership.

Tracking operations and VNAP conformance enables definitive answers to these questions and supports the development of long-term objectives such as reducing touch-and-goes overnight in 2026 versus 2025, increasing preferential runway use by a specific percentage over 2025, or setting a specified number of flight school engagements or community or neighborhood engagements. The specific targets depend on prioritization and, ideally, on identifying objectives within the control of the airport or participating pilots, flight schools, and other operators. And worth noting, based on 2025 data, preferential runway use was approximately 65%. If forming a target for improvement, it's important to consider factors including winds, which, in the case of runway use, are the primary influence. Similarly, compliance with discouraging touch-and-goes during quiet hours (8 PM- 8 AM) was close to 90%. All measured elements and targets should be carefully considered relative to the factors and conditions within and outside the airport's direct control to identify opportunities to support success. An example would be building up the pilot/flight school outreach, particularly messaging this element to encourage greater awareness, which can lead to greater participation.

Web-Based Public Airport Operations Information and Dashboards

Providing clear, easy-to-understand information about airport operations online can help residents better understand what is happening in the skies around their neighborhoods. Flight tracking information, operational analytics, and periodic reports can give the community a more complete picture of airport activity, including overall operations, runway use, time-of-day patterns, and activity during voluntary quiet hours. When this information is presented in a simple, accessible format, it can help answer common questions, reduce uncertainty, and make it easier for residents to see how the airport monitors and supports the Voluntary Noise Abatement Program. This also enables residents to base their perceptions and decisions on factual data rather than relying on personal experience and anecdotal evidence.

Public flight-tracking websites can be useful for viewing individual aircraft activity, but they often show only a limited snapshot in time and may present information that is confusing or misleading, such as reporting "pressure altitude" versus the actual altitude above the ground. A public dashboard can provide broader

context by showing trends over days, weeks, or months. For example, a resident may notice several aircraft over a neighborhood during a short period and reasonably wonder whether pilots are following the VNAP. A dashboard can help place that experience in context by showing measurable information such as preferred runway use, prevailing wind direction, touch-and-go activity during quiet hours, and other voluntary conformance measures.

Making this information available to the public can also support more constructive conversations between residents, airport users, and City leadership. Shared information helps everyone start from the same facts, while still recognizing that individual experiences with aircraft noise are real and important. This approach can reduce confusion, improve communication, and give residents a reliable place to find information before, during, or after raising concerns.

Over time, public reporting can help build trust by showing that the airport is actively monitoring operations, sharing information openly, and using data to guide outreach and program improvements. It also gives the community a clearer view of both progress and ongoing challenges, supporting a more transparent and collaborative relationship between the airport and surrounding neighborhoods.

Moving from Anecdotal to Evidence-Based Decision Making

Discussions about aircraft impacts are often shaped by individual experiences. A particularly loud aircraft or an unusual traffic pattern can influence public perception, even when those events may not reflect broader operational trends. While these experiences are valid and important, effective long-term noise management benefits from a broader analytical perspective.

Operational analytics establish that broader perspective by placing individual observations within a measurable operational context. At Vance Brand Airport, this means decision-makers and stakeholders evaluate questions about airport activity using actual operational data rather than assumptions or anecdotal information.

Evidence-based analysis enables the airport to assess whether activity levels are changing, determine where operational concentration occurs, identify trends in procedural adherence, and evaluate the effectiveness of mitigation efforts over time. This strengthens the quality of policy discussions and provides more defensible operational decisions.

Evidence-based decision-making reduces polarization. When stakeholders have access to the same information, discussions become less adversarial and more collaborative. Data does not eliminate differing opinions, but it creates a common operational foundation that supports more informed and constructive engagement.

Aircraft Operator Collaboration and Engagement

Objectives: Establish structured, aviation-focused forums that support data-driven analysis, collaborative development of noise-abatement strategies, and peer-to-peer engagement among pilots and operators.

Technical Advisory Group (TAG)

Establish a Technical Advisory Group (TAG) focused on aircraft operations, aircraft noise, and strengthening the VNAP. A TAG can serve as an industry forum dedicated to discussing operational data and trends, evaluating the effectiveness of mitigation measures, identifying practical opportunities for improvement, and supporting outreach and education initiatives.

The purpose of the TAG should be to provide a trusted source of candid, technically grounded input that is not shaped by political considerations, public pressure, or a desire to avoid difficult conclusions. Its value would come from creating a setting where aviation subject matter experts can speak directly and constructively about what is working, what is not working, and what may be needed to improve the program. This input should be fact-based, practical, and willing to identify concerns or limitations even when those findings may be uncomfortable or contrary to prevailing expectations.

The TAG could be facilitated by the Airport Manager or a neutral third-party facilitator, depending on the needs of the process and the desired level of independence. To maintain clear accountability and consistency in communication, findings and recommendations would generally be reported to City leadership through the Airport Manager, with summaries or presentations provided to City Council as appropriate. The specific reporting structure, meeting frequency, membership, and procedures should be defined during implementation.

Specialized working groups may also be established to focus on specific tasks or projects, such as developing VNAP content for flight school instruction or preparing VNAP brochures for regional distribution. These groups should sunset once their assigned task is completed, although some may be maintained for longer-term issues requiring sustained attention, such as flight training operations, expanded industry engagement, or maintaining and improving program effectiveness as conditions change over time.

Potential participants include airport staff, pilots and aircraft operators, flight schools and flight instructors, AOPA, the Federal Aviation Administration, and other aviation industry stakeholders. To support open and productive technical discussion, participation should be focused on individuals with relevant aviation or operational expertise. A charter should be established in advance to define the group's scope, roles, expectations for conduct, confidentiality where appropriate, reporting process, and duration. Clear expectations from the outset will help ensure the TAG remains a constructive, credible, and independent source of technical guidance.

Pilot VNAP Workshops

Develop dedicated, interactive Voluntary Noise Abatement Procedures (VNAP) briefing workshops tailored specifically for local and transient pilots. These could be hosted as in-person hangar seminars or online/virtual events. These workshops will go beyond basic map handouts to provide a comprehensive look at the "how" and "why" behind the airport's specific arrival and departure restrictions. Pilots can

analyze high-resolution overlays of noise-sensitive residential boundaries, review real-world flight tracks, and participate in case-study discussions that demonstrate how to participate in the VNAP without compromising aircraft safety. By utilizing interactive Q&A sessions this specialized educational initiative can transform passive compliance into an active partnership with the pilot community and promote understanding of LMO's "Fly Friendly" operations.

FAA Safety Team Workshops

Host FAA Safety Team workshops or seminars which can cover a number of safety-related topics and integrate an overview of the voluntary noise abatement program into the briefings and discussion. Leveraging existing FAASTeam infrastructure provides a highly efficient, low-cost marketing channel that eliminates the need for separate, standalone noise workshops. To ensure lasting impact, meetings should feature physical and digital VNAP resources, such as take-home reference cards and QR codes linking to the City of Longmont’s pilot portal. Ultimately, framing VNAP education within an official safety forum reinforces a cooperative "Fly Friendly" culture, emphasizing community partnership as a vital tool for protecting the airport's longevity. Leveraging the FAAST program may enable LMO to offer the additional incentive of FAA WINGS safety program credit.

Integrate VNAP Information into the Cockpit

Integrating the VNAP into widely used electronic flight bag (EFB) applications, such as ForeFlight, would place noise-abatement guidance directly in the cockpit, where pilots make real-time operational decisions.

Augmenting airport websites, handouts, and preflight briefings, this approach presents preferred routes, reporting points, visual landmarks, altitude guidance, and other VNAP information within the same platform pilots already use for flight planning, navigation, and airport familiarization.

Making VNAP guidance available through EFB plug-ins, data layers, or downloadable content would improve pilot awareness, reduce the likelihood that local procedures are overlooked, and support more consistent voluntary conformance by both based and transient operators.

Broad dissemination of these plug-ins through flight schools, pilot organizations, airport communications, and regional aviation networks would also strengthen outreach efficiency, reinforce good airmanship, and help normalize noise-sensitive operating practices across the pilot community.

Pilot Brochures

To proactively capture the attention of both local and visiting aviators, publish and distribute high-impact, pocket-sized Voluntary Noise Abatement Procedures (VNAP) brochures through flight schools, FBOs, and airport terminals around the region. Strategically placing these visually engaging, easy-to-read trifolds at high-traffic pilot touchpoints such as the front desks and flight planning lounges helps promote awareness of the VNAP and why it's important. By expanding distribution to neighboring regional airports along the Colorado Front Range (such as Rocky Mountain Metropolitan, Boulder Municipal, and Northern Colorado Regional), the materials can effectively educate transient pilots who frequently utilize LMO and may be unaware of the noise program.

Expand Community Education and Engagement

Objectives: Strengthen transparency, improve understanding of community concerns and noise impacts, and expand meaningful pilot and community engagement.

Separate and Expand Pilot-Facing and Community-Facing Airport Information

Revise the airport section of the City's website to create separate, clearly labeled information areas for the aviation community and the public. Pilot-facing information should be organized and tailored to local pilots, visiting pilots, flight schools, flight instructors, pilot groups, and aircraft operators. Community-

facing information should be organized and tailored to residents, neighborhood groups, prospective homebuyers and renters, real estate professionals, and others seeking to better understand airport activity and aircraft noise.

Although this information should remain available to both audiences, separating would make the website easier to navigate and allow the content to be expanded in ways that are more useful for each group. The current approach places technical pilot guidance and public education materials together, which can make it harder for residents to find plain-language explanations and for pilots to quickly locate concise operational guidance.

Information intended for pilots should be technical, concise, and operationally focused. This content should clearly describe the VNAP, and voluntary measures pilots are encouraged to follow when safe and practical. This section should also describe the impact that aircraft overflights and noise can have on the quality of life for residents. Presenting this information in a pilot-focused format supports quick understanding, reinforces good airmanship, and encourages aircraft operators to minimize community impacts.

Community-facing information serves a different purpose. Residents do not need the same level of technical operational detail to understand the program, and technical aviation language can create confusion or unrealistic expectations. For example, residents may interpret voluntary recommendations as mandatory rules or assume that a flight that does not follow a recommended procedure is violating City or FAA requirements. A dedicated public-facing section can explain the VNAP in plain language, clarify what is voluntary, describe why pilots may sometimes be unable to follow a preferred procedure, and provide realistic expectations about airport activity and aircraft noise.

Public materials should be organized, easy to navigate, and written in plain language suitable for general community understanding. The public-facing section should explain airport and aircraft operations; common flight patterns; aviation safety requirements; weather and traffic factors that influence aircraft

activity; the respective roles and authorities of the airport, City, County, State, and FAA; and the difference between voluntary noise abatement practices and enforceable regulations. It should also describe the airport's economic and community benefits, existing noise abatement efforts, and the practical limits of what the airport can control.

A dedicated resident information page would provide a central location for this material. That page could include an overview of the VNAP written for the public, explanations of factors that may affect conformance, such as wind, weather, runway direction, safety considerations, aircraft performance, and the number of aircraft in the traffic pattern, and links or references to operations dashboards, complaint procedures, noise alerts, and educational materials. This structure would help pilots access the technical information they need while giving residents a clearer, more accessible explanation of airport operations and noise abatement efforts.

Educational Outreach

Conduct "Airport 101" briefings tailored to key audiences, including City Council, City leadership, community stakeholders, residents, and those living within airport influence areas. These materials should provide a consistent foundation for understanding airport operations, noise abatement efforts, and compatibility considerations, and the content should be made readily available on the airport webpage for easy access and future reference.

Content for this effort should be developed for specific applications, including website publication, live briefings for City Council and City leadership, educational presentations or e-learning modules for the community, and hard-copy documents for physical distribution.

Public Information Meetings and Forums

Hold regular community forums or workshops on a quarterly or semi-annual basis to provide ongoing opportunities for engagement, share updates on the implementation of new or enhanced VNAP elements,

and invite community feedback and discussion. These forums will serve to communicate operational trends, complaint patterns, community concerns, program updates, and upcoming or ongoing initiatives, while also providing residents with a consistent venue to ask questions and better understand airport activities and noise abatement efforts.

The city should also consider hosting specialized online meetings involving selected community representatives and flight school or pilot representatives to facilitate question-and-answer discussions on identified topics. These meetings should be facilitated and moderated to ensure a civil and productive dialogue. Other interested participants could join to listen, learn from the discussion, and submit questions either verbally or through a typed Q&A function.

Neighborhood and Community Briefings

The Community Survey indicated there are several neighborhood groups, homeowner associations, and communities surrounding the airport. This provides an opportunity for focused outreach that addresses residents' experiences, flight patterns, and noise impacts specific to the neighborhood based on geographic location relative to the airport and flight patterns. Example candidates include Nelson Park, Southmoor Park, Clover Creek, Longmont Estates, and Golden Pond, all of which are near the closed traffic / touch-and-go flight pattern and experience frequent overflights. These groups often have scheduled meetings, which would provide the opportunity for an airport briefing and direct engagement with residents. Additionally, they may have websites, newsletters, and other communications channels that provide an efficient and low-cost way to reach members of these communities. The Neighborhood Group Leaders Association (NGLA) may serve as a valuable resource for identifying key groups and strategies for initiating engagement.

Community Working Groups

Consider establishing community working groups to support program development, continuous improvement, and the ongoing review of operational trends and community impacts. These groups could

provide a structured forum for more focused dialogue among airport representatives, community members, and other stakeholders, while helping to inform future refinements to the Voluntary Noise Abatement Program. Working group charters should be established in advance, outlining the scope, role, expected conduct, and duration of working groups to establish clear expectations from inception.

Noise Alerts

Implement a standardized process for pushing notifications (i.e., Noise Alert) whenever short-term operational changes may increase aircraft noise or shift flight paths. When possible, these alerts should explain the cause and expected duration and confirm that the changes are temporary.

Publishing noise alerts helps residents understand *why* they are seeing or hearing unusual aircraft activity and provides reassurance that the change in operations is safe and acknowledged. This helps reduce speculation, strengthens trust, and aligns VNAP with best-practice community engagement. Noise Alerts are typically distributed via email and posted on an airport's website.

Conditions that could trigger a Noise Alert include:

- Airfield maintenance - When closures or maintenance activities cause a change in flight paths or the runway used, temporarily shifting overflights and the noise footprint.
- Traffic pattern changes - When aircraft must deviate from recommended or typical routes to maintain safety, avoid weather, or manage emergencies.
- Special events – During special events such as visiting military operations, training exercises, etc., that result in different aircraft, different flight paths, increased operations, or noise.

Noise Complaint Management, Reporting, and Transparency

Objectives: Improve public understanding of airport operations, strengthen communication between the airport, the city, and surrounding neighborhoods, and ensure complaint data is used constructively to support program improvement.

Noise Complaint System Improvements

Residents may feel uncertain about how noise complaints are received, reviewed, and used, and whether their concerns lead to any meaningful follow-up. At the same time, complaint data can provide valuable insight into recurring concerns, potential opportunities to improve pilot participation, possible refinements to the VNAP, and areas where additional community education or outreach may be helpful.

Noise complaints are currently submitted through the City's broader comment and complaint platform. Access to the system is easy to find on the Airport webpage. However, the information collected is limited. The form currently allows users to select a general aircraft category, such as general aviation, helicopter, jet, skydiving, or other, and then provide a written description of the question or concern.

To make complaint information more useful for investigation, analysis, and reporting, the existing system should be expanded to collect additional information, including:

- Date and time of the event
- Address (to enable investigation of the overflight or noise event)
- Nature of complaint (i.e., too loud, too low, frequency of flights, late night/early morning, etc.).
- Type of operation (i.e., take-off, landing, touch-and-go, skydiving, hovering, etc.).
- Aircraft description (if known)

Collecting this information would allow the airport to investigate specific noise events more effectively, better understand community concerns, and identify recurring patterns over time. Where possible, the

complaint form should use structured fields, such as drop-down menus, checkboxes, or other predefined response options, rather than relying solely on open-ended text fields. Structured data is easier to sort, compare, summarize, and analyze across multiple complaints, whereas open-text responses often require manual review and interpretation before they can be used to identify trends or support reporting. Open comment fields should remain available so residents can describe their experiences in their own words, while structured fields should provide the foundation for analysis.

The airport should also establish a clear workflow and feedback loop, so residents understand that their concerns have been received, reviewed, and, when appropriate, considered for follow-up action. In some cases, complaints may identify opportunities for targeted outreach or public education to address misunderstandings, explain operational constraints, or clarify how the VNAP works. Providing confirmation that a complaint has been reviewed demonstrates responsiveness and can help reduce frustration, even when the underlying noise issue cannot be fully resolved.

The airport should improve the visibility, accessibility, and transparency of its noise complaint reporting process, so community members clearly understand where to submit concerns, who receives and reviews them, and how complaint information is evaluated and used. A more transparent process can help build public trust by showing that complaints are not simply collected, but are reviewed for trends, operational relevance, and opportunities to improve the program. Clearly explaining how complaint information supports outreach, education, operational review, and future refinements to the Voluntary Noise Abatement Program would help residents feel heard while strengthening the credibility and usefulness of the complaint management system.

Noise Complaint Tracking, Analytics, and Reporting

Implement a formal noise-complaint management system and workflow that tracks submissions, identifies trends and potential root causes, supports investigations, and improves overall responsiveness and customer service. Complaint data should be analyzed not only to document concerns but also to

better understand community impacts, support operational reviews, and inform future mitigation strategies. When used effectively, this information strengthens public engagement by helping the airport explain recurring issues, respond more clearly to residents, and demonstrate how complaint trends are informing ongoing program improvements.

Transparency and Reporting

Implement regular operational reporting to support transparency, improve accountability, and reduce reliance on anecdotal perceptions of airport activity and noise impacts. Recurring reporting, such as monthly or quarterly updates, provides stakeholders and community members with a clearer understanding of aircraft operations trends, Fly Friendly conformance metrics, noise complaint activity, and ongoing program implementation and outreach efforts.

When presented consistently and in an accessible format, this reporting demonstrates that the airport actively monitors conditions, evaluates program effectiveness, and pursues continuous improvement over time. Some airports maintain public-facing dashboards that summarize complaint activity, geographic distribution, and actions taken, thereby further enhancing transparency and public understanding.

Land Use Planning and Real Estate Coordination

Objectives: To improve awareness of aircraft activity and compatibility considerations among prospective residents, property owners, developers, and planning agencies to support informed decision-making, reduce future misunderstandings regarding airport noise, and promote long-term land use compatibility near the airport.

Aircraft Operations and Impacts Information for Prospective Homebuyers

The airport and City should enhance the availability of information for prospective homebuyers and renters within airport influence areas so that potential residents gain a clearer and more accurate understanding

of aircraft activity, typical flight patterns, potential noise exposure, and existing noise abatement efforts. This includes developing public-facing educational materials on the City's website that explain airport operations, describe and map the Airport Influence Area, and establish realistic expectations regarding aircraft activity and compatibility considerations.

Real Estate Agent Engagement

Engage local real estate professionals to raise awareness of aircraft flight patterns, noise, and potential impacts on property sales and leasing decisions. Noise generated by aircraft operations near a particular home varies with factors such as location, surroundings, time of day, runway use, wind, weather, and season. Engaging and educating local real estate professionals helps ensure that prospective homebuyers and renters receive accurate and consistent information about nearby aircraft activity, typical flight patterns, and the potential for aircraft noise before making purchasing or leasing decisions.

By increasing awareness among agents, brokers, and property managers, aircraft operations and potential impacts are more consistently communicated during real estate transactions and better understood by prospective home buyers and renters, helping establish realistic expectations, reduce future misunderstandings or complaints, and support more informed housing decisions, particularly within the airport influence area.

Noise Information / Disclosures

The city should consider the benefits of incorporating airport-related noise information or disclosures into real estate transactions. This recommendation will help prospective homebuyers make more informed decisions by ensuring they have access to clear, accurate information about airport activity, aircraft noise exposure, and typical flight operations before purchasing a home.

Land Use Planning and Coordination

Continue and strengthen coordination between airport management and local planning agencies so airport compatibility considerations are included early in land-use planning, zoning changes, development review, and other decisions affecting areas near the airport. The airport should be given an opportunity to review and comment on proposed land-use changes within the airport influence area, so that potential aircraft overflight, noise exposure, flight patterns, operational needs, and documented community concerns can be considered before decisions are finalized. This coordination is especially important in areas with frequent aircraft activity, known overflight patterns, or elevated noise-complaint volumes. Incorporating airport input into the planning process can help ensure that new residential and other noise-sensitive developments are compatible with existing and future aircraft operations, reduce the likelihood of future land-use conflicts, and support more informed decision-making by the City, developers, property owners, and residents.

Evaluate the Application of Landing Fees

Public comments referenced the need for landing fees to discourage training activity originating at other general aviation airports within the region. This concern assumes that Vance Brand Airport charges lower landing fees than nearby airports and does not assess fees for touch-and-go operations, unlike other local comparable airports.

A limited study was conducted comparing landing fees at airports in the region. The study suggests that most airports in the area charge landing fees for aircraft weighing 12,500 pounds or more, typically based on maximum takeoff weight (MTOW). Approximately 90% of operations at Vance Brand Airport involve light general aviation aircraft, which typically weigh between 1,500 and 3,000 pounds.

Additionally, federal guidelines strictly prohibit imposing landing fees for environmental mitigation, including noise abatement. To remain compliant with the Federal Aviation Administration (FAA) Policy

Regarding Airport Rates and Charges, fee structures at all federally obligated, public-use airports must be "fair, reasonable, and not unjustly discriminatory." Restrictions based on specific aeronautical activities, including touch-and-goes, would likely be characterized by the FAA as unjust discrimination.

If an airport sponsor explicitly uses charges (economic penalties) to restrict access or discourage specific flight operations (i.e., touch-and-goes) as a noise abatement strategy, it would violate FAA Grant Assurance 22 (Economic Nondiscrimination) and would conflict with the Airport Noise and Capacity Act of 1990 (ANCA).

Continuous Improvement of the Noise Program

Objectives: Continuously improve the effectiveness of the Voluntary Noise Abatement Program, better understand community concerns and aircraft noise impacts, and foster meaningful collaboration with the community and aviation stakeholders.

Post-Implementation Monitoring

Following the implementation of new or expanded VNAP initiatives, establish an ongoing post-implementation monitoring process to evaluate program performance over time and determine whether the intended outcomes are achieved. This effort should draw on available operational data, complaint trends, conformance information, and stakeholder feedback to assess effectiveness, identify emerging issues, and inform future adjustments. A flight-tracking and operations analytics platform would provide data based on actual conditions and monitor conformance with the VNAP recommendations, enabling reporting based on factual data rather than individual perceptions. With the proper tools, this can be automated to produce consistent, accurate, and reliable data with minimal demand for staff resources. And reports can be generated for internal analysis, working group review, and public reporting.

To support continuous improvement, the airport should develop a structured framework for regularly reviewing program performance, refining mitigation measures where appropriate, and maintaining stakeholder engagement as conditions evolve. Temporary or standing technical working groups may be established to support implementation, monitoring, and outreach efforts. These are often established with defined sunset provisions tied to specific milestones, deliverables, or stages of program maturity.

Additional Support (Internal or External/Contract)

As Vance Brand Airport continues to experience growth in regional flight training activity and increased community attention to aircraft noise impacts, the complexity and administrative demands of managing the airport's noise program have increased significantly. Effective noise management is no longer a routine administrative function; it requires ongoing analysis of operational data, including ADS-B flight tracking, proactive community engagement, coordination with regional flight schools and airport stakeholders, and responsive management of noise-related concerns. This demand will likely continue to grow.

To support ongoing resource demand and the additional work associated with the program expansion opportunities described in this report, the city should consider allocating staffing dedicated to noise program support. This may be accomplished either through internal staffing or specialized outside/contract support. Dedicated support would help ensure consistent oversight of airport-community relations, noise complaint management, Voluntary Noise Abatement Program (VNAP) administration, operational monitoring, and stakeholder outreach and engagement.

While establishing a dedicated staff position may provide long-term institutional knowledge, many airports find that contracting with specialized aviation noise management subject-matter experts offers a more flexible and cost-effective alternative. Contracted support can be structured around fixed annual budgets, specific deliverables, or on-call assistance, allowing resources to scale with program needs. Typical services may include noise complaint investigation and response, operational and technical analysis,

flight tracking evaluation, VNAP conformance monitoring, reporting and promotion, stakeholder coordination, and facilitation of public meetings and outreach efforts.

This approach can provide access to specialized expertise and analytical capabilities at a cost comparable to, or in some cases, lower than, that of a qualified part-time employee, while avoiding the overhead and long-term commitments associated with adding permanent staff. Additionally, consulting support can be engaged as needed, providing flexibility to address periods of increased activity, community concern, or program development initiatives.

Conclusion

A successful voluntary noise abatement program depends on extensive and sustained collaboration and communications among airport operators, pilots, flight schools, residents, elected officials, and other stakeholders. While voluntary programs cannot eliminate all aircraft noise impacts, meaningful improvements can be achieved through education, transparency, operational awareness, data-driven monitoring, and ongoing engagement. The greatest opportunity at Vance Brand is not necessarily to add more rules, but to make the airport's existing Voluntary Noise Abatement Program more measurable, more visible to both pilots and residents, more precise in its guidance, and more integrated into daily pilot behavior.

These recommendations provide a practical framework for strengthening the airport's existing Voluntary Noise Abatement Program while balancing aviation operational needs, regulatory constraints, community expectations, and broader quality-of-life considerations. Taken together, these recommendations will help advance the airport's Voluntary Noise Abatement Program toward a more data-driven, transparent, and stakeholder-integrated system. In practice, this means strengthening the program not only through expanded procedures but also through better visibility, clearer guidance, improved monitoring, and more consistent integration into flight school, pilot engagement, and community outreach.

Given the technical complexity and sustained effort required to develop and implement these recommendations, the City should consider retaining a qualified aviation noise consultant to support staff in developing, implementing, and analyzing noise program initiatives. Consultant support would provide specialized expertise in airport operations, flight tracking analytics, noise program administration, stakeholder engagement, and performance reporting, while helping staff maintain consistent progress, evaluate outcomes objectively, and adapt recommendations over time as operating conditions, community concerns, and program priorities evolve.

Appendix I – AOPA Noise Awareness Steps

AOPA
your freedom to *fly*

AOPA Noise Awareness Steps

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

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

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