



To: General Purposes Committee

Date: March 20, 2003

From: Terry Crowe
Manager, Policy Planning

File: 0153-01

Re: VANCOUVER INTERNATIONAL AIRPORT NIGHT OPERATIONS

Staff Recommendation

That a copy of the attached report dated March 20, 2003 from the Manager, Policy Planning be sent to Mr. Douglas Louth and the Vancouver International Airport Authority (VIAA) for information.

Terry Crowe
Manager, Policy Planning

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Att

FOR ORIGINATING DIVISION USE ONLY

CONCURRENCE OF GENERAL MANAGER

Staff Report

Origin

This report responds to a General Purposes Committee referral from its meeting of January 20, 2003, at which the following motion was carried:

“That the concerns of Mr. Douglas Louth regarding aircraft noise after midnight be referred to staff to:

- i. clarify the Airport’s position on this matter, and;*
- ii. provide information on the percentage of airplanes which arrive and depart after midnight.”*

Findings Of Fact

VIAA Aeronautical Noise Management Program

VIAA manages airport related noise through its Noise Management Program which is aimed at minimizing the level of disturbance to those people living in communities in the vicinity of the airport while recognizing the legitimate need for continued aircraft operations. Key components of this program include:

- published noise abatement procedures covering pilot take-off and landing procedures, preferential runway, hours of operation and aircraft type procedures;
- airside operations directives (ground and maintenance operations);
- ongoing noise monitoring and flight tracking systems;
- participation and support of international efforts in developing new standards and technologies for noise mitigation;
- receiving, reporting and responding to public questions and concerns;
- enforcement by Transport Canada of published procedures;
- managing and implementing initiatives in VIAA’s Noise Management Plan (Executive Summary included as **Attachment 1**);
- regular consultation with the VIAA Aeronautical Noise Management Committee which includes citizen representatives from Vancouver, Richmond and Delta, municipal and provincial governments, industry associations, airport users, Transport Canada, NAV Canada and VIAA. Richmond’s citizen representatives on this Committee are Tom Chan and James Watson. Rob Innes, Community Planner in the Policy Planning Department participates on behalf of the City administration.

Night Operations at YVR/Runway Movements after Midnight

Airport Authority staff have provided the following information to assist in clarifying the Authority’s position on the issue of night operations at the airport and the proportion of runway movements which occur after midnight:

- Like most international airports, Vancouver International Airport (YVR) is open 24 hours per day. While much of the night-time traffic is associated with over-night cargo and courier services, there are a limited number of passenger services;
- **Attachment 2** illustrates the average hourly runway movements for 2002 and provides an indication of the volume of traffic at night compared to other periods of the day. In 2002, there were a total of 128,915 arrivals and 128,033 departures for a total of 257,850 total runway movements (arrivals and departures) at YVR.
 - Approximately 25,030 movements, or 9% of the annual total, occurred between the hours of 10:00 p.m. and 7:00 a.m.; and,
 - Approximately 6,940 movements, or less than 3% of the annual total, occurred between the hours of midnight to 6:00 a.m.
- VIAA assumes that the airport will accommodate 459,900 total runway operations in 2015 with approximately 61,225 movements (approximately 13%) occurring between the hours of 10:00 p.m. and 7:00 a.m. The planning assumptions used to create the 2015 Noise Exposure Forecast (NEF) contour are not refined enough to predict how much of this traffic will occur either during the periods 10:00 p.m. to midnight or 6:00 a.m. to 7:00 a.m. The 10:00 to 7:00 a.m. forecasted movements for the year 2015 is more than double the actual movements experienced in 2002.

To help manage noise from night-time operations, the published Noise Abatement Procedures (NAP) for YVR include the following procedures/restrictions:

- A midnight to 6:00 a.m. departure restriction on older and noisier “Chapter 2 certified” jet aircraft over 34,000kg;
- Preferential use of runways that attempt to keep both arriving and departing aircraft over the Strait of Georgia (weather permitting) between the hours of 11:00 p.m. and 6:00 a.m.;
- Use of minimal reverse thrust upon landing, consistent with safety;
- Closure of the North Runway (08L/26R) between the hours of 10:00 p.m. to 7:00 a.m.; and,
- A night-time approval process for jet aircraft cargo, scheduled air carriers and charter flights between the hours of midnight and 7:00 a.m.;
- Exemptions can occur due to emergencies or maintenance.

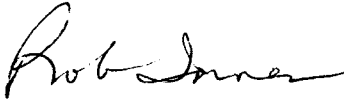
VIAA staff advise that the most effective noise mitigation procedure for night-time operations is the use of preferential runways to route all air traffic over the water between the hours of 11:00 p.m. and 6:00 a.m., weather permitting. During these hours, the preferential runway for take-off and landing is the South Runway. The use of the runways in this manner is weather dependent, and aircraft may have to use a non-preferential runway due to winds - for safety reasons aircraft must land and take-off into the wind.

Financial Impact

None.

Conclusion

In response to a General Purposes Committee referral, this report has clarified the Airport Authority's position on night operations at YVR including the percentage of airplanes which arrive and depart after midnight.



Rob Innes
Planner
(4193)

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EXECUTIVE SUMMARY

This document outlines the Aeronautical Noise Management Program at the Vancouver International Airport (YVR). It is intended to be a reference document that describes both the current program as well as future initiatives incorporated into a five year (1999-2003) action plan aimed at improving the noise environment around YVR.

This document consists of six sections. The first section provides an introduction to noise management at YVR. The second section provides a brief summary of the rules and regulations governing aeronautics in Canada. The third section describes the overall program at YVR. The fourth section describes the overall process of updating the Plan and consultations surrounding the initiatives included in the five year action plan. The fifth section describes the five year action plan and accompanying initiatives. The sixth section provides a summary of the comments received during the course of updating the Plan. The seventh section provides an index to these comments.

The initiatives listed in the five year action plan were determined through close consultation with the YVR Aeronautical Noise Management Committee and the through a consultation process involving the community, municipal councils, and local organizations. The initiatives have the full support of the Airport Authority's Senior Management and Board of Director's.

The 22 initiatives that were identified are:

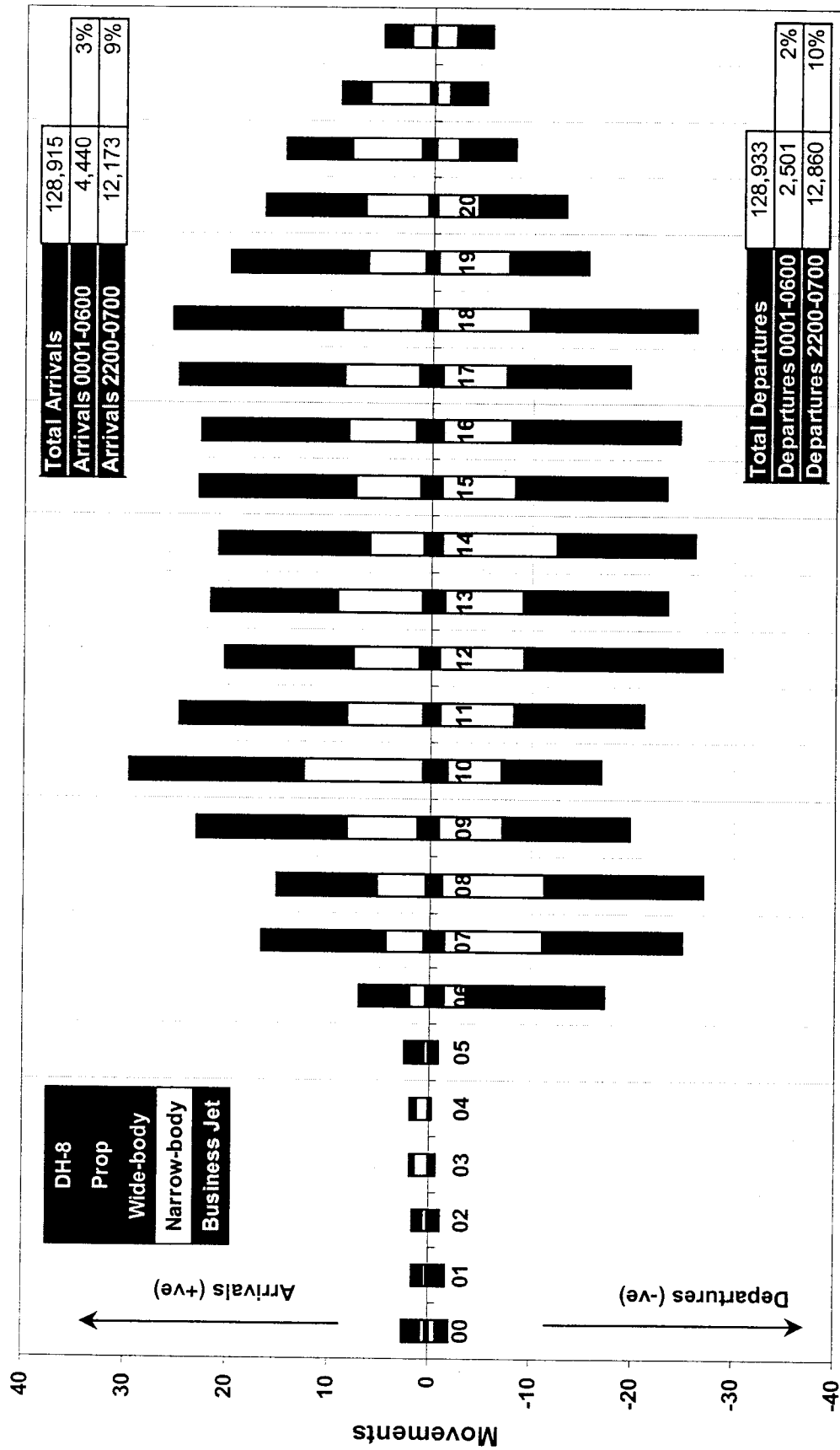
- Noise & Technology
- Visual Barriers
- Acoustical Barriers
- Engine Run-ups
- Reverse Thrust
- Night-time Departures

- Noise Abatement Procedures (NAP)
- Capacity
- Education & Awareness
- Land Use Planning
- Social Survey
- General Airport Noise
- Noise Monitoring Terminal (NMT) in North Delta
- Landing Glide-slope
- Y2K Systems Upgrade
- Air Traffic Control Procedures
- Noise Surcharges
- International Civil Aviation Organization (ICAO) Noise Certification
- Chapter 2 Aircraft Phase-out
- Noise Budgets
- 2001 Noise Environment
- 5 Year Review

The implementation of some initiatives will require further consultation with affected parties including final approval by Transport Canada. Initiatives contained in this Plan are not exclusionary, and new opportunities for additional items will be considered on an ongoing basis and discussed fully with the YVR Aeronautical Noise Management Committee. In addition, there may be additional working groups established to explore specific action plan initiatives. Such working groups will report findings and recommendations to the Noise Management Committee. As an example (as of October 1998), a Reverse-Thrust Working Group has been exploring options to further minimize use of reverse thrust for landings on the North Runway (08L/26R).

On a quarterly basis, a status report will be prepared for the Committee with updates to the five year action plan. At the end of the five years, a Plan review will also be conducted to ensure that the Airport Authority remains proactive in its approach towards noise management.

Average Hourly Runway Movements at YVR for 2002



February 2003

Hour

YVR Noise Management
 FILE: City of Richmond Staff Request.v1.MCC.xls