




# City of Richmond

## Report to Committee

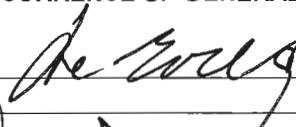

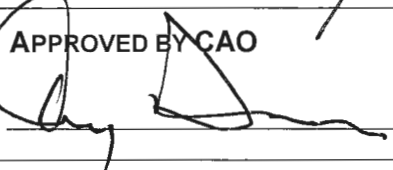
**To:** General Purposes Committee  
**From:** Victor Wei, P. Eng.  
Director, Transportation  
**Date:** December 21, 2015  
**File:** 01-0153-04-01/2015-  
Vol 01  
**Re:** **2015 Report from City Citizen Representatives to the Vancouver International  
Airport Aeronautical Noise Management Committee (YVR ANMC)**

### Staff Recommendation

That the report from the City citizen representatives to the Vancouver International Airport Aeronautical Noise Management Committee (YVR ANMC) regarding the Committee's 2015 activities dated December 21, 2015, from the Director, Transportation, be received for information.

  
Victor Wei, P. Eng.  
Director, Transportation  
(604-276-4131)

Att. 1

REPORT CONCURRENCE		
<b>ROUTED TO:</b>  Policy Planning	<b>CONCURRENCE</b>  <input checked="" type="checkbox"/>	<b>CONCURRENCE OF GENERAL MANAGER</b>  
<b>REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE</b>	<b>INITIALS:</b>  	<b>APPROVED BY CAO</b>  

## Staff Report

### Origin

As directed by Council, the City's two citizen appointees to the YVR ANMC provide annual updates directly to the General Purposes Committee on agenda items discussed at the YVR ANMC meetings. This report provides the 2015 update through a status report prepared by the City's appointees to the YVR ANMC (Attachment 1).

### Analysis

The YVR ANMC continues to achieve good participation from all cities and agencies and provides the opportunity for insightful discussions on a wide range of aeronautical noise-related topics as well as continued educational tours to enhance members' understanding of airport operations. The attached status report from the citizen appointees provides a summary of the key agenda items discussed at Committee meetings held between January and November 2015; staff also provide the following supplemental comments.

#### Airspace Change Communication and Consultation Protocol (the "Protocol")

The voluntary Protocol is a formalized broad-based public communication and consultation procedure for changes in airspace or procedures that have the potential for material noise impacts at ground level regardless of where the change occurs in proximity to the airport (i.e., even if the change occurs beyond an airport's area of responsibility for noise management of up to 10 nautical miles from the airport).<sup>1</sup> The Protocol applies to proposed changes to arrival and departure procedures at the nine largest airports in Canada.<sup>2</sup> Generally, the types of proposed changes for which the Protocol applies are flight path design changes that:

- result in aircraft flying over new areas around an airport;
- affect the lateral location of an aircraft on an IFR flight (i.e., flying by reference to instruments in the flight deck versus by visual reference or VFR); and
- implement new advanced navigational technologies (i.e., Required Navigational Performance or RNP) that replicate an existing IFR or VFR route.

The key components of the protocol are:

- *What Constitutes Communication and Consultation:* Typically, communication would comprise one-way notification (e.g., notice in local newspaper) while consultation would include the preparation of materials and more robust and interactive engagement with communities and stakeholders.
- *Communication versus Consultation:* The protocol defines when communication versus consultation will occur and the trigger points for each. Table 1 summarizes how the protocol will be applied based on the type of change.

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<sup>1</sup> The Protocol is available on NAV CANADA's website at [www.navcanada.ca/airspace](http://www.navcanada.ca/airspace).

<sup>2</sup> The Protocol applies to airports with more than 60,000 annual Instrument Flight Rules (IFR) movements which, based on 2014 data, would include airports at Vancouver, Calgary, Edmonton, Winnipeg, Ottawa, Toronto, Montreal, Quebec City, and Halifax.

Table 1: Type of Notification based on Type of Flight Path Design Change

Type of Proposal	Type of Notification
Flight path over new area	Communication
Lateral change in aircraft position below 4,000 feet AGL	Consultation
Lateral change in aircraft position between 4,000-6,000 feet AGL	Communication
Lateral change in aircraft position above 6,000 feet AGL but still in vicinity of airport	Communication
Increase in flight frequency of 30% (day) or 15% (night) when lateral position of aircraft is below 4,000 feet AGL	Consultation
Implementation of RNP that replicates an existing IFR/VFR route	Communication
Implementation of RNP that replicates an existing IFR/VFR route <b>and</b> increases flight frequency by 30% (day) or 15% (night) <b>or</b> has lateral change in aircraft position below 4,000 feet AGL	Consultation

- ***Roles and Responsibilities:*** The lead responsibility for consultation will be assumed by the organization that proposes making the change (typically either NAV CANADA or the airport operator).
- ***Decision-Making and Review:*** For airspace changes subject to consultation under the protocol, the input received will be assessed and considered. A final decision by the organization proposing the change will be announced along with a description, if relevant, of any changes to the original proposal. The decision will be issued at least three weeks prior to implementation and will be available on the website of the proponent including a document summarizing the comments received during the consultation and reasons for the final decision. An assessment of the change will be made by the organization implementing the change and the affected airport operator within 180 days following implementation. This assessment will examine whether noise levels are in line with what was anticipated and should include actual decibel measurements taken in the affected area.

### Required Navigation Performance (RNP)

Whereas traditional navigational infrastructure primarily uses a ground-based system (i.e., radar or radio aids such as beacons), the aviation industry is now moving towards GPS-based navigation. Required Navigation Performance (RNP) technology allows aircraft to follow very accurate paths, both laterally and vertically, and gives greater flexibility in how flight paths are designed. Noise and emissions generated from an aircraft using an RNP approach are less than that from an aircraft using current conventional procedures. RNP allows aircraft to maintain a continuous descent profile, thereby eliminating noise from changes in flap reconfiguration and power application for level flight segments associated with a conventional approach.

A new RNP approach procedure developed for the north runway at YVR, but currently on hold pending resolution of operational issues, is based on an existing Standard Terminal Arrival Route (STAR) that is typically used by aircraft approaching YVR from the northeast, primarily from originating airports such as Calgary, Edmonton, and some airports in northern BC. Figure 1 illustrates sample flight tracks of aircraft using the current STAR (yellow) compared to the flight track to be followed by an aircraft using the new RNP 08L approach (magenta). The lateral shift of the flight track associated with the RNP approach occurs over English Bay, away from populated areas, and is thus expected to have positive community benefits.

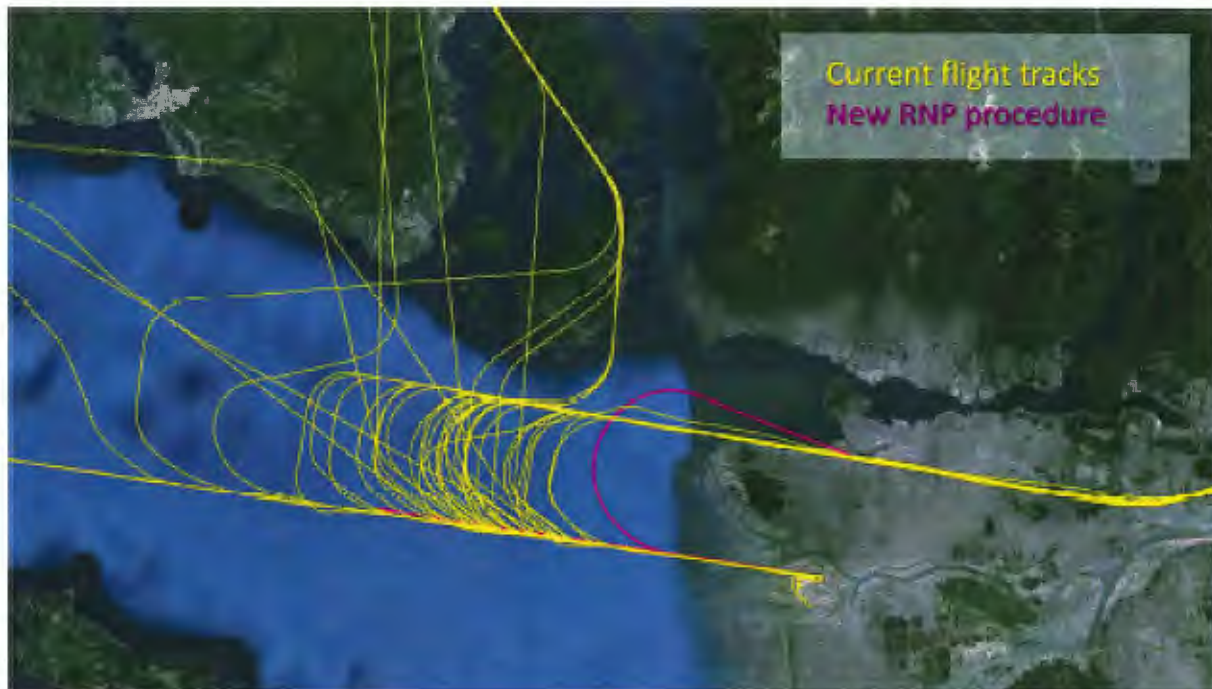


Figure 1: Comparison of Flight Tracks for Existing versus Proposed Approaches for 08L

As the RNP 08L initiative constitutes a flight path design change, the Airspace Change Communication and Consultation Protocol applies. Given that the approach procedure occurs at an altitude above 4,000 feet and that the lateral shift of flight tracks will occur over unpopulated areas, consultation is not required and a communications plan has been developed by the Airport Authority and NAV CANADA. A briefing session for the YVR ANMC was held and informational material (fact sheet and video) has been posted on the YVR website.

#### Ground Run-up Enclosure (GRE) Study

Canada's first GRE was constructed in 2011 and is located adjacent to the South Terminal. The facility comprises a three-sided, open-roofed enclosure with noise-absorbing panels and several louvered vents that reduce engine run-up noise by absorbing and channelling sound up rather than out. Engine run-ups are mandated by Transport Canada as part of stringent maintenance and safety standards that require operators to test engines and their components before an aircraft is put back into service.

The GRE study comprised a review of the existing engine run-up procedures and directives with a focus on optimizing noise reduction opportunities at all non-Ground Run-up Enclosure (GRE) locations. An analysis of existing run-up events performed during the 2013-2014 period yielded the following key findings:

- Over 10,000 run-up events were performed, of which idle run-ups were the most common.
- 55 per cent of the run-ups were performed by operators on the south side of the airport.
- Of the run-ups conducted on the south side, the GRE accommodated 39 per cent of total run-ups and 88 per cent of full power run-ups.



### Runway End Safety Area (RESA)

RESA is a pending requirement from Transport Canada that would require an additional area at each end of a runway to enhance aircraft and passenger safety. These areas reduce the severity of damage to an aircraft should one overrun or undershoot during landing thereby increasing passenger safety, as well as providing an area for better access for emergency response vehicles. In anticipation of the enactment of the Canadian standard within the next few years, YVR is proactively planning to construct RESAs for its three runways (north, south and crosswind) that will meet existing international safety recommendations.

Year one of a three-year project to construct RESAs on the south airfield commenced in Summer 2015. Construction occurred between May and August at night between 9:00 pm and 7:00 am on most nights of the week. During this time, the south runway was closed and air traffic diverted to the north runway. Additional runway maintenance work was undertaken in conjunction with the closures to maximize efficiency. Extended closures over the next two years (2016 and 2017) will be required to complete this multi-year project; project information and the construction schedule is available on the YVR website at: <http://www.yvr.ca/en/business-at-yvr/construction/Projects.aspx>.

### Noise Management Home Buyer and Owner Guide

The 2014 report on YVR ANMC activities identified that a brochure had been developed to help educate new homebuyers and provide existing homeowners with suggestions on how to sound insulate older homes. The guide is planned to be posted on YVR's website in late 2015 as an on-line resource for new home buyers and existing home owners. Limited hard copies have also been produced and are available at City Hall for the public.

### YVR Master Plan Update

The Vancouver Airport Authority (VAA) is required to submit a Master Plan every 10 years under the lease agreement with the Federal Government. The current YVR Master Plan covers the period 2007-2027 and the update to the Plan, which commenced in May 2015, will span the time period 2017-2037. VAA has established a separate website for the process ([www.yvr2057.ca](http://www.yvr2057.ca)). Each Master Plan helps to outline:

- (1) How growth in passenger aircraft and cargo volumes will be accommodated,
- (2) How the needs of stakeholders and the communities that YVR serves will be met in the future,
- (3) How YVR's longer term viability will be supported, and
- (4) How YVR's key strategic objectives will be achieved.

On June 16, 2015, staff updated Planning Committee on the *2017-2037 YVR Master Plan* update, noting that:

- Staff have established a City Team and held discussions with VAA staff.
- The YVR Master Plan will be prepared in four phases as shown in Table 2. Note that the VAA has advised that the work program will be redefined in 2016 and the timing of the four phases will be extended beyond what is shown in Table 2.

- VAA will be holding approximately 10 consulting opportunities for Richmond residents through to Fall 2016. To protect and advance the City's interests, staff have identified a comprehensive list of City issues which VAA staff have been asked to address in preparing the Master Plan (e.g., sustainability, land use, noise, transportation, environmental, revised Noise Exposure Forecast contours).

Table 2: Key Phases and Work Items of YVR Master Plan Update

Phase	Period	Work Items	Focus of Public Consultation
1	Spring 2015	<ul style="list-style-type: none"> <li>• Public survey</li> <li>• Develop possible future events and forecasts</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm collective vision for the future</li> <li>• How YVR can help meet/serve the vision</li> </ul>
2	Fall-Winter 2015	<ul style="list-style-type: none"> <li>• Develop options, scenarios and evaluation criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Future possibilities for key elements of the Master Plan</li> <li>• Discussion of the trade-offs between future possibilities</li> <li>• Understanding of how well these possibilities serve the needs and aspirations identified in Phase 1</li> </ul>
3	Winter 2016	<ul style="list-style-type: none"> <li>• Evaluate options</li> <li>• Develop recommendations and draft plan</li> </ul>	<ul style="list-style-type: none"> <li>• How well does the plan serve the vision of the future</li> <li>• What other elements, if any, need to be considered</li> </ul>
4	Early 2017	<ul style="list-style-type: none"> <li>• Finalize Master Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Information sharing</li> </ul>

VAA and City staff have continued to meet during 2015 including with the YVR AMNC and the YVR Environmental Advisory Committee (EAC). On December 4, 2015, VAA staff provided staff with the final Phase 1 "*Our World in 2057*" public consultation report, which staff are presently reviewing and will update Council in January 2016. VAA staff further advised that the Master Plan update program continues as follows:

- *Phase 2 - Building a World Class Sustainable Airport:* This phase will develop options to respond to growth and become a world class sustainable gateway to meet the future described in Phase 1. Options will address key components, including land use, terminals, runways and taxiways, ground access, parking and recreational areas.
- *Phase 3 - YVR Draft Master Plan:* VAA will develop a draft final concept for the Master Plan, including selecting a preferred future state for each key element, such as ground access, and put forward the draft plan for consultation.
- *Phase 4 - Approval of YVR Master Plan:* This phase will primarily focus on final consultations with approving entities including the federal Minister of Transport and primary stakeholders, and information sharing with the public. Phase 4 will also focus on determining key milestones for future consultation during the implementation of the Master Plan.

Staff will meet with VAA staff in 2016 to determine when and how the City's interests will be addressed (e.g., land use, transportation, sustainability).

#### 2015 Aeronautical Noise Management – Summary Report

This section and the status report from the City's appointees to the YVR ANMC include YVR's Noise Management Report for the period January 1 through November 21, 2015.

During this period, YVR received a total 1,667 noise concerns from 298 individuals across Metro Vancouver, which is a 1.7 per cent decrease in the number of concerns and a 7.2 per cent increase in the number of complainants over 2014 (see Figure 2). One individual in South Surrey registered 61 per cent of all noise concerns to date in 2015 (i.e., 1,015 concerns regarding overflights of the area).

As noted in the 2014 report from the City citizen representatives to the YVR ANMC, the spike in the number of Richmond-related concerns beginning in 2013 (see Figure 3) is attributable to one individual in Richmond who resides adjacent to the float plane route and registered 225 concerns in 2013 and 130 concerns in 2014 (60 per cent and 42 per cent of all Richmond-related concerns respectively).

In 2015, a different single individual living in the same area registered 126 concerns in 2015 (54 per cent of all Richmond-related concerns). The total number of complainants residing in Richmond remained essentially the same (92 in 2014 and 93 in 2015). When the concerns from the single individual are excluded for 2015, the remaining number of Richmond-related concerns is 130, which is a 26 per cent decrease from the balance of 176 concerns received in 2014.

As shown in Figure 4, the operational concerns identified include float plane operations as noted above

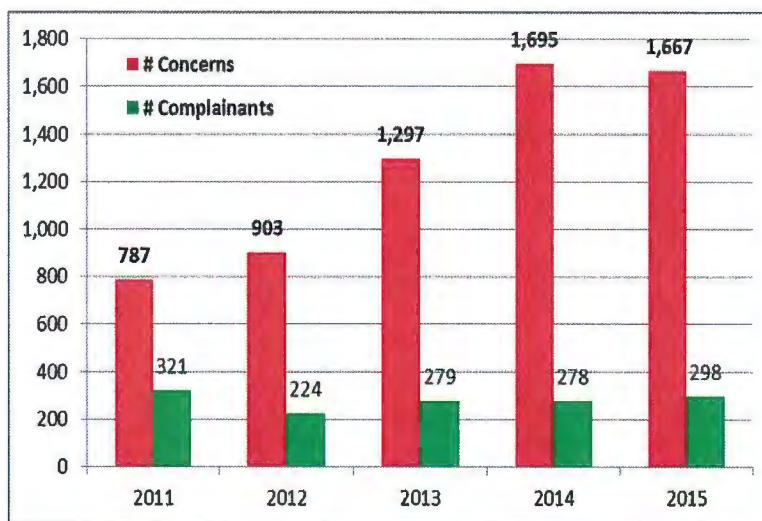


Figure 2: Region-wide Noise Concerns and Complainants

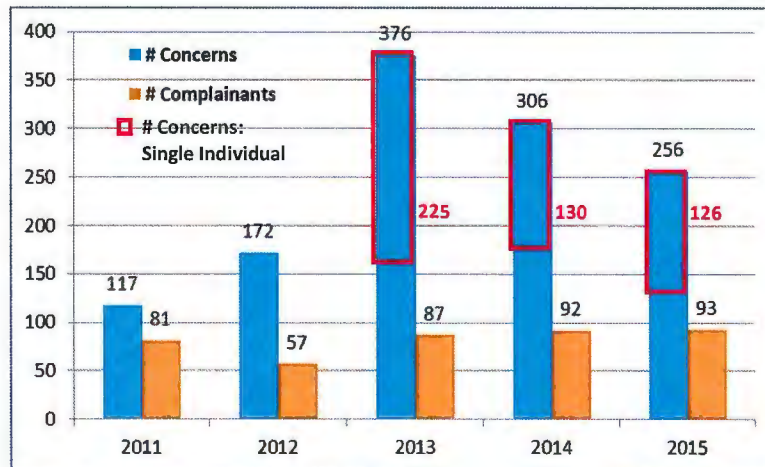


Figure 3: Richmond-Related Noise Concerns and Complainants

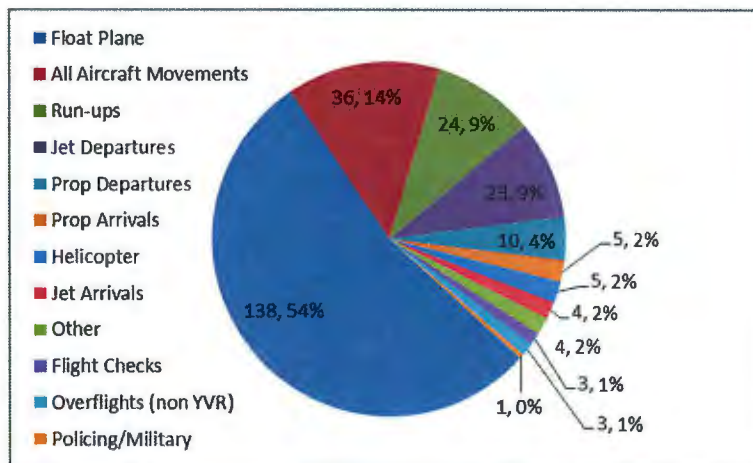


Figure 4: Total Number and Per Cent of Richmond-Related Noise Concerns by Operational Category

followed by all aircraft movements, engine run-ups, and departures.

Outcome of 2015 Recommendations of the City Appointees to the YVR ANMC

VAA was requested to publicize and provide training for Richmond residents in the use of WebTrak. As part of a broader VAA project to update the YVR website, VAA intends to translate much of the material on its website, including materials in the noise management section. In preparation for this, a review of all on-line noise materials has been completed to ensure they are up-to-date and relevant. The materials related to WebTrak will be translated and VAA will explore opportunities to provide additional information to help users navigate the system. At this time, the new website is anticipated to be live in early 2016.

**Financial Impact**

None.

**Conclusion**

The City's citizen representatives to the YVR ANMC continue to uphold Richmond's profile at the Committee and contribute positively to discussions. The YVR ANMC remains a valuable forum for addressing aeronautical noise impacts on Richmond. The provision of input regarding action items to support VAA's new *2017-2037 Master Plan* will be an opportunity for the City and the City's representatives to the YVR ANMC to ensure that the initiatives are consistent with a goal of minimizing aeronautical noise impacts to the community and enhancing residents' quality of life.



Joan Caravan  
Transportation Planner  
(604-276-4035)

In collaboration with: Gary Abrams and Margot Spronk  
City Citizen Representatives to the YVR ANMC

Att. 1: Report from City Citizen Representatives to the YVR ANMC



**Date:** December 14, 2015

**To:** City of Richmond General Purposes Committee

**From:** Margot Spronk  
Gary W.D. Abrams  
City of Richmond Citizen YVR ANMC Representatives

## **2015 Status Report: YVR Aeronautical Noise Management Committee**

### **City Appointees**

The 2014/15 term is Year 2 of the third two-year YVR ANMC appointment for Margot Spronk. Margot was previously NAV CANADA's General Manager for the Vancouver Flight Information Region, and worked as an air traffic controller at the Vancouver Area Control Centre. Gary Abrams was appointed to the YVR ANMC in January 2015 for a one-year term. Gary is a Richmond lawyer with military and civil flying experience and involvement in the British Columbia Aviation Council and other aviation organizations. Both live in Richmond.

### **Past Year at the YVR Aeronautical Noise Management Committee**

The YVR ANMC met on January 14, April 1, June 16, July 22, and November 26, 2015. Highlights of these meetings are provided below.

#### **Required Navigation Performance**

The April 1 meeting had, as its main topic, a presentation by Capt. David Deere, of Westjet, on Performance Based Navigation (PBN), which describes an aircraft's capability to navigate using performance standards. PBN uses satellite and equipment on board the aircraft to provide greater track accuracy compared with conventional procedures that use ground based navigation aids. At the meeting of July 22, a representative of NAV CANADA delivered a briefing on the proposed implementation of an RNP (Required Navigation Performance), which is a subset of PBN, approach to Runway 08L (the north runway). The Runway 08L RNP approach procedure was published on October 15, and was used by a relatively small number of flights. At the November 26 meeting, a NAV CANADA representative advised that use of the procedure was currently on hold until certain operation issues could be resolved. The Runway 08L RNP approach has no effect on Richmond as the procedure uses an existing flight path over the City of Vancouver and the change associated with the RNP section of the approach occurs over English Bay. If later implemented on other runways (there are no present plans for this), RNP approaches will need further consideration by the Committee.

#### **Airspace Change Communication and Consultation Protocol**

The Airspace Change Communication and Consultation Protocol, a joint product of NAV CANADA and the Canadian Airports Council, was, the meeting of July 22 was informed, approved by the Minister of Transport in June, 2015. This protocol outlines commitments by industry to communicate and consult with regards to airspace changes. As such, of interest to

Richmond, is that in future all proposed changes affecting airspace below 4,000 ft will be the subject of either communication or consultation, depending on the nature of the change.

### **Noise Management Reports**

YVR quarterly YVR Noise Management summaries, as well as the 2014 Year-end Noise Complaint Review, were presented and discussed at a number of meetings. The subject of engine run-ups received particular attention. The Vancouver Airport Authority retained consultants in 2015 to review procedures at run-up locations outside the airport's dedicated ground run-up enclosure to ensure the procedures employed were effective in reducing noise as much as possible. Preliminary results of this review were presented at the November 26 meeting and a final report will be delivered by year end. Recommendations arising from this review will be further evaluated and considered by the Airport Authority. A copy of the YVR Noise Management Report for the 4<sup>th</sup> Quarter 2015 is appended to this report.

### **Engine Run-ups**

As engine run-ups are of particular interest to Richmond, given its nearness to the Airport, further details of the review may be useful. The 4<sup>th</sup> Quarter 2015 Noise Management Report (for the period January 1 to November 21) records 23 concerns about run-ups. Of these, 16 were from persons in Richmond.

The opening of the ground run-up enclosure (GRE), near the South Terminal on the South Side of the Airport, in 2012 has gone some distance towards reducing the number of run-up complaints. The GRE reduces, but does not eliminate, noise affecting the parts of Richmond nearest the airport.

Engine run-ups are conducted at approximately 13 locations at YVR, but mainly at eight of these. All run-ups require advance approval from YVR Operations and are conducted strictly within the permission granted. Well under 10 per cent of run-ups at any location (except the GRE) are conducted at full power. The consultant's review also looked at the area to the north of the Air Canada South Hangar. While this area currently experiences a very low number of run-ups, a high level analysis to assess the benefits of having noise and blast barrier was done for further consideration if this area were to receive increased run-ups in the future. Barrier or berms at this location were thought, however, to be of limited value in reducing the impact of run-up noise, in Burkeville or beyond, and would likely pose problems with design, placement, and meeting height requirements associated with airport zoning.

### **Float Plane Operations**

Float plane operations at YVR were the subject of 138 concerns, of a total of 249, registered by residents of Richmond in the 4<sup>th</sup> Quarter 2015 summary. A similar proportion appears in the reports for 2013 and 2014. A substantial number of the float plane concerns emanate from one person. It may be that not primarily noise, but the perceived hazard created by float planes travelling east downwind or departing westbound in line with Westminster Highway at only 500 feet, is the source of some of the complaints. The solutions proposed by a former City-appointed member of the Committee in 2014 (downwind at 1,500 feet, and westbound departure path over Swishwash Island) were considered operationally infeasible. A fresh look

might, however, be useful. In January 2015, Gary Abrams informally approached the representative of the British Columbia Floatplane Association with a view to discussing the situation. No discussion has yet occurred, but a meeting early in 2016 with YVR and City staff participation may yet be arranged.

#### **Quieter Aircraft**

The trend, referred to in the 2014 report, towards quieter aircraft continues. Residents of Richmond will be pleased to hear that the use of the Boeing 727 freighters decreased during the year to operate from Vancouver.

#### **Construction Projects**

The Committee was informed during the year of construction projects at YVR, which resulted in a displacement of aircraft noise. The main projects were construction of RESAs (runway end safety areas) on the south airfield, which includes the south (08R/26L) and crosswind (13/31) runways, and urgently needed repairs to Taxiway Delta (parallel, and a short distance to the north of, the south runway).

#### **Use of FRASER SIX Departure Procedure during the Spring-Summer**

The FRASER SIX standard instrument departure procedure from Runway 08R was again implemented in the spring of 2015. This follows its use in previous years and the use of the FRASER SIX, along with other air traffic control techniques, allows for increased capacity and efficiency. The FRASER SIX may hereafter be used on a year-round basis. The FRASER SIX requires departing aircraft to turn 15 degrees to the right, from the runway heading of 083° to 098°, on reaching 1,000 feet. The Airport Authority reported no complaints related to the use of the FRASER SIX. It is unlikely that any persons on the ground in Richmond, unless involved in aviation, would even notice that some eastbound jet aircraft are turning 15 degrees to the right 1,000 feet above them. Traffic noise, especially in central Richmond, has for many years been more noticeable than the noise created by aircraft.

#### **Recommendations to the General Purposes Committee**

No specific recommendations are made at the end of 2015. The work of the Committee will continue.

Margot Spronk  
Gary Abrams



## Noise Management

4<sup>th</sup> Quarter 2015

Notes: reported date is from January 1 to November 21 for all years.

	2011	2012	2013	2014	2015	% Change (from 2014)
YVR Complaints (YTD)	740	668	1,107	1,568	1,529	-2.5%
Complainants	299	218	271	272	287	+5.5%

Breakdown of 2015 complaints by geographic area:

Location	# of Concerns	# of Complainants
Surrey	957	21
Richmond	249	89
Vancouver	178	119
North Delta	86	15
South Delta/ Tsawwassen	15	9
New Westminster	5	3
Other	34	26
Unknown	5	5
<b>Total</b>	<b>1,529</b>	<b>287</b>

**Analysis of the 1,529 complaints:**

- 59% (n=900) of concerns were registered by one individual from South Surrey regarding over-flights of the area. There was nothing out of the ordinary about these operations.
- Night-time use of the north runway due to the annual and monthly south runway closures resulted in 59 concerns:
  - 54 concerns were registered during the construction of Runway End Safety Area (RESA) between May 19 and the morning of September 1.
  - 3 concerns were registered during the extended south runway closure period for the repair of Taxiway Delta between September 1 and the morning of September 19.
  - 2 concerns were registered due to the monthly south runway closure for maintenance.
- 14 concerns were related to ILS flight checks:
  - 3 from Richmond
  - 10 from Vancouver
  - 1 from South Surrey
- 29 concerns were regarding engine run-up activities:
  - 23 concerns from 16 individuals in Richmond
  - 6 concerns from 6 individuals in Vancouver





## Noise Management

## Community Concern Operational Breakdown

Community	Operational Concern	No. of Concerns
Surrey	Jet Departures	602
	Jet Arrivals	296
	Prop Arrivals	36
	Overflights (non-YVR)	7
	All Aircraft	5
	Prop Departures	4
	Helicopter	3
	Policing/Military	2
	Flight Checks	1
	Other	1
Vancouver	Jet Departures	34
	Helicopter	33
	All Aircraft	32
	Jet Arrivals	22
	Prop Arrivals	15
	Flight Checks	10
	Overflights (non-YVR)	10
	Policing/Military	8
	Run-ups	6
	Other	5
	Prop Departures	3
North Delta	Jet Arrivals	58
	Jet Departures	10
	All aircraft	8
	Prop Arrivals	5
	Overflights (non-YVR)	4
	Helicopters	1
Richmond	Float Plane	138
	All Aircraft	34
	Run-ups	23
	Jet Departures	20
	Prop Departures	9
	Prop Arrivals	5
	Helicopter	5
	Jet Arrivals	4
	Other	4
	Flight Checks	3
	Overflights (non-YVR)	3
	Policing/Military	1
New Westminster	All Aircraft	3
	Jet Arrivals	1
	Prop Arrivals	1



## Noise Management

## Community Concern Operational Breakdown (cont'd)

Community	Operational Concern	No. of Concerns
South Delta/Tsawwassen	Overflights (non-YVR)	7
	Jet arrivals	4
	All Aircraft	2
	Jet Departures	2
Other	All Aircraft	14
	Jet Arrivals	6
	Helicopter	5
	Overflights (non-YVR)	4
	Other	2
	Prop Arrivals	1
	Policing/Military	1
	Jet Departures	1
Unknown	All Aircraft	3
	Jet Departures	2

## April - November 2015 Highlights

Month	Event
April	<ul style="list-style-type: none"> <li>The ANMC held its second meeting of 2015. Agenda items included: an overview of Performance Based Navigation (PBN); YVR Master Plan; engine run-up project; and 2015 summer runway operations.</li> <li>Airport Authority staff attended the B&amp;K Aircraft Noise &amp; Operations Monitoring System (ANOMS) User Forum in Chicago where B&amp;K provided product direction and demonstrations. Several airports presented on noise management case studies and their use of ANOMS.</li> </ul>
May	<ul style="list-style-type: none"> <li>NAV CANADA commenced the use of the FRASER SIX departure procedures on Runway 08R on May 4.</li> <li>Nightly closure of the south runway for annual maintenance and the Runway End Safety Area (RESA) project commenced on May 19.</li> </ul>
June	<ul style="list-style-type: none"> <li>YVR Master Plan team hosted a joint meeting of Environmental Advisory Committee and the ANMC to provide an update on the YVR Master Plan work.</li> <li>Airspace Change Communication &amp; Consultation Protocol (ACCCP) was approved by the Minister of Transport. The ACCCP was drafted jointly by NAV CANADA and airports in 2014 to provide direction for the aviation industry on how best to coordinate communication and consultation regarding airspace changes with the communities.</li> </ul>
July	<ul style="list-style-type: none"> <li>A special meeting was held with NAV CANADA and the ANMC to provide information on the new Required Navigation Performance (RNP) approach procedure for Runway 08L. Technology background of RNP, changes associated with the new procedure, and the communications plan were discussed at the meeting.</li> <li>Emergency repair work on Taxiway Delta commenced in late July due to rapidly deteriorating conditions.</li> </ul>





## Noise Management

Month	Event
August	<ul style="list-style-type: none"> <li>Engine run-up study contract was awarded to HMMH and the project kick-off meeting was hosted.</li> <li>Installation of noise monitoring terminal (NMT #1) at Richmond Olympic Oval was completed.</li> </ul>
September	<ul style="list-style-type: none"> <li>RESA project concluded on the morning of September 1 as scheduled.</li> <li>Repair work on Taxiway Delta was completed on the morning of September 19.</li> </ul>
October	<ul style="list-style-type: none"> <li>The new RNP approach procedure for Runway 08L was published on October 15.</li> <li>Airport Authority staff presented 2014 YVR Fly Quiet Awards at the Airline Operators Committee meeting. The winners were Central Mountain Air (propeller category), Jazz (narrow-body category), and Japan Airlines (wide-body category).</li> </ul>
November	<ul style="list-style-type: none"> <li>Airport Authority staff hosted a meeting of Canadian airport noise staff. Airports attending included Calgary, Toronto, and Montreal. Discussion topics included RNP implementation and representation on the ACI-NA Noise Working Group and Transport Canada's Aircraft Noise and Emissions Committee (ANEC).</li> </ul>