VANCOUVER INTERNATIONAL AIRPORT

2025 Aeronautical Noise Management Report

EXECUTIVE SUMMARY

In 2025, Vancouver International Airport (YVR) experienced continued growth in aircraft movements, passenger traffic, and cargo volumes. A total of 26.9 million passengers travelled through the airport, marking a new record for YVR. Cargo shipments also reached the highest volume ever. While the passenger numbers reached a new peak, surpassing the previous record in 2019, aircraft movement remained below pre-pandemic levels, indicating aircraft are carrying more passengers and cargo per flight.

As traffic levels increased to meet the air travel demands of the region, the Vancouver Airport Authority (Airport Authority) remained committed to managing noise from aircraft and airport operations to reduce the impact on surrounding communities. Key highlights of noise management activities in 2025 included:

- Supporting NAV CANADA with stakeholder engagement, community communication, and noise monitoring efforts for airspace changes associated with the Vancouver Airspace Modernization Project (VAMP);
- Reviewing and updating noise management information materials on the YVR website;
- Coordinating to ensure timely and effective communication on irregular operations;
- Hosting meetings with the Aeronautical Noise Management Committee to support community-industry dialogue; and,
- Presenting the annual YVR Fly Quiet Awards to raise awareness of noise issues in the aviation community and celebrate operators demonstrating good noise management practices at YVR.

The Airport Authority also continued its efforts to engage with the community on aircraft noise issues and responding to questions and concerns from residents. In 2025, a total of 1,423 concerns were registered by 175 individuals. This is an increase in the number of concerns but a decrease in the number of individuals compared to 2024. Approximately 79% of the total concerns were received from three individuals.

Based on trends observed in 2025, the Airport Authority has identified several areas for close monitoring in 2026, including changes in noise exposure following the implementation of new arrival routes introduced as part of VAMP, trends in nighttime operations, and shifts in the geographic distribution of noise concerns.

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INTRODUCTION

The Vancouver Airport Authority (the Airport Authority) is a private, non-share capital corporation that manages and operates Vancouver International Airport (YVR) in service of our community and economy that supports it. The Airport Authority took over management of YVR from Transport Canada in 1992 under a long-term ground lease agreement and is committed to operating YVR in a manner that minimizes negative impacts on the environment, while providing 24-hour airport services to support the business and travel demands of the region.

As part of YVR's Ground Lease requirements with the Government of Canada, the Airport Authority is responsible for noise management activities for operations related to YVR, including monitoring noise levels and responding to noise complaints for aircraft arriving and departing YVR up to 10 nautical miles from the airport. To manage noise from aircraft and airport operations, the Airport Authority has a comprehensive noise management program and uses a sustainability framework in its which integrates the economic, environmental, social, and governance aspects of our business and provides a balanced approach for our corporate objectives and our commitment to the local community.

The objective of this report is to share information with the community about activities undertaken as part of the YVR Aeronautical Noise Management Program, and to facilitate informed dialogue between stakeholders involved in managing aircraft noise. Data and information compiled for this report also helps to support discussions with members of the YVR Aeronautical Noise Management Committee (ANMC), a key consultative forum where independently appointed community and industry representatives share information and provide advice and input on the development of initiatives to the Airport Authority through a collaborative process.

2025 YVR NOISE MANAGEMENT HIGHLIGHTS

The Airport Authority is committed to advancing efforts on noise management. Annual work plans are guided by a broad set of initiatives contained in the 2025-2029 YVR Noise Management Plan, developed with input from the community and support from the YVR ANMC. Highlights of noise management activities in 2025 are summarized below.

VANCOUVER AIRSPACE MODERNIZATION PROJECT

The Airport Authority continued to support NAV CANADA on their Vancouver Airspace Modernization Project (VAMP).

This multi-year project was initiated in response to an audit of operations completed by Transport Canada in 2017 that recommended a prioritized review of the airspace to enhance safety. The objective of the Project was to enhance safety in the region and modernize the airspace while reducing the industry's environmental impacts such as noise and carbon emissions.

As part of VAMP, new arrival procedures and routes were introduced for YVR on 27 November 2025[1], resulting in changes to the flight paths used by aircraft approaching the airport over some communities. To inform residents about the project and to collect feedback on initial proposed airspace designs, NAV CANADA conducted extensive public consultations between December 2022 and February 2023. Community feedback was reviewed, and mitigation measures were assessed and incorporated into the final procedures where feasible and safe, leveraging advances in air traffic management technologies.

Prior to the implementation of the new flight paths, NAV CANADA provided updates to key stakeholder groups, including municipalities, elected officials, and the ANMC. Additionally, a public Consultation Report and community-specific reports were posted on the NAV CANADA project VAMP website, which provided background information on the project, a summary of the community consultation process, detailed explanation of the final airspace designs, and implementation timelines. This material was also sent directly to residents who had participated in the community consultation process.

[1] Additional procedures based on Required Navigation Performance criteria will be introduced as part of Phase 2 of implementation in Spring 2026.

Operations not within the scope of VAMP include:

- YVR Departure Operations: there are no changes to procedures and flight paths used by departing YVR aircraft.
- VFR Routes and Procedures: there are no changes to routes and procedures used by aircraft operating under Visual Flight Rules - this includes float planes operating off the Middle Arm of the Fraser River as well as most aircraft operating from other airports in the region.

NAV CANADA will prepare a post-implementation review report 180 days after implementation of all new procedures. This report will be made available to the public.

Changes to Arrival Routes

When designing the new arrival routes, NAV CANADA made efforts to locate flight paths over less populated areas and to address community feedback received during the public consultation process through mitigation measures where possible. However, it is not possible to completely avoid overflights of populated areas as the airspace designs must meet strict Transport Canada design criteria to ensure a high level of safety, and some communities may be affected by the changes.

Figures 1 and 2 illustrate flight tracks of aircraft using the old and new arrival routes during Runway 26 and Runway 08 operations, respectively. One of the major changes associated with the new designs is the move of the new north downwind segment farther north from its old location. While this change benefited communities under the old north downwind segment, it also resulted in shifting some arrival traffic over communities that had not previously experienced many arrival overflights before.

More details about the new procedures are available in the Consultation Report and community-specific reports posted on the VAMP website.

FIGURE 1: Flight Tracks of Aircraft Using New vs. Old Arrival Routes – Runway 26

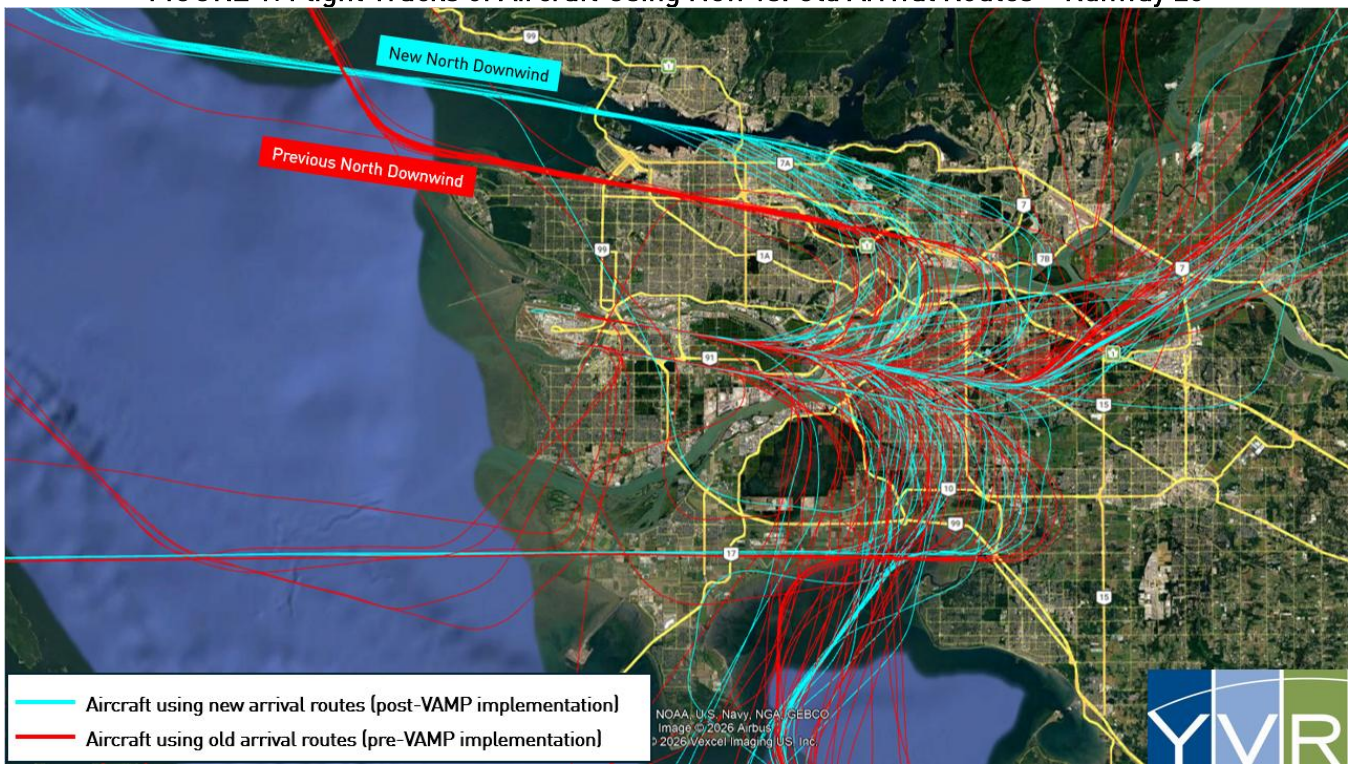
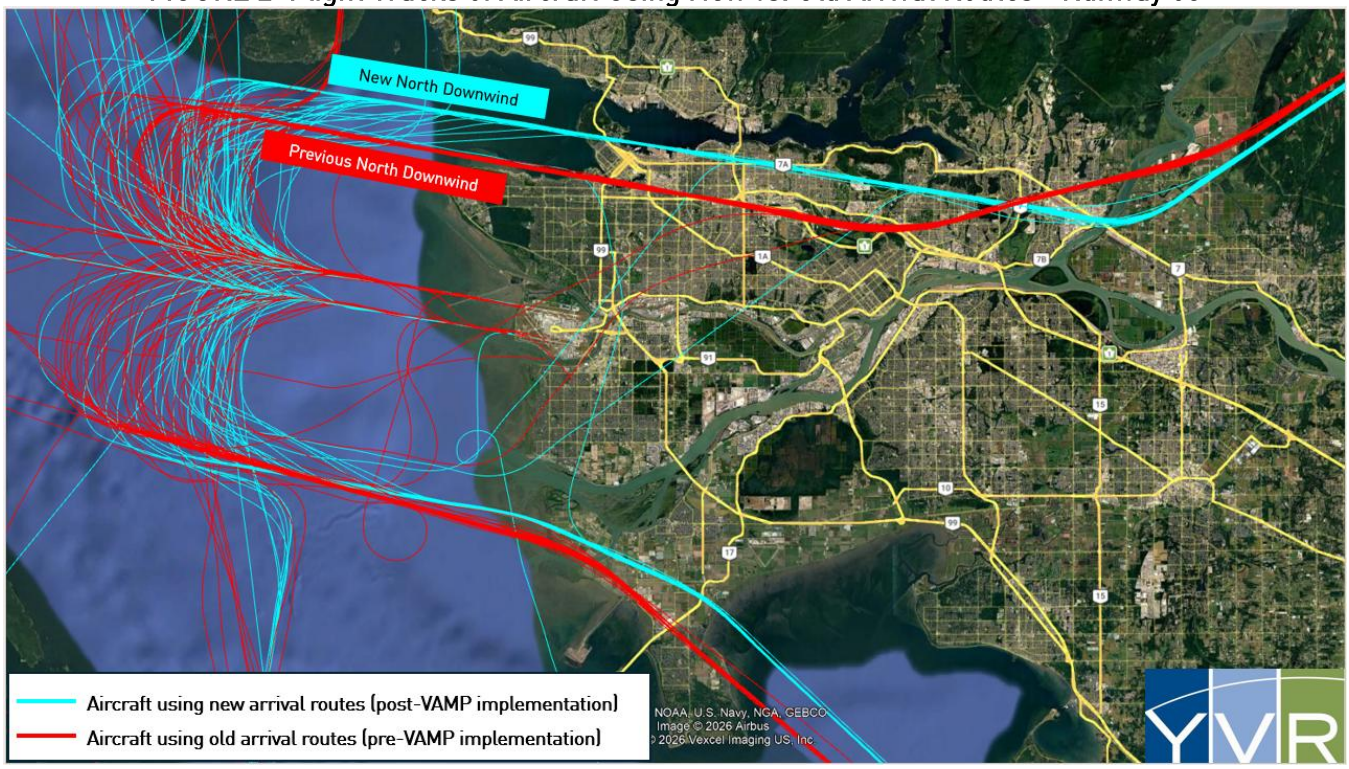


FIGURE 2: Flight Tracks of Aircraft Using New vs. Old Arrival Routes - Runway 08



Ensuring Functional and Reliable Collection of Noise Monitoring Data

The Airport Authority maintains a network of noise monitoring terminals (NMTs) throughout Metro Vancouver to assess the contribution of aircraft noise in the community. To help respond to anticipated questions and concerns from residents about the airspace change, the Airport Authority initiated discussions with the City of Burnaby to install a permanent NMT at a location under the new north downwind.

While the goal was to have the NMT installed prior to implementation of new arrival routes, installation was delayed due to ongoing discussions with the City and became operational in March 2026. To assist NAV CANADA collect baseline noise monitoring data before the new routes were introduced, the Airport Authority assisted with the coordination of temporary noise monitoring with the support of a local acoustical consulting firm. The Airport Authority will continue to support NAV CANADA with additional supplemental noise monitoring. Noise monitoring data and community feedback collected following the introduction of new arrival routes will be reviewed in NAV CANADA's 180-day post implementation findings to inform discussions on potential operational refinements and future monitoring priorities.

Noise monitoring data is used for educational and information purposes only and is not used for regulatory compliance, as all aircraft operating in Canada meet required international and Transport Canada noise and emissions standards. Additionally, there are no *Canadian Aviation Regulations* or noise abatement procedures where compliance is based on measured noise levels, and there are no established noise limits that dictates an operational change to air traffic control operations or the redesign of airspace.

AERONAUTICAL NOISE MANAGEMENT COMMITTEE (ANMC) MEETINGS

The ANMC provides a forum for discussion and consideration of all aeronautical noise management issues at the airport. The membership includes a diverse group of stakeholders representing municipal staff, citizens, Musqueam, and industry partners. In 2025, three meetings were hosted – two online and one in-person. Updates by NAV CANADA on VAMP were provided at the in-person meeting to better support discussions. The meeting minutes are posted on the YVR website.

WEBSITE REVIEW AND UPDATE

In 2025, a review and update of noise management information materials posted on the YVR website was completed. The objective of this work was to enhance clarity and accessibility of website materials as well as to ensure all information is current and up-to-date.

This work was identified as an initiative in the 2025-2029 Noise Management Plan based on input received from resdients during the development of the Plan identifying the YVR website as their source of information on noise management activities.

The work included the followings tasks:

- Gathering input from ANMC members on the content and structure of existing website materials and soliciting suggestions for improvement;
- Conducting an audit of the Noise Management section of the website;
- Updating factsheets and converting them from PDF format to website pages to enhance accessibility and searchability; and,
- Creating a new video explaining noise operating restrictions at YVR.

The updated content and video were also made available in French, and the materials can be viewed at www.yvr.ca/noise.

IRREGULAR NORTH RUNWAY USE

Between March 30 and May 21, the north runway was temporarily used for departures during the daytime, between 7 AM and 10 PM, while the south runway was used for arrivals due to unplanned work related to the North Runway Modernization Program. During this period, 54 concerns were registered by 30 individuals regarding the irregular runway use. The majority of these concerns were received during Runway 08 operations, which has aircraft taking off over the City and landing over the water due to easterly wind conditions. To inform the community about the temporary change to operations, a community advisory was posted on the YVR newsroom, and it was updated as new information became availalble.

Routine and preventative maintenance on the south airfield also continued on selected nights throughout 2025. On these nights, the south runway is closed, and the north runway is used for all departures and arrivals between 10 PM and 7 AM. The Airport Authority is committed to providing advance notice to the community regarding upcoimng airfield work and associated runway closures whenver possible.To meet this commitment, the south runway maintenance schedule is posted and updated regularly on the YVR website

YVR FLY QUIET AWARDS

The 20th annual YVR Fly Quiet Awards were presented at the annual YVR Chief Pilots Meeting in May, 2025. The goal of these awards is to support best noise management practices and raise awareness of noise issues within the aviation community. The winners were:

Jazz Aviation - Propeller Aircraft Category

Porter Airlines – Narrow-body Jet Category

All Nippon Airways – Wide-body Jet Category

YVR OPERATIONS IN REVIEW

Aircraft movements and passenger traffic continued to grow in 2025, each experiencing a 3% increase compared to 2024. In particular, the number of passengers reached a new record of 26.9 million. Cargo movements also reached the highest volume ever.

TABLE 1: Operational Statistics for YVR, 2023-2025

	2023	2024	2025
Total Aircraft Movements	**284,403**	**289,395**	**297,350**
Runway Movements	250,332	257,660	264,054
Non-Runway Movements	34,071	31,735	33,296
Total Cargo (Tonnes)	**316,485**	**339,276**	**364,742**
Total Passengers	**24,938,184**	**26,205,801**	**26,912,704**

Figure 3 illustrates the historical trend of annual aircraft movements and passengers at YVR over the past 20 years between 2006 and 2025. While the passenger numbers reached a new peak in 2025, surpassing the previous record in 2019, aircraft movements remained below pre-pandemic levels. This trend indicates that aircraft are carrying more passengers and cargo per operation, which has the benefit of reducing noise and emissions.

Figure 4 illustrates the annual average hourly runway movements by arrivals and departures in 2025. The runway movements are observed to increase at 6 AM, with peaks experienced throughout the day. Approximately 4% of the total annual runway movements occurred between midnight and 6 AM. The following section provides more detailed analysis of night operations.

FIGURE 3: Annual Aircraft Movements & Passenger Statistics, 2006-2025[2]

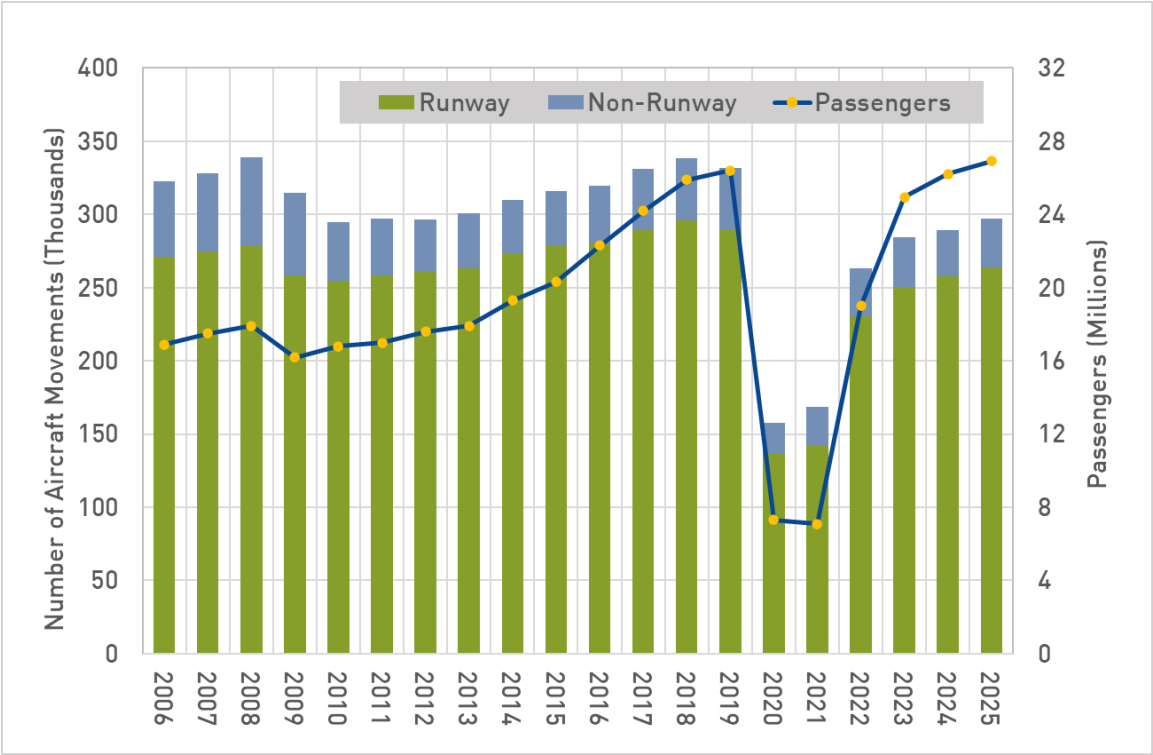
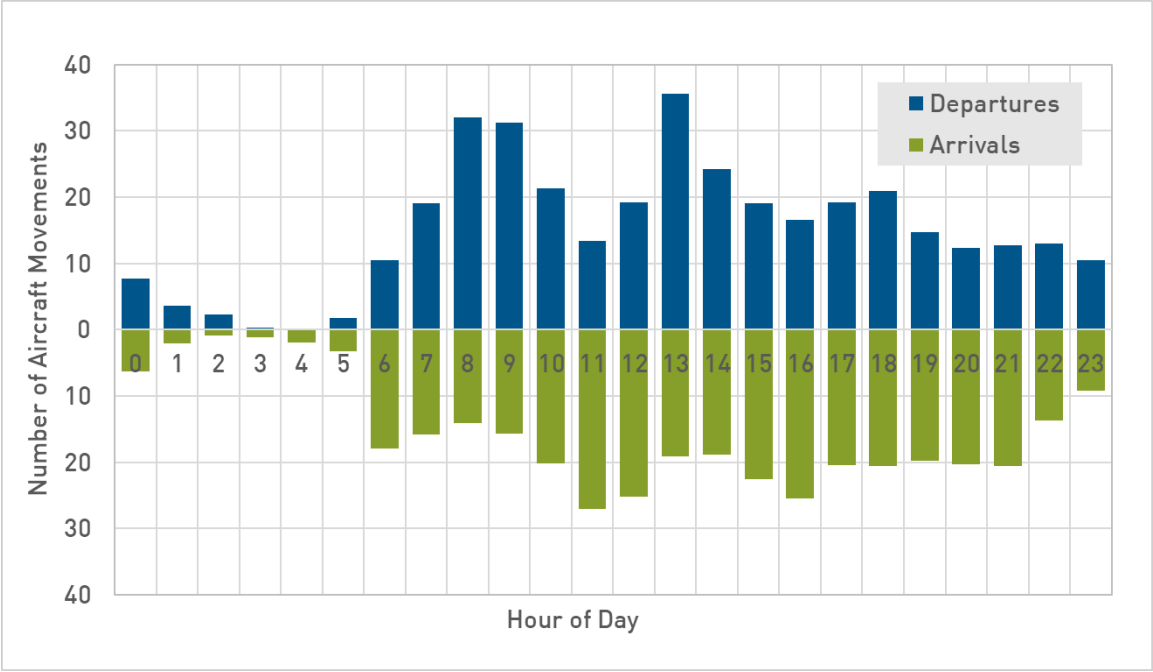


FIGURE 4: Average Hourly Runway Movements, 2025



[2] This chart includes both runway and non-runway movements. Non-runway movements include helicopter and floatplane operations.

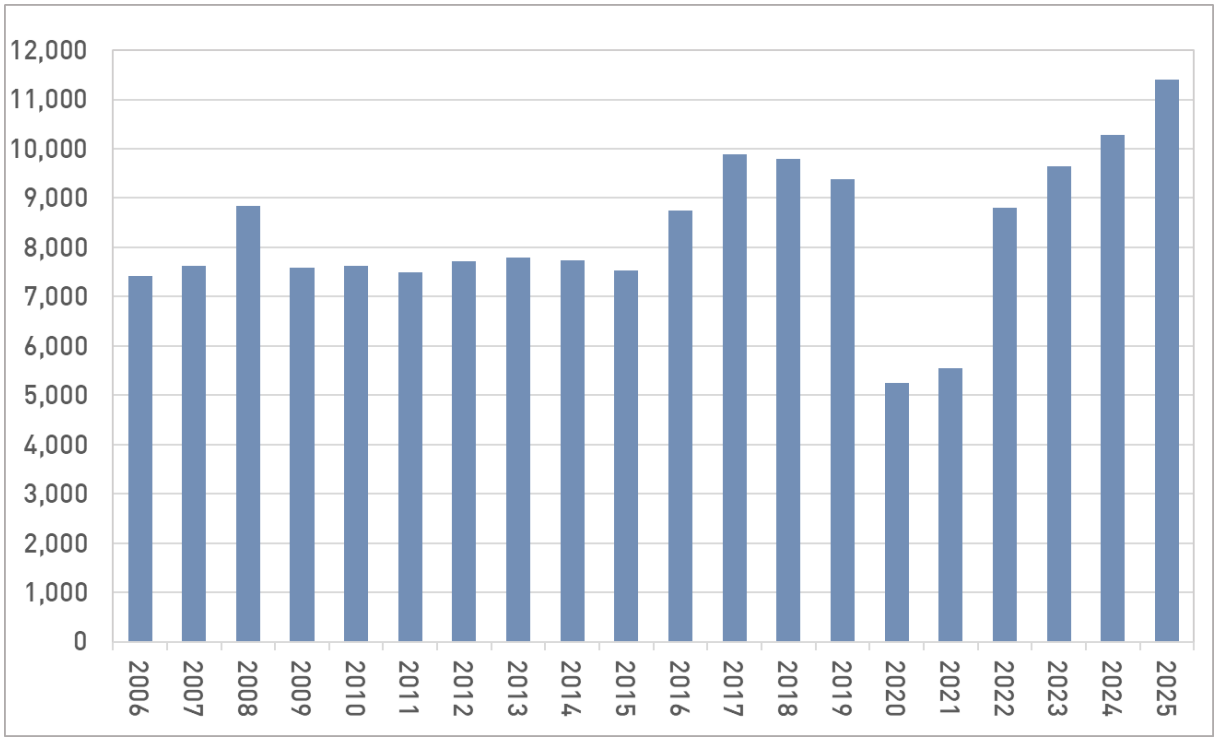
NIGHT OPERATIONS

Like most international airports worldwide and all international airports in Canada, YVR is open 24 hours a day to serve the air travel and business demands of the region. Movements at night are typically associated with courier, cargo, and passenger services including several long-haul international passenger flights operated by wide-body aircraft.

In 2025, there were a total of 11,404 runway movements during the night-time period[3], representing approximately 4% of the total runway movements. On average, this equates to an average of 31 movements per night. Of these, 51% were departures, and 49% were arrivals.

YVR has always been open 24-hours a day, including when the airport was managed by Transport Canada prior to the transfer to the Airport Authority in 1992. **Figure 5** provides the annual night-time runway movements over the past 20 years between 2006 and 2025.

FIGURE 5: Annual Night-Time Runway Movements, 2006-2025



[3] For this report, the night-time period is the hours between midnight and 6:00 AM local time.

As illustrated, following a significant decline in 2020 and 2021 due to the global COVID-19 pandemic, night-time runway movements exceeded pre-pandemic levels in 2024. In 2025, night-time runway movements increased further compared to 2024. There were several factors influencing this trend, including the continued extension of U.S. Customs and Border Protection preclearance hours, which started in summer 2023, resulting in additional transborder flights. While most of these flights are scheduled before midnight, the actual time for take-offs and landings may occur after midnight due to delays, weather conditions, and traffic volume on the airfield. Other contributing factors included additional domestic passenger flights during the night and early morning hours, as well as growth in long-haul passenger international services.

To manage the impact of operations at night, YVR includes the following practices in its published Noise Abatement Procedures, which are monitored for compliance.

- A prior approval requirement for the departure of jet aircraft rated over 34,000 kg (maximum take-off weight) between the hours of midnight and 6 AM.
- Use of preferential runways to keep arriving and departing aircraft over the Strait of Georgia, depending on operational feasibility and weather conditions.
- Early turn and vectoring procedures for aircraft on certain routes to minimize over-flights of populated areas.
- Closure of the north runway between the hours of 10 PM and 7 AM, except in the event of an emergency or maintenance of the south airfield.

In 2025, there were no suspected violations of the published Noise Abatement Procedures reported to Transport Canada. The Airport Authority continues to monitor trends in night operations and regularly reviews the published Noise Abatement Procedures as well as operational procedures and guidelines to ensure they remain relevant and current to manage the impacts of operations at night.

JET FLEET MIX BY NOISE CERTIFICATION

The International Civil Aviation Organization (ICAO) is an agency of the United Nations and establishes principles for the planning and development of international air transportation to ensure safe and orderly growth. The ICAO Committee on Aviation Environmental Protection (CAEP) prescribes standards for noise with the goal of promoting reduction at the source. These standards are contained in *Annex 16: Volume I Environmental Protection - Aircraft Noise* and categorize jet aircraft as either Chapter 2, Chapter 3 or Chapter 4 depending on the Gross Take-off Weight (GTOW) of the aircraft and sound level measurements taken at three different locations (take-off, landing, and sideline)[4].

The Chapter 14 noise standard was confirmed at the 9th meeting of CAEP in February 2013. This standard applies to new aircraft types over 55,000kg certified after 2017 and to new aircraft types less than 55,000kg after 2020. To meet the Chapter 14 standard, aircraft must be at least 7 EPNdB (Effective Perceived Noise in Decibels) quieter than the current Chapter 4 standard. This reduction is cumulative over the three measurement points: take-off, landing, and sideline.

In 2025, it is estimated that approximately 93% of the movements at YVR by jet aircraft with a GTOW over 34,000kg were with an aircraft type that met Chapter 4 or Chapter 14 noise certification standards. In addition, it is estimated that approximately 82% of movements by jet aircraft with a GTOW over 34,000 kg operating between the hours of midnight and 6:00 AM were with an aircraft type that met Chapter 4 or Chapter 14 noise certification standards.

Airlines worldwide continue to invest to upgrade their aircraft fleets. These new aircraft types have improved noise and emission benefits compared to the older aircraft types they replace.

[4] The Government of Canada legislated the phase-out of older noisier Chapter 2 jet aircraft over 34,000kg from operation in Canada by 2002. These aircraft are no longer permitted to operate in Canada and were either retired from operation or modified to meet Chapter 3 standards. A few exemptions were granted for aircraft operating from airfields in northern Canada.

AIR TRAFFIC FLOW

The active runway in use, i.e., the direction of take-offs and landings, at any given time is determined by wind conditions at the airport as aircraft must take-off and land into the wind for safety reasons.

At YVR, the predominant winds are typically in an easterly or westerly direction. As such, the main parallel runways at YVR, the south runway (08R/26L) and the north runway (08L/26R), are aligned in an east-west direction with magnetic headings of 083° and 263°. Based on historical observations, traffic flow in an easterly direction (Runway 08L and Runway 08R active) is more common during the fall and winter months, and traffic flow in a westerly direction (Runway 26L and Runway 26R active) is more common during the spring and summer months.

The published YVR Noise Abatement Procedures prescribe a westerly flow of traffic (Runway 26 active) as the preferred mode of operation whenever possible to reduce noise exposure on the community. Westerly flow places departures, the noisiest type of operation, over the Strait of Georgia. In addition, NAV CANADA will attempt to accommodate two-way flow between the hours of 11:00 PM and 6:00 AM to keep both arriving and departing aircraft over the Strait of Georgia to minimize over-flights and noise on the community. This operation is subject to traffic volume, airfield activities, and weather conditions.

RUNWAY USE

At YVR, during normal operations, the south runway is the primary 24-hour runway, and the north runway is closed every night between the hours of 10:00 PM and 7:00 AM, except during emergencies and airfield maintenance on the south airfield. The Airport Authority is required to close the south runway on selected nights throughout the year to conduct preventative and routine maintenance as well as construction projects to ensure a high level of safety for passengers and aircraft. On these nights, the north runway is used for all departures and arrivals between 10:00 PM and 7:00 AM. To inform the community about upcoming airfield work and schedules, the south runway maintenance schedule is posted and regularly updated on the YVR website.

Between the hours of 7:00 AM and 10:00 PM, the north runway is used primarily for landings; however, it can be used for departures when traffic demand approaches capacity, such as during peak times, to reduce delays as well as during emergencies or maintenance.

Figures 6 and **7** on the following page illustrate the distribution of arrivals and departures on all runways in 2025.

FIGURE 6: Runway Arrival Distribution, 2025

FIGURE 7: Runway Departure Distribution, 2025

ENGINE RUN-UPS

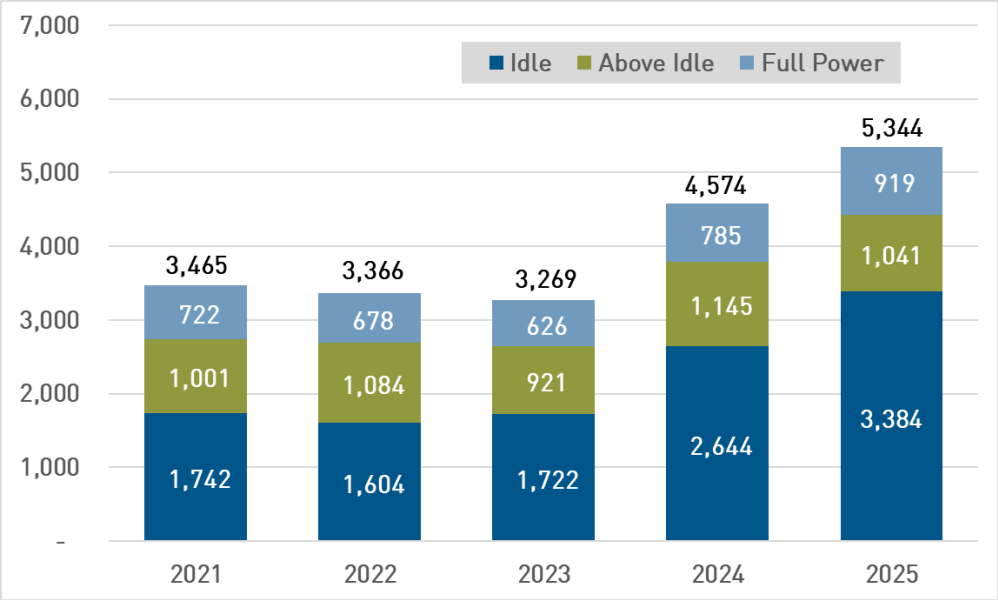
Transport Canada standards require regular maintenance of aircraft to ensure safe operations. Engine run-ups are a critical part of maintenance work and involve operating the engines at various power settings to test components and to simulate flight conditions. These tests are often a required step in the maintenance process and verify that the aircraft is airworthy and safe for its return to service.

To ensure a high level of safety on the airfield and to reduce community noise exposure from run-up activities, the Airport Authority maintains directives and procedures that prescribe how, when, and where run-ups can be performed. Information collected on run-up activities are routinely analyzed to track and identify trends and to ensure directives and procedures remain up to date.

Figure 8 provides the annual number of run-ups at YVR by power setting between 2021-2025. From 2021 to 2023, run-up activity remained relatively low following the global pandemic, before returning to the pre-pandemic levels in 2024. In 2025, a total of 5,344 run-ups were performed, which is an average of about 15 run-ups per day.

The increase in the number of run-ups observed in 2025 compared to 2024 was largely attributable to a higher number of run-ups performed at an idle power setting. This is likely due to increased maintenance activities corresponding with higher flight volumes. Run-ups performed at full power also increased compared to 2024, which was primarily associated with propeller aircraft conducting run-ups in the Ground Run-up Enclosure (GRE), a three-sided open roof facility whose walls are designed to absorb and redirect noise from run-ups perform in the facility.

FIGURE 8: Number of Run-ups Performed at YVR by Power Setting, 2021–2025



Further analysis of the 5,344 run-ups in 2025 shows:

- 63% of the run-up were performed at an idle power setting, 19% were at an above idle power setting, and 17% were at a full power setting.
- While run-ups are performed at all hours of the day, 34% of the total run-ups were performed during the nighttime period between midnight and 6:00 AM.
- 60% of the run-ups were performed by the operators located on the south side of the airport and 40% of the run-ups were performed by the operators located on the north side of the airport, with the south runway acting as the dividing line.
- 69% of all high-power run-ups (above idle and full power settings) performed by south side operators were conducted in the GRE. Between midnight and 6 AM, 98% of high-power run-ups by south side operators were conducted in the GRE.

NOISE CONCERNS

One of the goals of the YVR Aeronautical Noise Management Program is to respond to questions and concerns from the community and provide individuals with up-to-date information on airport operations and noise management initiatives. The community can contact the Airport Authority with their questions and concerns through the following:

- Online noise inquiry form
- Real-time flight and noise tracking system (YVR WebTrak)
- YVR Noise Information Line: **(604) 207-7097**

When a concern is received, Airport Authority staff will investigate the concern using the Aircraft Noise Monitoring and Flight Tracking System as well as other data sources to determine the source of the concern. A response is then provided with information to help the individual better understand the source of their concern.

While the Airport Authority is assigned the responsibility to respond to noise concerns related to YVR aircraft operations within 10 nautical miles of the airport under the long-term Ground Lease requirements with the Government of Canada, all concerns received are investigated and responded to regardless from where they are received. If the aircraft operator is suspected of non-compliance with published Noise Abatement Procedures, the incident will be forwarded to Transport Canada Civil Aviation Enforcement for further investigation.

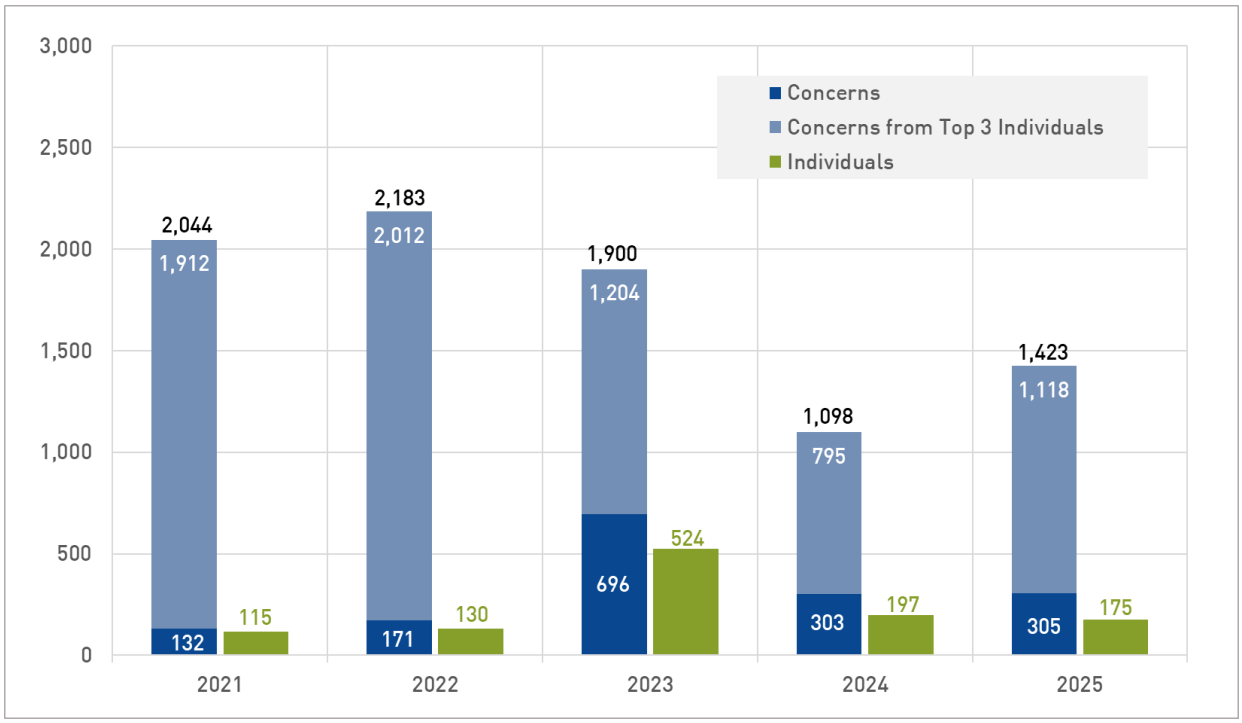
Information provided by residents and results of investigations are used to analyze and identify trends. A summary of concerns is provided to the YVR Aeronautical Noise Management Committee at each meeting for review and discussion. In addition, customized semi-annual reports are created for City representatives to provide information on the current issues of concern from their community.

NUMBER OF CONCERNS

In 2025, the Airport Authority received 1,423 noise concerns from 175 individuals around the Greater Vancouver area, which has an estimated population of 2.6 million[5]. Compared to 2024, this is a 30% increase in the number of concerns but a 11% decrease in the number of individuals submitting concerns.

Figure 9 provides a breakdown of the number of concerns and individuals between 2021 and 2025. Because there are several individuals who register multiple concerns throughout the year, the number of concerns associated with the three individuals that have registered the most concerns are identified for each year.

FIGURE 9: Number of Noise Concerns and Individuals, 2021-2025



[5] 2021 Statistics Canada's Census (https://www12.statcan.gc.ca)

As illustrated, 79% (n=1,118) of the total concerns in 2025 were received from three individuals:

- One individual in Surrey submitted 629 concerns mostly regarding departing jet aircraft over the area.
- One individual in Richmond submitted 280 concerns mostly regarding propeller aircraft departures during Runway 08 operations.
- One individual in Vancouver submitted 209 concerns regarding the new north downwind arrival routes associated with VAMP. All concerns related to VAMP will be examined as part of NAV CANADA's 180-day post-implementation review, and a summary will be included in the report.

Excluding the 1,118 concerns from the top three individuals, there were 305 concerns from 172 individuals. Of these concerns:

- 48 concerns were received from 24 individuals regarding the night-time use of the north runway during scheduled maintenance and project work on the south airfield.
- 54 concerns were received from 30 individuals regarding the temporary change in runway use between March 30 and May 21 due to construction work associated with the North Runway Modernization Program. During this period, the north runway was temporarily used for departures between 7 AM and 10 PM while arrivals were accommodated on the south runway. Many of the concerns were regarding aircraft taking off on the north runway during Runway 08 operations.
- 21 concerns were related to arrival path changes due to VAMP, mostly regarding aircraft using the new north downwind.

NOISE CONCERNS BY LOCATION

Whenever possible, individuals are asked to provide the location of their residence to better understand the source of their concerns as well as the distribution of concerns across the region. **Figure 10** illustrates the number of concerns and the number of individuals submitting the concerns in 2025 by community.

While the highest number of concerns were received from Surrey, most of these concerns were registered by one individual as discussed in the previous section of this report. Excluding the concerns received from this individual, there were eight concerns from seven individuals in Surrey.

FIGURE 10: Number of Concerns and Individuals by Location

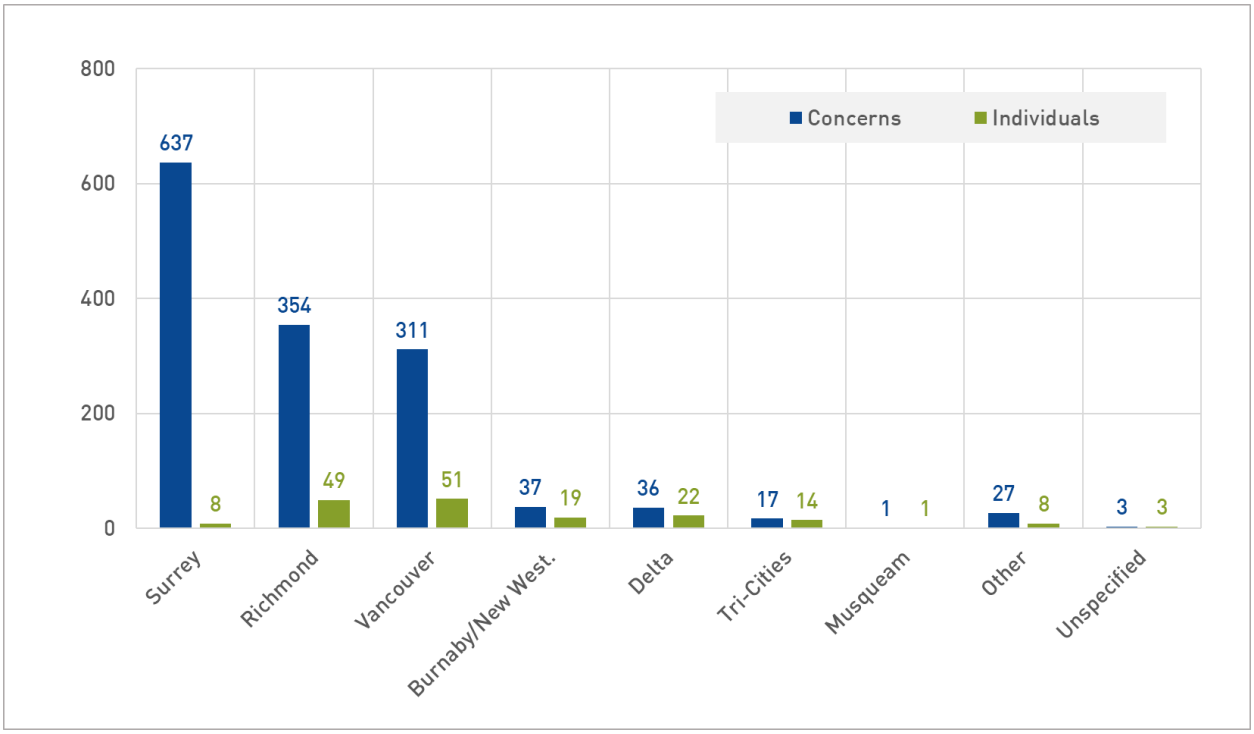


Figure 11 illustrates the geo-distribution of noise concerns received in 2025. In general, locations closer to the airport exhibit a greater density of noise concerns due to the lower altitude of aircraft and greater regularity of aircraft activity.

Figure 12 illustrates the geo-distribution and the frequency of concerns in the Greater Vancouver area in 2025. The size and colour of each dot represent the volume of concerns originating from that specific location.

Concerns submitted without location information are omitted from these figures.

FIGURE 11: Geo-distribution of Noise Concerns, 2025

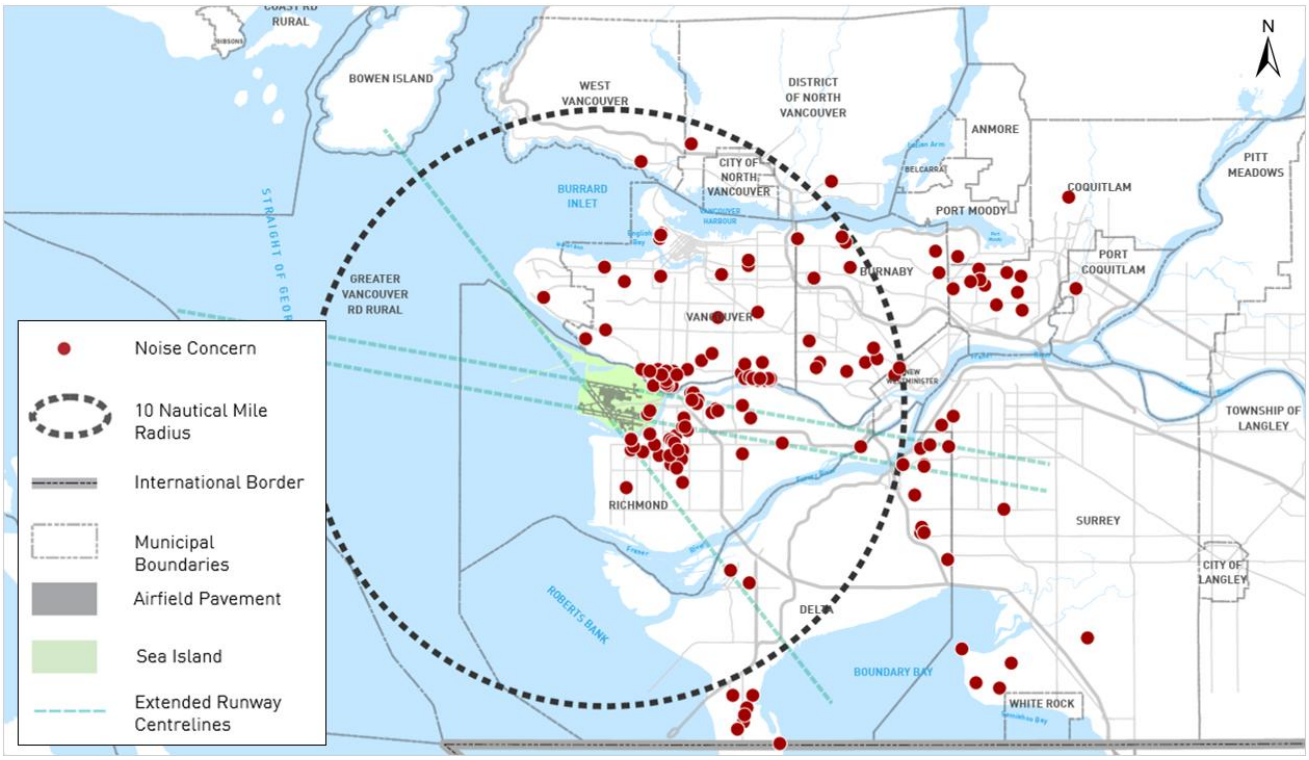
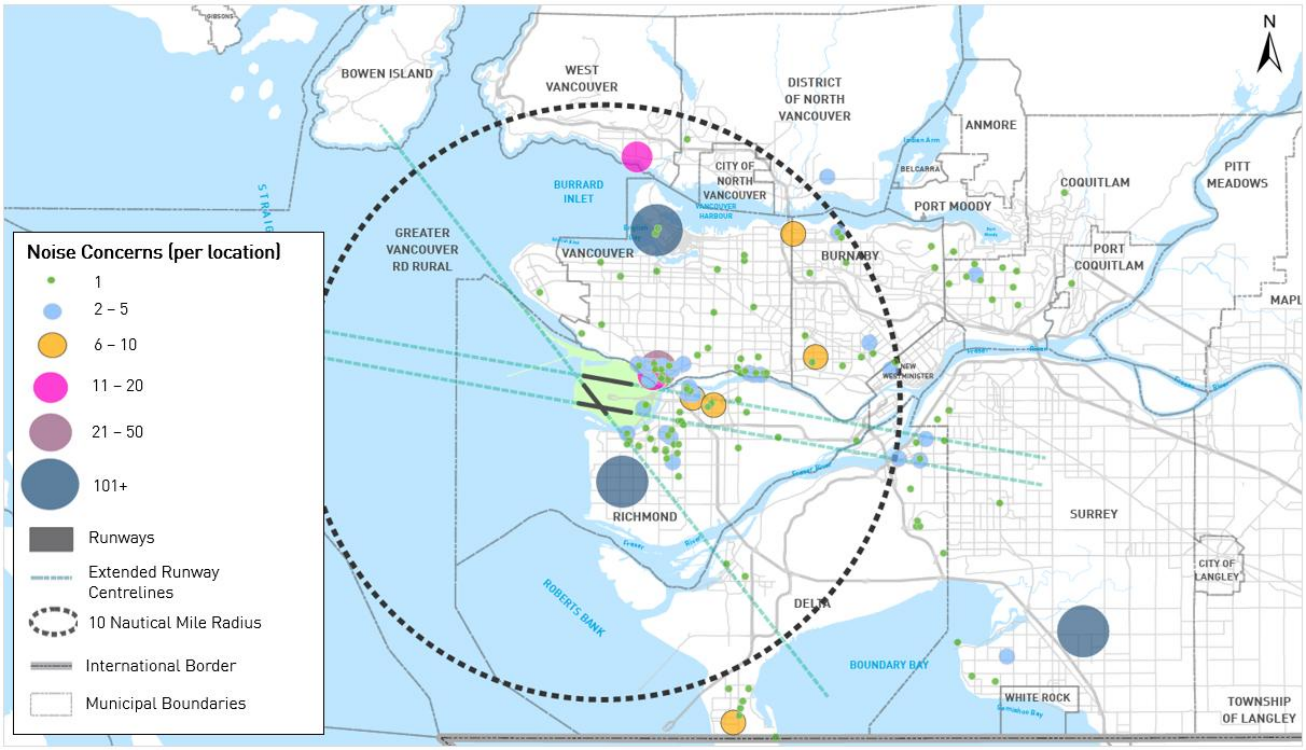


FIGURE 12: Geo-distribution and Frequency of Noise Concerns, 2025



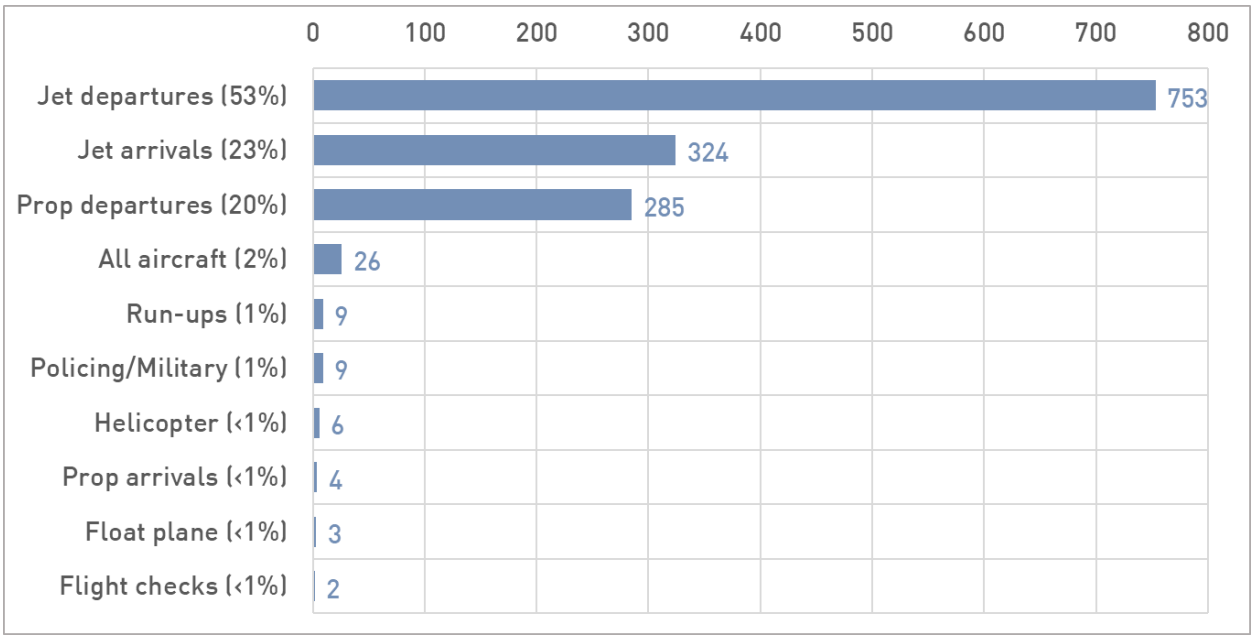
NOISE CONCERN BY OPERATION TYPE

When reporting a noise concern, individuals will generally provide details of date, time, and their location as well as the information related to a specific operation. Based on the information provided and investigations using the airport's Aircraft Noise Monitoring & Flight Tracking System, each concern is matched and categorized into an operation type such as Jet Departure, Jet Arrival, Helicopter, and Run-Ups. In some cases, concerns are general in nature, and the individual does not reference a specific operation or activity. These types of concerns are categorized as "All Aircraft". Concerns that cannot be matched against an operation for the time and location provided by the individual are categorized as "Other".

While all areas of the region are exposed to some level of aircraft activity, the level of exposure will vary depending on the location of the area in relation to the airport and its proximity to flight paths. **Figure 13** illustrates the breakdown of all noise concerns received in 2025 by operational category.

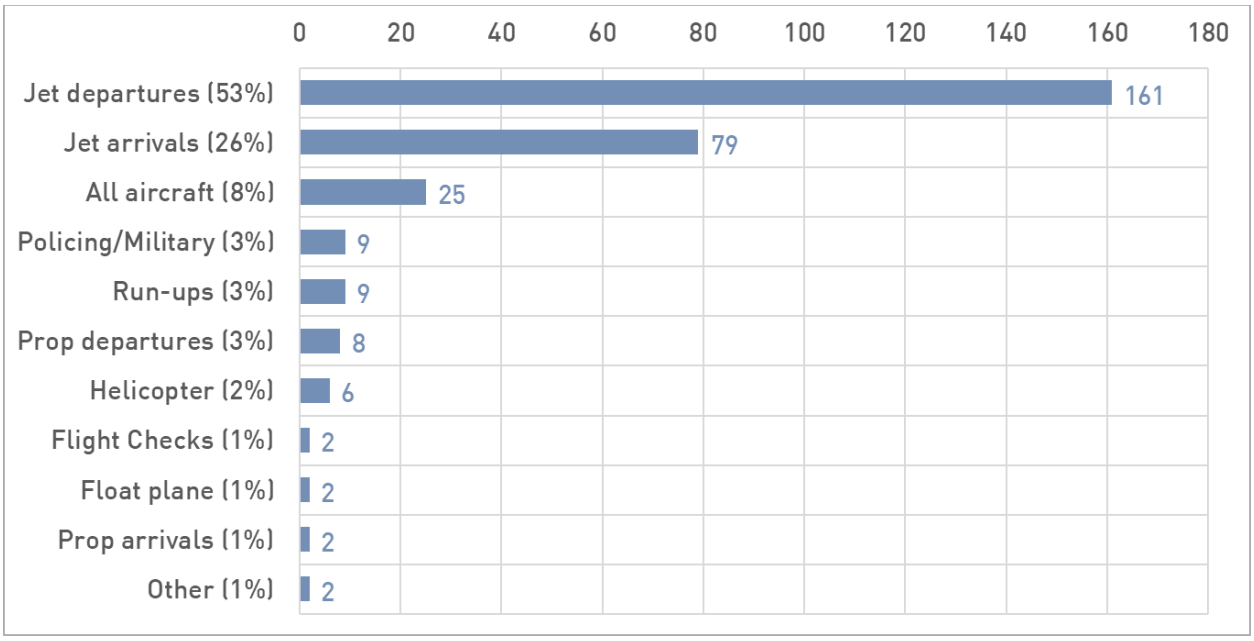
As illustrated, three operational categories associated with the most concerns in 2025 were "jet departures", "jet arrivals" and "prop departures". These categories also corresponded to the types of operations most frequently cited by the three individuals who submitted the most concerns in 2025.

FIGURE 13: Concerns (n=1,423) by Operational Category



To better understand overall trends, further analysis was performed by excluding the 1,118 concerns received from the three individuals who registered the most concerns. **Figure 14** illustrates the remaining 305 concerns received from 172 individuals, by operation type.

FIGURE 14: Concerns (n=305) by Operational Category, Excluding the 3 Individuals



"Jet departures" and "jet arrivals" remained top operational categories, accounting for 240 of the 305 concerns. Of the 161 concerns related to "jet departures", 62% (n=100) were associated with jet aircraft departing on the north runway:

- 52 concerns were regarding jet departures on the north runway between 7 AM and 10 PM due to the North Runway Modernization Program, which required temporary changes to runway use between March 31 and May 21.
- 47 concerns were regarding the night-time jet departures on the north runway due to scheduled maintenance and project work on the south runway.
- One concern was associated with jet departures on the north runway during daytime due to maintenance activities on the north airfield which required temporary changes to runway use for a short period of time.

27% (n=21) of the 79 concerns regarding jet arrivals were received from areas to the north and northeast of the airport regarding the new north downwind introduced in November as part of VAMP.

NOISE MONITORING DATA

The Airport Authority uses the Aircraft Noise & Operations Monitoring System (ANOMS) to monitor noise levels and assess the contribution of aircraft noise in communities around the airport. ANOMS combines noise data collected at Noise Monitoring Terminals (NMTs) with radar flight tracking data provided by NAV CANADA. **Figure 15** illustrates the current NMT network in relation to the airport.

FIGURE 15: NMT Locations in the Greater Vancouver Area[6]

[6] NMT 13 was removed from its location in 2023 due to potential land development in the area, and NMT 6 was removed in 2025 following decommissioning of the site by the property owner. The Airport Authority is assessing new locations for these NMTs.

ANNUAL AVERAGE NOISE LEVELS (LEQ)

One common metric for community noise assessment is the equivalent sound level, or average noise level (Leq), measured over a given period. **Table 2** presents the annual average Leq, measured in units of A-weighted decibel or dBA, at each NMT location for the last five years. It is important to note that the average noise levels, presented below, include contributions from all sources in the community, including aircraft, motor vehicles, people, lawn mowers, barking dogs, etc.

To provide context on sound exposure, **Figure 16** illustrates example sounds levels ranging from 0 to 130 dBA associated with typical sources. As a note, a 3 dBA increase in noise level is achieved by doubling equal noise sources and is generally the smallest difference in noise level that is perceptible by a receiver. A 6 dBA increase in noise level is clearly perceived, and a 10 dBA increase is perceived as being twice as loud.

TABLE 2: Annual Average Noise Level (in dBA), 2021-2025

	NOISE MONITORING TERMINAL										
YEAR	1	2	3	4	5	6	7	8	9	10	11
2021	72.4	62.2	53.5	60.1	55.6	56.4	58.0	50.2	49.7	57.2	57.0
2022	67.8	63.0	51.1	59.1	56.5	55.8	57.6	50.2	49.1	55.2	59.2
2023	74.2	62.5	51.2	59.1	57.8	55.5	57.5	50.9	49.2	55.1	61.2
2024	72.3	64.0	51.8	59.4	57.5	56.4	58.1	50.8	49.5	53.9	60.1
2025	**75.1**	**64.1**	**53.1**	**61.1**	**57.0**	**57.6**[7]	**59.2**	**51.5**	**48.9**	**54.5**	**59.6**

YEAR	12	13	14	15	16	17	18	19	20	21	22	23
2021	65.8	59.5	55.3	59.8	54.5	57.1	53.8	54.8	56.9	51.0	51.0	49.7
2022	74.9	60.5	54.6	54.7	53.4	53.6	51.8	53.2	61.8	51.2	51.2	52.0
2023	71.5	61.9	55.5	54.0	53.7	52.5	51.3	53.6	53.3	51.3	51.2	51.3
2024	75.4	-	55.2	56.2	54.2	52.6	52.3	53.0	51.6	51.3	51.3	50.6
2025	**61.1**	**-**	**55.3**	**57.9**	**54.6**	**52.0**	**52.7**	**53.2**	**50.8**	**51.4**	**51.3**	**51.0**

[7] The annual average noise level at NMT 6 is based on the data collected between January 1st and June 17th before it was removed due to the site being decommissioned by the property owner.

FIGURE 16: Example Sound Level and Associated Sources

Source: URS Corporation, 2008

NUMBER OF EVENTS - SINGLE EVENT NOISE LEVEL

Another metric used to assess noise is the single event noise level (SEL), measured in dBA. For an aircraft fly-over, either a landing or take-off, the SEL represents the total acoustic energy above a prescribed reference threshold and is typically 10 dBA greater than the maximum noise level experienced during the aircraft fly-over. The primary use of the SEL is to provide a comparison of noise events with different noise levels and durations.

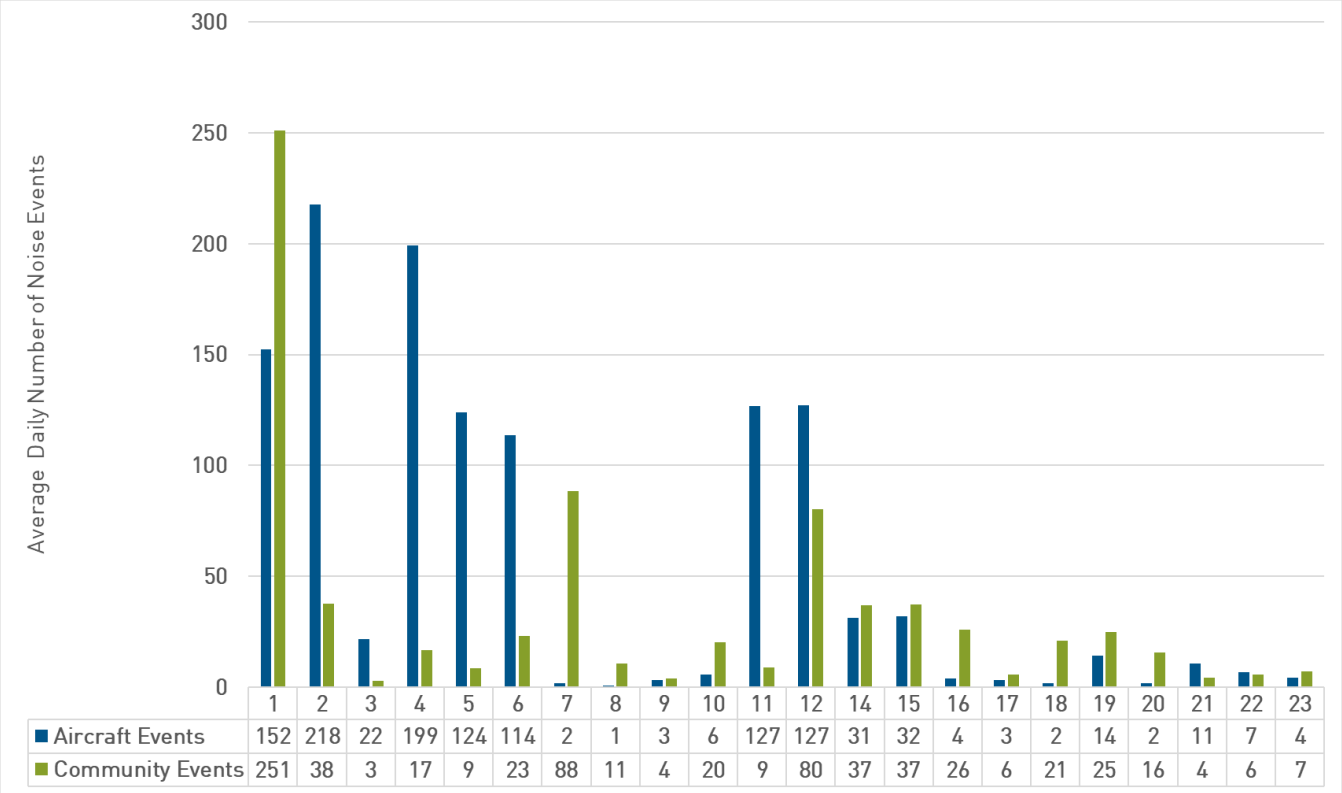
At each NMT, a sound level reference threshold is set according to the ambient background noise level in the area. Reference thresholds are typically set between 65 and 70 dBA during the day (7:00 AM to 10:00 PM) and between 55 and 60 dBA during the night (10:00 PM to 7:00 AM). When the sound level measured by the NMT exceeds the reference threshold, a noise event is captured.

Noise events are then analyzed together with radar flight tracks by ANOMS and are categorized as either correlated or uncorrelated. Correlated noise events are those associated with aircraft activities and uncorrelated noise events are those associated with other sound sources in the community. For those NMT sites located under flight paths and where aircraft operate at lower altitudes, the captured noise events tend to be more associated with aircraft than community sources. Conversely, for those NMT sites located farther away from the airport or where aircraft tend to operate at higher altitudes, the captured noise events tend to be more associated with community sources.

Figure 17 illustrates the daily average number of aircraft versus community noise events[8] captured at the NMTs in 2025.

[8] Noise events with durations less than 60 seconds and a SEL greater than 70dBA are included in this count.

FIGURE 17: Average Daily Number of Noise Events at NMTs, 2025



	1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	19	20	21	22	23
Aircraft Events	152	218	22	199	124	114	2	1	3	6	127	127	31	32	4	3	2	14	2	11	7	4
Community Events	251	38	3	17	9	23	88	11	4	20	9	80	37	37	26	6	21	25	16	4	6	7

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Version 1.0

Note on Reported Figures and Data:

The Airport Authority receives aircraft operations data from NAV CANADA. This data includes daily aircraft arrivals and departures at YVR as well as aircraft transiting through the Vancouver Control Zone. Every effort is made to verify and correct anomalies in the dataset, and numbers stated in this report may vary slightly from those reported by others.