



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** March 17, 2021
From: John Hopkins, MCIP, RPP **File:** 01-0153-04-01/2021-Vol 01
 Director, Policy Planning
Re: **Report from the City Citizen Representatives on the Vancouver International Airport Aeronautical Noise Management Committee (YVR ANMC) for 2020**

Staff Recommendation

That the staff report titled "Report from the City Citizen Representatives on the Vancouver International Airport Aeronautical Noise Management Committee (YVR ANMC) for 2020", dated March 17, 2021, from the Director, Policy Planning, be received for information.

John Hopkins, MCIP, RPP
 Director, Policy Planning
 (604 276-4279)

JH:pw

Att. 2

REPORT CONCURRENCE		
ROUTED TO: Transportation	CONCURRENCE <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER
SENIOR STAFF REPORT REVIEW	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

The Vancouver International Airport Aeronautical Noise Management Committee (YVR ANMC) is a committee of stakeholders struck by the Vancouver Airport Authority. The City's representatives on the Committee are two citizen representatives appointed by Council and a staff member from the Policy Planning Department. As directed by Council, the City's two citizen appointees provide annual updates directly to the General Purposes Committee on the work undertaken by the YVR ANMC in the previous year.

This report supports Council's Strategic Plan 2018-2022 Strategy #8 An Engaged and Informed Community:

Ensure that the citizenry of Richmond is well-informed and engaged about City business and decision-making.

8.1 Increased opportunities for public engagement.

Findings of Fact

YVR Aeronautical Noise Management Committee (ANMC)

Through its ground lease with the Federal Government, the Vancouver Airport Authority has responsibility for noise management at the Vancouver International Airport (YVR), addressed through a comprehensive noise management program which includes:

- Development and implementation of a five-year Noise Management Plan;
- Stakeholder engagement through the ANMC;
- Procedures and directives to mitigate noise from aircraft and airport operations;
- Flight tracking and noise monitoring across the region;
- Staff responsible for responding to questions and concerns from the community;
- Education and awareness programs; and
- Identification of noise-exposed areas to inform local government land-use planning and noise attenuation requirements in building design.

The purpose of the ANMC is to enable YVR to engage regularly with stakeholders having an interest in aeronautical noise management. In addition to representatives of the Airport Authority, members are independently appointed by stakeholder groups including affected municipalities, the Musqueam Indian Band, airline associations, NAV CANADA and Transport Canada. The Committee's mandate is limited to aeronautical noise. Other sources of noise, like construction or ground traffic, are addressed through the Airport Authority's environmental assessment program and are managed by their project team and Communications group.

Attachment 1 provides answers to some frequently asked questions related to the Committee and aeronautical noise at YVR.

Attachment 2 is a report from the two Richmond citizen appointees that summarizes the key items discussed by the Committee in 2020. This report provides additional staff comments on noise management issues and concerns from activities at YVR.

Analysis

COVID-19 Impacts

Globally, the aviation industry saw a significant decline in activity in 2020 due to the COVID-19 pandemic. Impacts at YVR included:

- Air traffic decreased by 52% and passenger trips by 72% over the previous year;
- Noise levels fell to the point where community noise has generally been higher than aircraft noise; and
- YVR cancelled its CORE Program, a multi-year capital construction program that included a new parkade, central utilities building and geexchange energy system.

YVR noted that domestic flights in China have recovered to pre-pandemic levels since the number of new cases there dropped, suggesting we may see the same recovery locally following successful vaccination.

2020 Aircraft Noise Concerns

The number of individuals registering noise complaints in the Lower Mainland fell 55% year-over-year, mirroring the reduction in air traffic due to COVID-19, although factors other than air traffic may also have influenced that trend.

At airports across Canada, a small number of individuals are responsible for the great majority of registered noise concerns. For example, in Richmond in 2020, three individuals registered 75% of all concerns. YVR reports statistics on the number of registered concerns, the number registered by the few “top” individuals and the number of concerned individuals, an approach supported by ANMC members as providing a complete picture of noise concerns.

As shown in Figure 1 (next page), the number of concerned individuals across the Lower Mainland has dropped gradually since 2016, with a slight rise in 2019 and a substantial drop in 2020. As with the Lower Mainland, about half as many concerned individuals in Richmond registered concerns in 2020 as in 2019 (Figure 2). The City also saw a similarly large drop in registered concerns other than those from the top three concerned individuals.

Jet departures were the source of concerns for most concerned individuals in Richmond, including the top three complainants. Other concerns of note were:

- Float planes, a concern for residents of the Thompson neighbourhood;
- Engine run-ups (engine testing required as part of regular maintenance), a concern for Burkeville residents; and
- Propeller aircraft movements, noticeable for residents in western Richmond.

Figure 1: Lower Mainland Noise Concerns and Concerned Individuals (2015-2020)

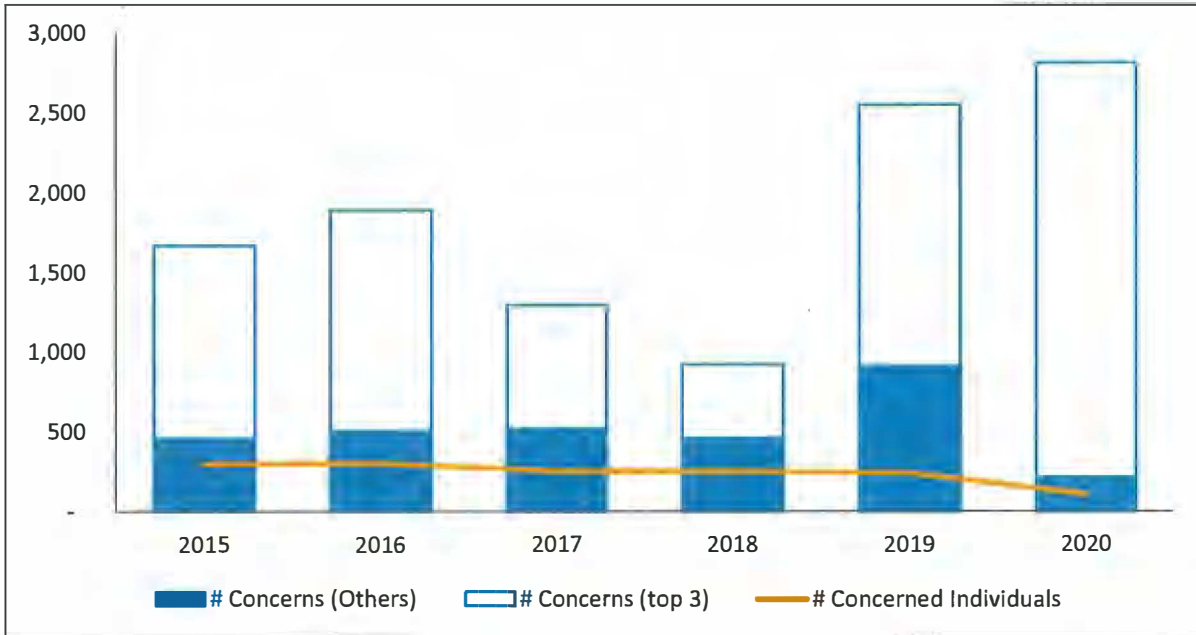
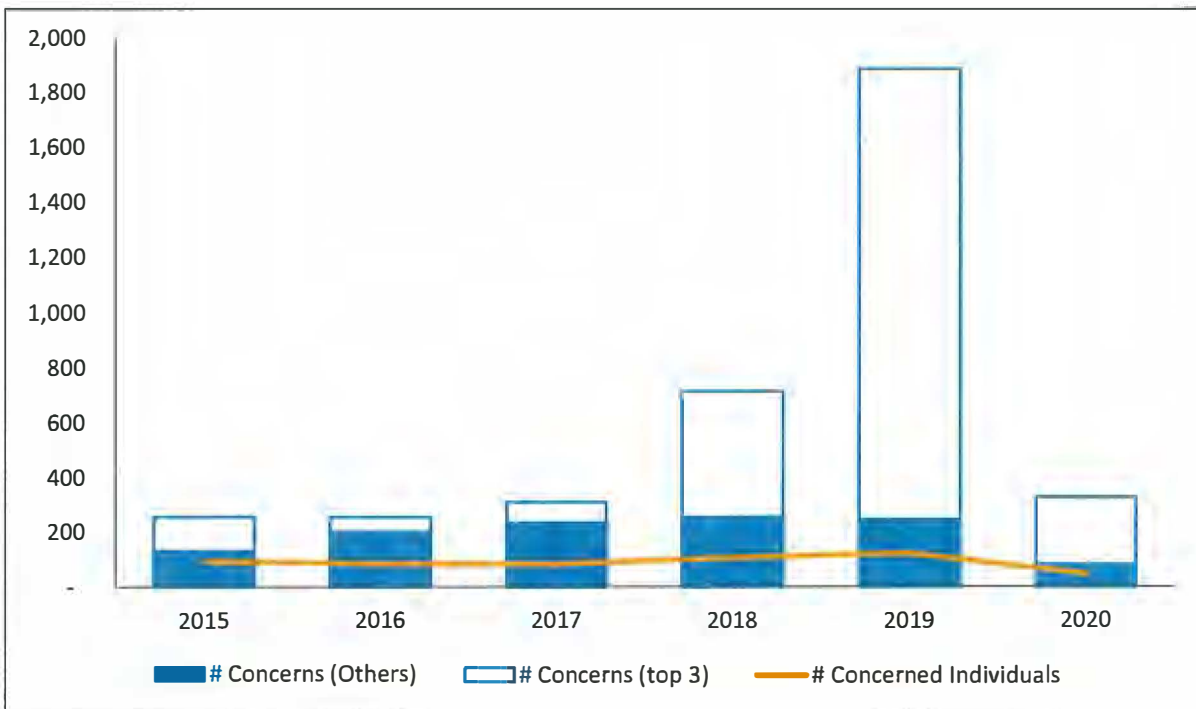


Figure 2: Richmond Noise Concerns and Concerned Individuals (2015-2020)



Airspace Modernization Program

In 2019, the airport began a project to “modernize” airspace, leveraging advances in technology to optimize flight paths around YVR. The aim of the project is to accommodate increased air traffic while maintaining safety and reducing the impact of noise on surrounding communities. It is anticipated that this program will narrow flight paths and reduce engine surges during descents, reducing overall noise impacts. However, it may also move flight paths, increasing noise impacts in some locations. YVR has committed to further consultation with the ANMC and its members in 2021 as the project progresses towards 2022 implementation.

Noise Exposure Levels and Land Use Planning

Canadian airports including YVR have used Noise Exposure Forecast (NEF) models to delineate areas of high noise exposure. These have been used by the City to create land use policies that restrict development of aircraft-noise sensitive uses in those areas. Responding to a 2019 report to the House of Commons Standing Committee on Transport, Infrastructure, and Communities (TRAN), Transport Canada plans to review the NEF approach. The scope and timeline for this review have not been set, and staff will monitor this to understand any potential impacts on the City’s policy framework.

Financial Impact

None.

Conclusion

The YVR ANMC remains a valuable forum for keeping abreast of aeronautical noise and proactively addressing potential impacts on Richmond. The City’s citizen representatives to the YVR ANMC continue to uphold Richmond’s interest at the Committee and contribute positively to discussions. The upcoming Airspace Modernization Program consultation is an important opportunity for the City and the City’s representatives to the YVR ANMC to ensure that the goals of minimizing aeronautical noise impacts to the community and enhancing residents’ quality of life remain priorities guiding the Airport Authority’s decisions.



Peter Whitelaw, MCIP, RPP
Planner 3
(604-204-8639)

In collaboration with: Arvind Sharma and Ivan Ma
City Citizen Representatives to the YVR ANMC

PW:cas

Att. 1: Frequently Asked Questions Related to the YVR ANMC
Att. 2: Report from the City Citizen Representatives on the YVR ANMC for 2020

FREQUENTLY ASKED QUESTIONS: VANCOUVER AIRPORT AERONAUTICAL NOISE COMMITTEE (ANMC)

This document provides answers to common questions about the ANMC and about issues relating to aeronautical noise management and the City of Richmond. YVR provides more information and other general FAQ about noise on their website at <https://www.yvr.ca/en/about-yvr/noise-management/noise-faqs>.

Q: What noise does the ANMC discuss and how are concerns about other sources of noise addressed?

The committee's mandate is limited to aeronautical noise. Other sources of noise, like construction or ground traffic, are addressed through the Airport Authority's environmental assessment program and are managed by project teams and YVR's Communications group.

Q: Can the airport reduce noise impacts on Richmond by using the North runway more?

The airport's use of the North runway is restricted by conditions set out by the federal Minister of Transportation through the Environmental Assessment completed when construction of the North runway was approved in 1992. These restrictions include:

- No operations between the hours of 10:00PM and 7:00AM
- Use is primarily for landings; however, take-offs are permitted when demand approaches capacity limits
- Minimal use of reverse thrust consistent with safe operating procedures

The restrictions are exempted in case of emergencies or airfield maintenance. In particular, the North runway is used during closures of the South runway for required regular maintenance.

Q: Is it possible for City staff or citizen representatives to follow up with people who have registered aeronautical noise concerns?

The Airport follows strict protection of privacy guidelines which prohibit the release of personal information to third parties, so the City and citizen representatives to the ANMC cannot follow up with concerned individuals directly. In the past, when citizen representatives asked YVR about if they could invite follow-up discussions, the Airport let concerned individuals know of the invitation. To date, this invitation has not been taken up.

Q: Will the noise contours Richmond uses in its Official Community Plan policy change as air traffic increases?

To provide guidance about potential future noise impacts, the noise contours are based on maximum anticipated air traffic levels, not historical levels. Therefore, they will not change with increased air traffic alone. If aircraft routing changes, the contours may change; however, aircraft routing changes can only occur through a substantial process including extensive consultation (e.g. the 2019-2022 Airspace Modernization program).

Date: February 06th 2021

To: City of Richmond General Purposes Committee

From: Arvind Sharma, Ivan Ma
City of Richmond Citizen YVR ANMC Representatives

2020 Status Report: YVR Aeronautical Noise Management Committee

City Appointees:

Arvind Sharma, AME and Human Factors Trainer working for Lufthansa German Airlines at Vancouver International Airport. Arvind is a City Rep on Noise Committee since 2018 and recently renewed his term. Ivan Ma is the new City Rep who replaced Gary Abrams in 2020. Ivan is a Project Manager at Translink and a general aviation pilot. Both Arvind and Ivan live in Richmond.

Past Year at the YVR Aeronautical Noise Management Committee

The ANMC met on April 16th, September 10th, and December 3rd, 2020. In addition, there was a special presentation on June 19th about the YVR Airspace modernization project.

April 16th Meeting

1. The April 16th meeting was the first one to be conducted after Covid-19 restrictions were placed on travel and a partial lock down was issued. It was the first virtual teams meeting conducted by Marion Town, Director Environment for the Vancouver Airport Authority. The subject of greatest interest was the initial impact of closure on air traffic movement through the airport. In their first analysis of impact, they are expecting 40-50% decline in traffic and staff layoff at airport. Most of projects with capital expenditure including airport modernization project have been put on hold. Data from the previous year, 2019, was presented. The number of passengers at Vancouver had increased by 8 million over the past five years, to a record number of 26.4 million in 2019. The impact of Covid-19 will be felt slowly across all business units of YVR Airport.
2. In the first 3 months of Q1 2020, there were 1168 noise complaints received and an increase of 450% over the past year for same period. Out of these 1168 complaints 930, or 80%, of the complaints came from one individual in south Surrey. YVR offered to meet the individual to allay their concerns, but the offer was refused.
3. There was a presentation about SST(Super Sonic transport) a/c noise certification by US F.A.A. Certification that is related to noise levels during subsonic phase of flight, takeoff, and landing. The rules are being framed for planes with MTOW

(Maximum Take Off Weight) below 150,000 pounds and a speed of Mach 1.8. Supersonic flights are still banned over land in the US. The consultation has been started as a lot of manufacturers have shown interest in developing the SST. Presently, there are no rules being proposed by Transport Canada related to SST.

June 19th YVR Airspace Modernization Project

1. On June 19th, there was a special meeting to brief committee members about the YVR Airspace modernization project.
2. NAV Canada is one of the largest Air Navigation Service providers in the world, and it is engaged in modernizing the airspace around Vancouver as the a/c movements have increased considerably over the past few years. Project Manager Jonathan Bragg gave a presentation about preliminary designs. The work has been impacted by Covid-19, but the project is still on track. The main priority of the project is to maintain highest levels of safety and at the same time maintain the projected increase in airplane movements. RNP (Radio Navigational Procedures) approach methods are being adopted to make precise approaches and reduce the impact of noise. Although it is not possible to avoid this in the residential area completely, the main goal is still to move more and more traffic over commercial and agricultural areas.
3. The timeline of the project was discussed with groundwork being laid in 2020, public consultation starting in 2021 with the start of implementation from 2022 onwards, all stakeholders including Richmond City, ANMC will be a part of stakeholder consultation process.

September 10th Meeting

1. The ANMC held its second meeting on Sep. 10th. The ongoing impact of Covid-19 was discussed. The passenger load factor has considerably gone down on domestic and international flights due to various COVID-19 restrictions. YVR Airport has launched initiatives like rapid testing for COVID-19 with WestJet for passenger screening.
2. Analysts discussed the update being made to the ANMC term of reference and sought input from committee members as the last update was in 2009. Main revisions were around:
 - a) Airport lease requirement to manage noise and how ANMC fits with the overall YVR Noise management program.
 - b) ANMC mandate is to deal with noise related to a/c movements. Non a/c related noise like construction, etc. are dealt with the Airport Authority Environmental Assessment program.
 - c) Committee members provided feedback on proposed changes. In relation to the ANMC Member list, earlier new committee members were provided with the

committee manual as a welcome package. YVR Airport has discontinued handing out the manual, as most material is available online and instead invites new member to meet airport staff and discuss committee mandate.

3. YVR presented the quarterly summary of airport activity. a/c movement was down by 50% and passenger movement down by 63%. There were 19% less run ups compared to last year.
4. The NMT (Noise Monitoring Terminals) update has been postponed to 2021 due to budget constraints.
5. UBC conducted a study based on NMT Data to investigate the impact of noise due to reduced social activities during COVID-19 times.
6. YVR presented a study from HMMH a US based consulting company on airport noise levels during Covid-19 times. As per the study, airport cumulative noise has dropped by 5dB due reduced a/c movements.

Dec 3rd Meeting

1. The last meeting of the YVR ANMC for 2020 took place on Dec. 3rd. The full year impact of Covid-19 on the airport was discussed. There was a 51% decrease in aircraft movement and 69% decrease in passenger movement.
2. YVR is updating their website on the noise management section. Emphasis is to transfer information from pdf format to video format for a user friendly experience and raise general awareness about noise. The committee members provided feedback about how to further improve the website.
3. Noise Exposure Forecast (NEF) Information was provided by airport. TC prescribes NEF as a tool to assist municipalities with compatible land use around airport. It helps in planning for cities and accommodate future growth and noise impact. In BC the land use planning is delegated to municipalities and no provincial protection around airport unlike Alberta. Richmond has utilized NEF parameters for future development of city projects.
4. YVR Airport is embarking on the improvement of airside pavements. Most of the focus is on the north side of the runway and does not plan closure of the south runway. South runway closure is still planned in nights for routine maintenance. Dates will be informed well in advance and posted on the website.
5. YVR Airport presented a noise management summary for the year 2020 up till November 30. No less than 2664 complaints were registered from 101 individuals. Although aircraft movements have come down due COVID-19, complaints have shown a 26% increase from previous year. 2292, or 86% of these complaints, were registered by a single person based in Surrey.

Arvind Sharma
Ivan Ma