# Toronto Pearson Noise Management Forums Pearson Public Meeting

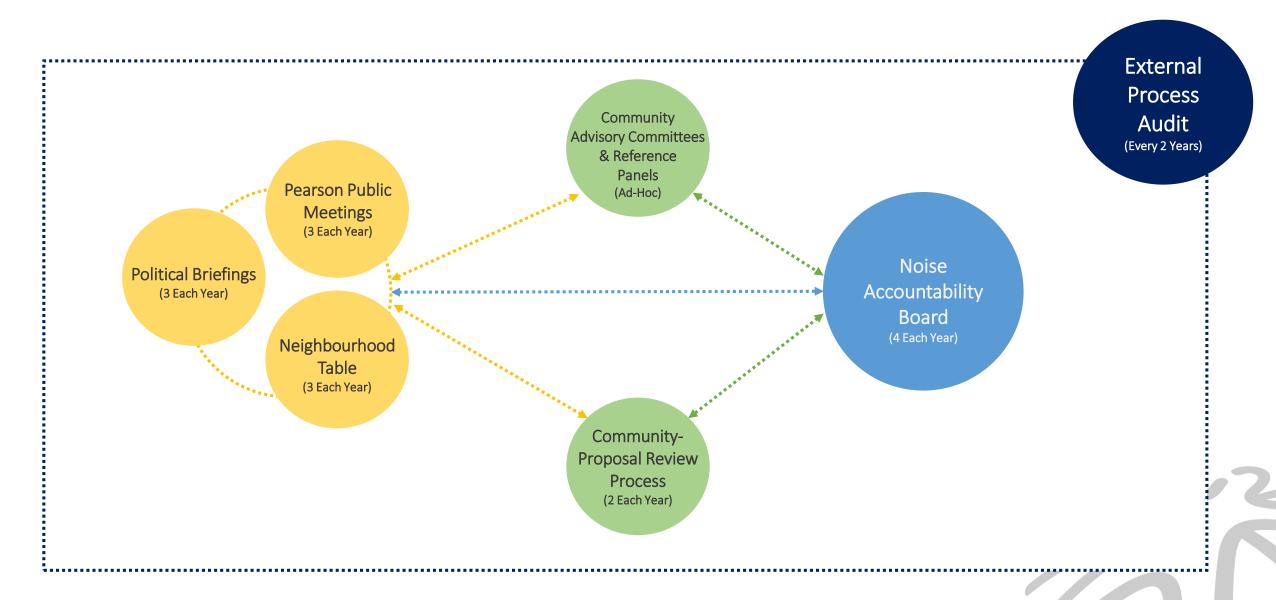
April 4, 2019



# Agenda

- Welcome & Introductions
- Noise and Operations Statistics Update
- NAV CANADA Update
- Six Ideas: Overview and Progress Update
- Noise Management Action Plan: Overview and Progress Update
- Other Business

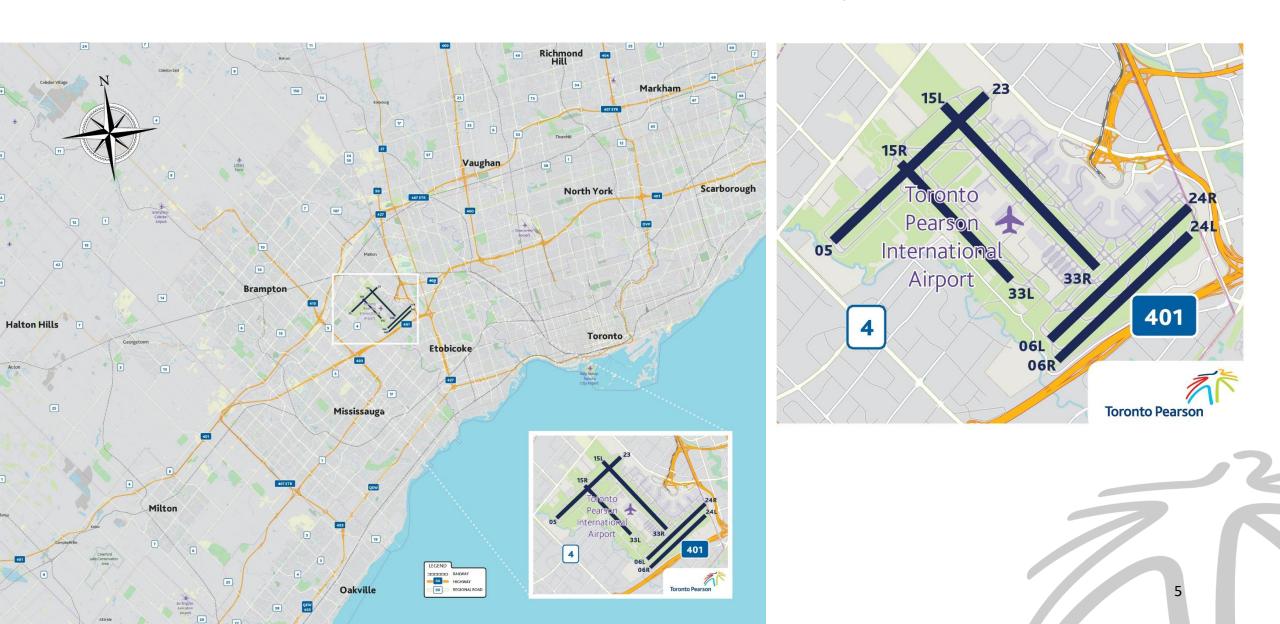
# Toronto Pearson Noise Management Forums



# Noise & Operations Statistics Update

2018 Year End

# Toronto Pearson and Our Runways



# Operations and Complaints January – December 2018

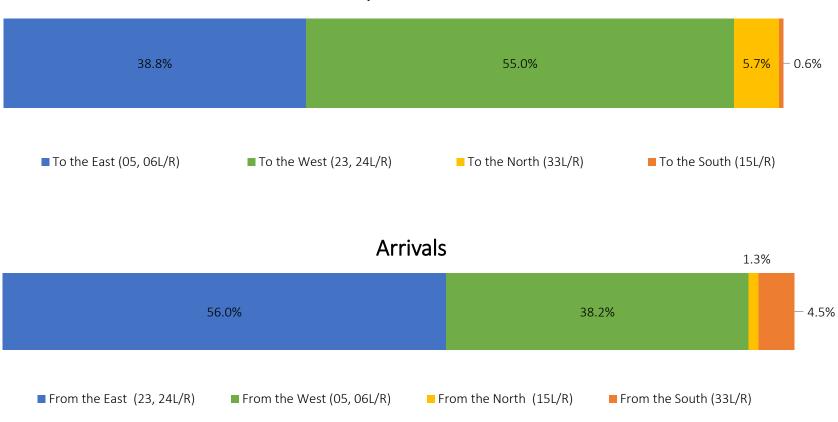


# 2018 Movements (Arrivals & Departures)

Runway	Arrivals	Departures	Total
05	61,510	22,013	83,523
06L	19,247	64,874	84,121
06R	9,347	1,621	10,968
15L	1,789	1,618	3,407
15R	1,232	214	1,446
23	48,413	84,547	132,960
24L	18,625	1,237	19,862
24R	65,070	44,921	109,991
33L	9,537	388	9,925
33R	1,170	13,330	14,500
Grand Total	235,940	234,763	470,703

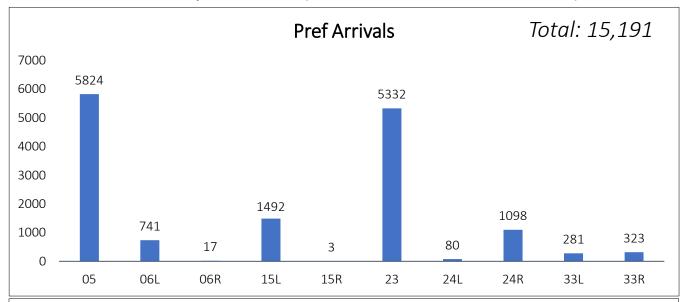
# 2018 Operations by Direction

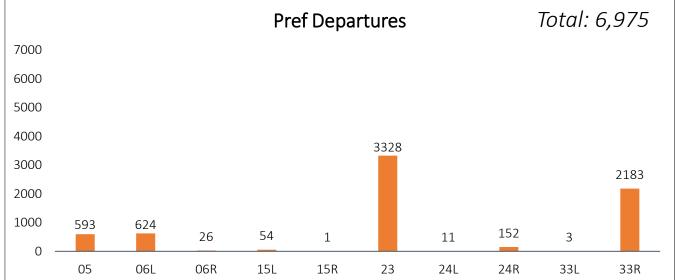




# 2018 Preferential Runway Usage

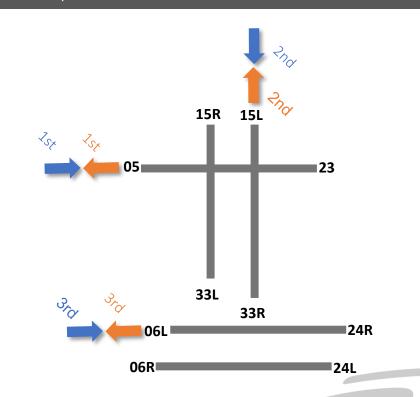
Arrivals and Departures (12:00 a.m. – 6:29 a.m.)





#### Adherence to the Preferential Runway System:

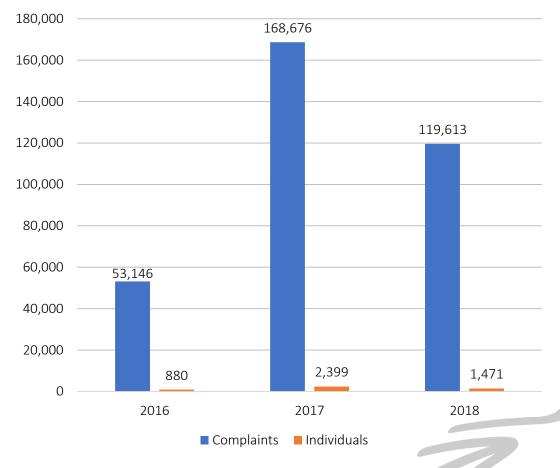
- Arrivals 53%
- Departures 81%



# 2018 Complaints by Month & by Year

January – December 2018			
Month	Complaints	Individuals	
January	9,336	259	
February	6,767	188	
March	20,444	333	
April	12,789	285	
May	13,266	285	
June	9,831	239	
July	8,815	310	
August	8,083	403	
September	8,738	298	
October	7,285	179	
November	7,724	196	
December	6,535	170	



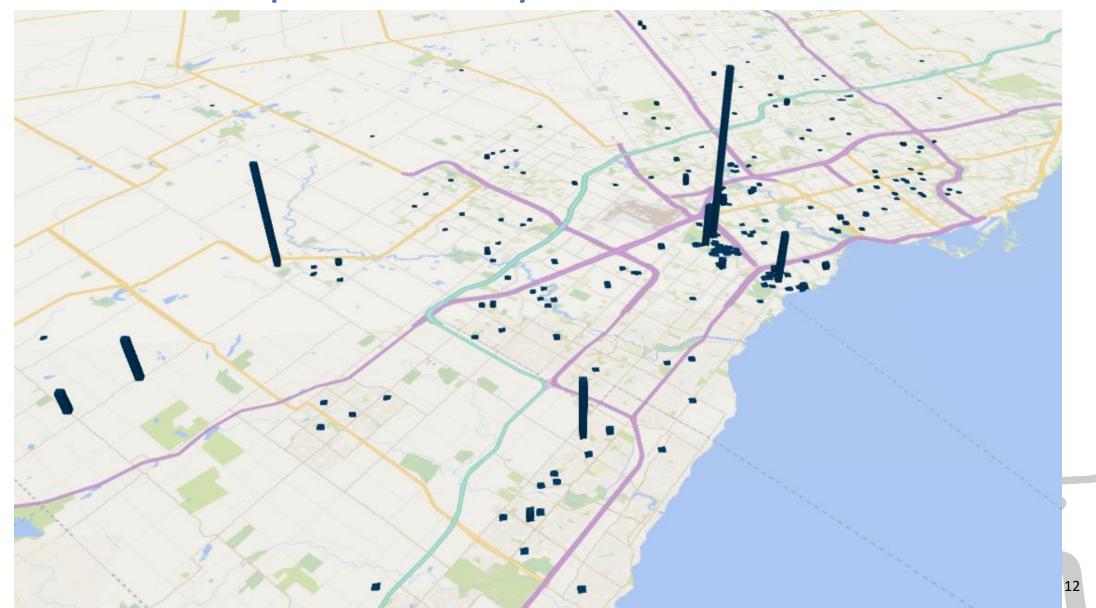


# 2018 Complaints by Federal Riding

Riding	Complaints	Individuals
Aurora-Oak Ridges-Richmond		
Hill	5	3
Beaches-East York	60	3
Brampton Centre	249	25
Brampton East	461	12
Brampton North	13	8
Brampton South	128	29
Brampton West	1,008	3
Burlington	1	1
Davenport	378	5
Don Valley East	1,007	22
Don Valley West	302	21
Dufferin-Caledon	11	5
Eglinton-Lawrence	286	6
Etobicoke Centre	32,700	289
Etobicoke North	1,388	67
Etobicoke-Lakeshore	8,331	203
Humber River-Black Creek	1,385	58
King-Vaughan	362	11
Markham-Stouffville	4	3
Markham-Thornhill	50	10
Milton	18,461	65
Mississauga Centre	18	1
Mississauga East-Cooksville	3,461	70

Riding	Complaints	Individuals
Mississauga-Bram. South	4	1
Mississauga-Erin Mills	282	22
Mississauga-Lakeshore	165	22
Mississauga-Malton	1,917	42
Mississauga-Streetsville	1,099	89
Oakville	1,525	39
Oakville North-Burlington	22,498	74
Parkdale-High park	3,239	21
Richmond Hill	1,048	15
Scarborough Southwest	208	2
Scarborough-Agincourt	3	1
Scarborough-Rouge Park	220	1
Spadina-Fort York	1	1
Thornhill	235	20
Toronto-Danforth	5	4
Toronto-St.Paul's	180	17
University-Rosedale	119	11
Vaughan-Woodbridge	442	14
Wellington-Halton Hills	14,978	40
Willowdale	293	62
York Centre	296	21
York South-Weston	694	28
Grand Total	119,613	1,471

# 2018 Complaints by FSA (first 3 digits of postal code)



# November 2017 – October 2018

# Night Flight Restriction Program

#### Background

- Annual cap, or "budget" on the number of flights permitted to operate during the restricted hours (12:30 a.m. to 6:29 a.m.)
- Transport Canada set the budget in 1997 and conducts annual audits of the program
- Budget year runs from November 1 to October 31
- Approximately 4% of flights operate during the restricted hours

#### November 2017 - October 2018

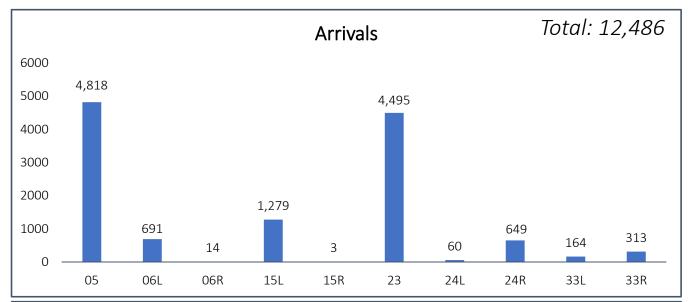
- Budget 19,395 movements average 53 flights per night
- Actual 17,930 movements average 49 flights per night
- Used 93% of the night flight budget
- A bump-up will not be applied

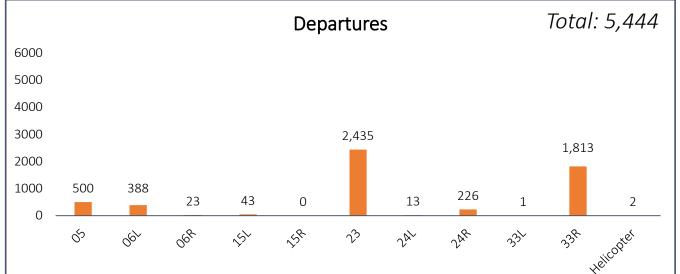
#### November 2018 – October 2019

- Passenger growth of 5.35% in 2018
- Budget will increase to 20,433 movements average 56/night

# Restricted Hours Usage

November 2018 – October 2018 | Arrivals and Departures (12:30 a.m. – 6:29 a.m.)



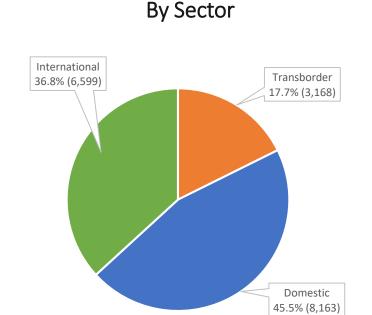


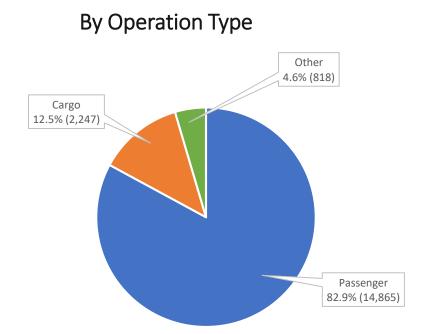
During the restricted hours, arrivals accounted for 70% of all operations and departures accounted for 30%.

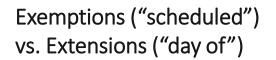
Restricted Hours (12:30 a.m. - 06:29 a.m.) is a sub-set of Preferential Runway period (12:00 a.m. - 06:29 a.m.).

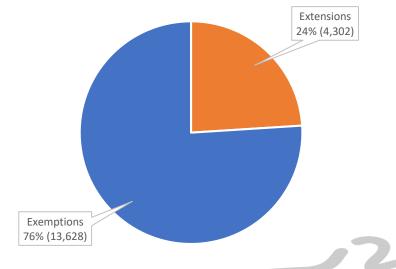
# Who operated at night?

November 2017-October 2018









# Enforcement Investigations November 2017 – October 2018

# Enforcement Investigations

#### November 2017-October 2018

- When there is evidence of non-compliance to the Night Flight Restriction Program or Noise
   Abatement Procedures, the GTAA investigates the event and forwards the complete details of the
   investigation along with all supporting evidence to Transport Canada's Enforcement Office.
- Transport Canada publishes summaries of infraction details on its <u>Corporate Offenders page</u>.

Investigation Type	Monitoring	Enforcement Office Investigations (complete + ongoing)	Sent to Transport Canada
Noise Abatement Procedures	All arrival and departure operations are monitored for compliance with the Noise Abatement procedures using rules set up in flight tracking system	31	25
Night Flight Restriction Program	All flights that operate during the Restricted Hours (12:30 to 6:29 a.m.) are verified against the night flight schedule and the day of operations extension approvals	154	102
	Totals	185	127

# NAV CANADA Update



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### NAV CANADA UPDATE

- New Night Time Procedures (Idea #1 & #2)
- New CDO Procedures (Idea #4)
- Quieter Operations Guide
- New guidance in Canada Air Pilot



Idea	Status
Idea 1: New Nighttime Approaches (12:30 – 6:30 am)	Implemented November 8, 2018
Idea 2: New Nighttime Departures (12:30 – 6:30 am)	Implemented November 8, 2018
Idea 3: Increase Downwind Speed	Implemented April 27, 2017
Idea 4: Increased use of Continuous Descent	Implemented February 28, 2019
Idea 5: Summer Weekend Runway Alternation Program	Tested Summer 2018 Recommended next steps: Summer Trial 2019
Idea 6: Review of the Preferential Runway System	Dates for testing TBD

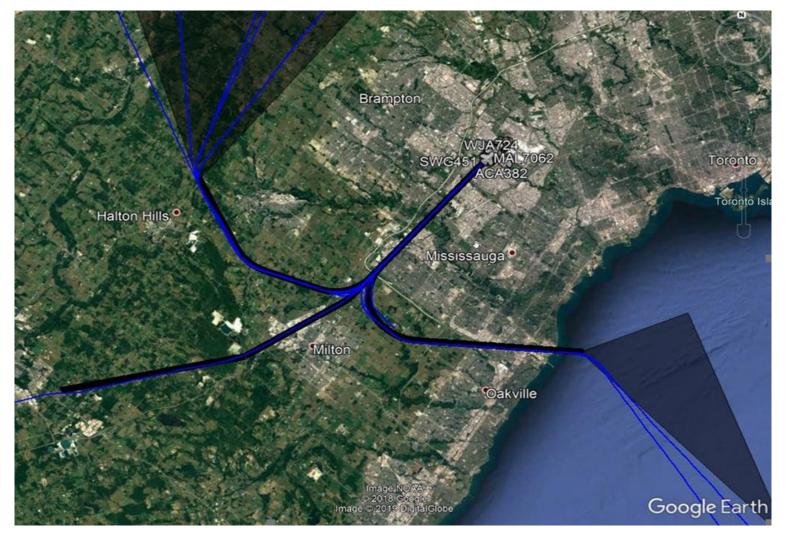
# NIGHTTIME PROCEDURES – IDEA 1

**NEW RNAV Arrival - RWY 05** 



### NIGHTTIME PROCEDURES – IDEA 1

**NEW RNAV Arrival - RWY 05** 



### NIGHTTIME PROCEDURES – IDEA 2

Departure Procedure - Runway 23



#### NIGHTTIME PROCEDURES

> Implemented Nov 8, 2018

#### > Early indications

- Easy to use for ATC
- Positive feedback from aircrew generally

#### > Next steps

- Continued awareness and education (INMB agenda item)
- Use of Arrival Manager technology to potentially increase usage

#### IDEA #4

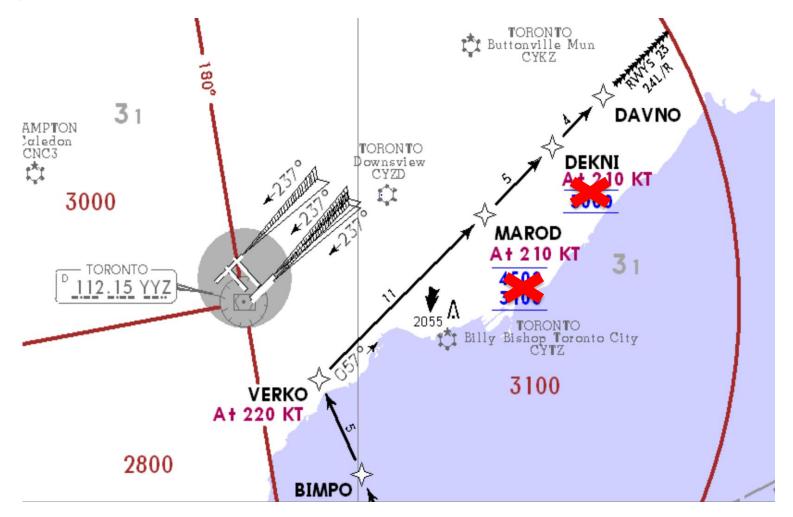


#### Implemented February 28, 2019

- In a busy airspace, such as Toronto Pearson's, level flight segments can be necessary to safely manage traffic flows.
- In order to keep aircraft at a level altitude, pilots must increase thrust and drag, which can create more noise.
- Increasing the use of Continuous Descent Operations (CDO) will enable more aircraft to operate in a quieter flight profile on approach.
- Continuous descent approaches are the quietest type of approach, offering noise reductions between 1 and 5 decibels depending on the phase of flight.

#### **NEW STAR VERTICAL PROFILES**

#### Increase CDO



### QUIETER OPERATIONS GUIDE

> Published Dec 2018

> Includes guidance on:

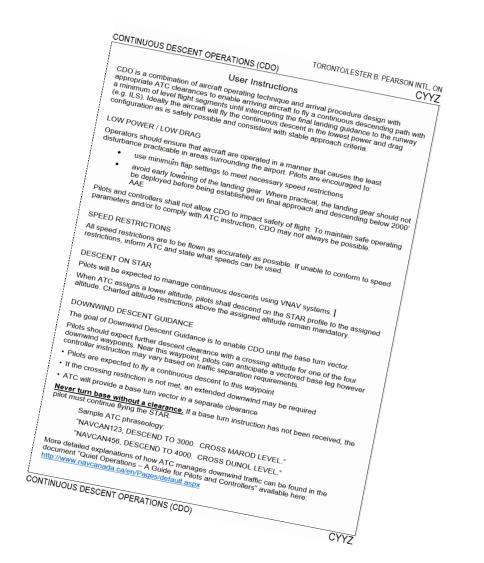
 Continuous Descent Operations (CDO)

Low Power/Low Drag



#### **CANADA AIR PILOT**

- New section in Canada AirPilot for YYZ Operations
  - Will ensure specifics of Quieter Operations Guide get right to the Flight Deck
  - Includes guidance on later deployment of landing gear
  - Includes downwind CDO guidance





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# Six Ideas Update

Idea 5 and Idea 6

# Idea 5 Summer Weekend Runway Alternation Program

#### Summer Weekend Runway Alternation Program Involves only the three east/west runways

- Benefits residents on final approach or initial departure
- No change for residents on downwinds

May to October (26 weekends) Saturdays and Sundays between 6:30 a.m. and 11:59 p.m.

- ~13 weekends of respite
- A published schedule
- The post-test survey results of 9000+ responses indicated that periods of respite were meaningful and the non-respite weekends were not more impactful than normal operations.

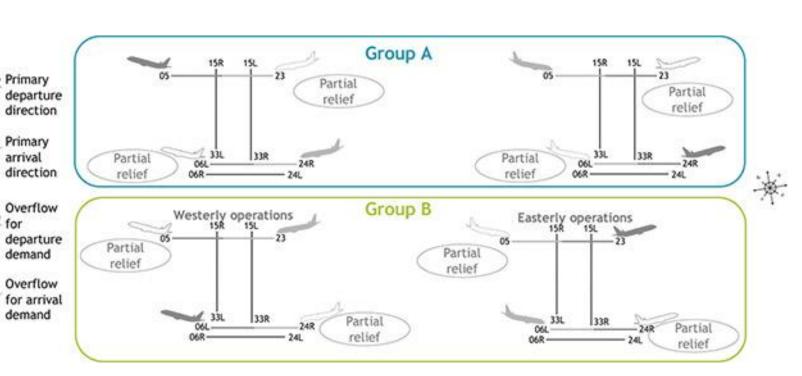
#### **Respite Zones**



### Respite Groups

Idea 5 Summer Weekend Runway Alternation Program

2 for



## Summer 2018 Idea 5 Test

#### Tested for 8 Weekends in Summer 2018

- Toronto Pearson tested the program for eight-weekends in Summer 2018 to validate technical analysis predictions and allow the community to provide feedback on their experience.
- July 28 to September 16, 2018 Saturdays and Sundays from 6:30 a.m. to midnight.
  - Operational analysis showed that respite was achievable in morning and late evening when traffic is lower. It also showed that there was room to improve levels of respite provided by working with partners.
  - The post-test survey results of 9000+ responses indicated that periods of respite were meaningful and the non-respite weekends were not more impactful than normal operations. Survey results indicate community support of a full-length trial.

# Summer 2019 Idea 5 Trial

# GTAA Recommendation: Proceed with Summer Trial

- Analysis showed that respite is possible during the weekend mornings and late evenings.
- Analysis showed that there is scope to improve the level and consistency of respite provision.
- Community response indicates that relief was meaningful and nonrelief weekends were not adversely impactful.

May 25/26 to September 7/8 2019 Saturdays and Sundays from 6:30 a.m. to midnight (16 weekends)

#### Communications

Summer 2019 Idea 5 Trial

Pre-Trial	During the Trial	Post-Trial
<ul> <li>Dedicated webpages</li> <li>Print Ads in newspapers for areas involved in the test (full page, colour)</li> <li>Automated phone calls to areas involved in the test</li> <li>Social Media</li> <li>Checking In</li> <li>Email to engaged residents</li> <li>Noise Forums briefings</li> </ul>	<ul> <li>Community feedback accepted through the online feedback form, emails, and phone calls</li> <li>Continued social media posts</li> <li>Checking</li> <li>Mid-point web and email updates</li> <li>Noise Forums briefings</li> </ul>	<ul> <li>Web update</li> <li>Emails to elected officials and engaged residents</li> <li>Checking In</li> <li>Survey through automated phone calls and online</li> <li>Noise         <ul> <li>Forums briefings</li> </ul> </li> </ul>

# Idea 6 Review of Nighttime Preferential Runway System

#### Test of Updated Nighttime Preferential Runway System – Deferred

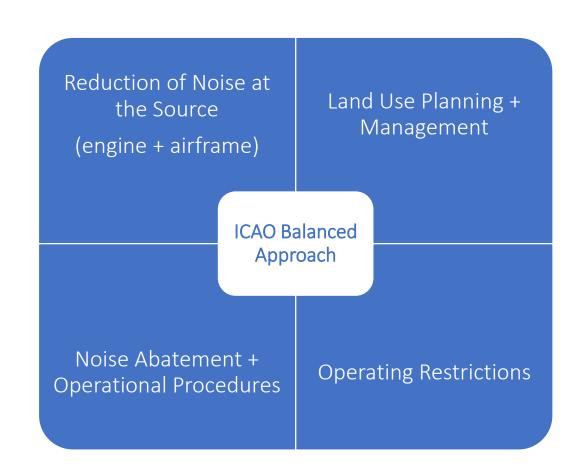
- More of our regular runway maintenance is now being conducted in the overnight period when traffic levels are lowest to minimize disruption to the operation.
- The increased nighttime maintenance work was not factored into the technical analysis of Idea 6.
- For this reason, the test of the updated Preferential Runway System is deferred.
- Next Steps:
  - Updating analysis (Helios)
  - Noise Forums Briefings with updated recommendations

## 2018-2022 Noise Management Action Plan

Update: April 2019

## Noise Management Program

Toronto Pearson's Noise Management Program is based on ICAO's Balanced Approach. The program is reviewed every five years; following that, a new Noise Management Action Plan is released.





### Timeline

#### Short Term (0 to 18 months) | January 2018 to June 2019

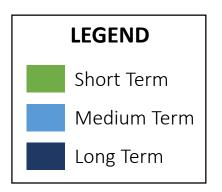
- Explore potential changes to Night Flight Restriction Program
- Begin work on Quieter Fleet Incentive Program, starting with A320 Family Retrofit Program
- Explore development of voluntary Residential Noise Insulation Program
- Explore a pilot air conditioning program for nearby schools
- Publish updated Complaint Process
- Review of CFNAC
- Six Ideas Idea 6 Test
- Six Ideas Idea 5 Summer Program tested summer 2018

#### Medium Term (18 months to 3 years) | July 2019 to December 2020

- Publish standard noise reports and impact metrics
- Launch Quieter Fleet Incentive Program incentives for airlines with retrofitted A320s
- Continue development of the Residential Noise Insulation Program

#### Long Term (3 to 5 years) | January 2021 to December 2022

- Launch Fly Quiet Program
- Launch pilot Residential Noise Insulation Program
- Continued evolution of Night Flight Restriction Program



## Communications, Outreach & Noise Committees

#### **Our Commitment**

Review the governance, membership and role of the Community Noise and Environment Advisory Committee (CENAC)

Launched the Noise Management Forums, a series of briefings, tables, and working groups that will help the airport work smarter with its communities and collaborate better with industry



## Noise Complaints

#### **Our Commitment**

Improve our noise complaint process, starting with publishing current Complaint Process

Launch a new noise management website so residents can better understand our operations

#### **Complaint Process**

 Complaint process published in February 2019 outlining what residents can expect when they register a noise complaint

 Noise Management Office now produces monthly complaints and operations reports

#### InsightFull

- Working on a new, interactive web portal called InsightFull
- This new portal will provide residents with personalized information about airport operations and impacts

TIMELINE



#### Metrics/Reporting and Fly Quiet Reporting Program

#### **Our Commitment**

Our 25 Noise Monitoring Terminals (NMTs) provide real-time noise data - create a standard noise report from this data

Establish a Fly Quiet Reporting Program that will publish an annual report comparing airline performance across several metrics

## Noise Reporting & Metrics

- Noise Management Office currently produces noise monitoring reports based on request from community
- Exploring new noise reports with input from the Neighbourhood Table to ensure information provided is valuable for the community
- Begin publishing reports in late 2019

## Fly Quiet Program

- Investigating similar programs at other airports
- Developing possible criteria and metrics relevant to Toronto Pearson





## Land Use Planning

#### **Our Commitment**

Investigate a pilot program to provide funding to nearby schools for air conditioning systems

Explore options for a new Noise Insulation Program to provide funding to residents to improve the sound insulation of their homes

## School Air Conditioning Pilot

- Identified 16 public schools in the Airport Operating Area
- Developed criteria matrix to prioritize schools.
   For e.g., air conditioning status, student population, summer programing, etc.
- Call for interest sent to eligible school boards with list of potential schools to inform them of the program and solicit proposals
- Expect to select school in April 2019, with work to be completed in Summer 2019

#### Residential Noise Insulation Program

- Study underway for the residential Noise Insulation Program
- Working to understand how other airports and local organizations manage similar programs
- Engage with utility companies like Enbridge and Union Gas which provide rebate programs, City of Toronto Home Energy Loan Program
- Research to understand local regulatory environment, population and types of dwellings around the airport





#### **Our Commitment**

## Runway Usage

Consultation with NAV CANADA on the Toronto Noise Mitigation Initiatives (The Six Ideas)

Determine next steps on the Six Ideas based on feedback from this consultation and recommendations of the Residents' Reference Panel

 Completed consultation in April 2018 that exceeded the Airspace Change Consultation and Communications Protocol



## Night Flight Restriction Program

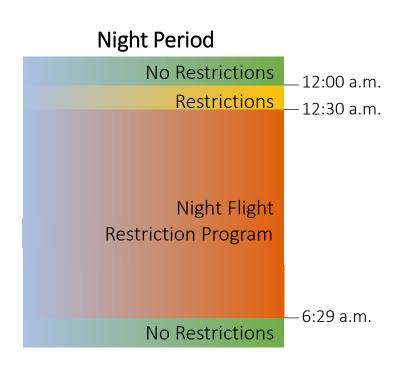
#### **Our Commitment**

We will explore changes to our Night Flight Restriction Program as benchmarked against the Best Practices in Noise Management Report.

- To date, completed operational analysis to better understand current night flight operations at Toronto Pearson
- Reviewed the current nighttime Preferential Runway Program as part of the Six Ideas.



## Night Flights at Toronto Pearson



- Preferential runways used from midnight to 6:30 a.m.
- Night Flight Restriction Program runs from 12:30 a.m. to 6:29 a.m.
  - Annual cap on number of movements permitted.
  - Only Chapter 3, or equivalent, aircraft permitted to operate in the night-time hours.

## Breakdown of Night Flights

November 1, 2017 to October 31, 2018 – 17,930 flights (average of 49 flights/night)

EXEMPTIONS ("scheduled")

78% of budget reserved for scheduled passenger and cargo flights

extensions ("day of")

20% reserved for day of extensions including mechanic, weather delay, security/ATC delay (includes medevac)

General Aviation/ Business Aviation

2% reserved

## Who is Scheduled to Operate at Night?

~13,600 scheduled night flights for Nov 1 2017 to Oct 31 2018 (37/day on average)

11,100 (82%) passenger

2,500 (18%) cargo

5,300 scheduled Domestic & Transborder flights (48%)

3,800 scheduled Int'l flights (34%)

2,100 scheduled Point to Point flights (18%)

7% Domesti

29 % Transborde

per cent Int'l, mostly to Asia









#### What This Means

- 40 per cent of passenger operations, and 67 per cent of cargo operations are domestic flights. 29 per cent of domestic flights are to/from Western Canada
- Sun destinations make up only a small percentage of scheduled night flights at 18 per cent (average 7/night in the winter and 5/night in the summer)
- The high percentage of domestic flights indicates that time zones are a factor when planning flights, and we need to understand the economic impact and consult with stakeholders for any changes to our Night Flight Restriction Program

## Quieter Fleet Incentive Program

#### **Our Commitment**

Many airports incentivize airlines to use the quietest aircraft in their fleets, or expedite purchase of quieter aircraft

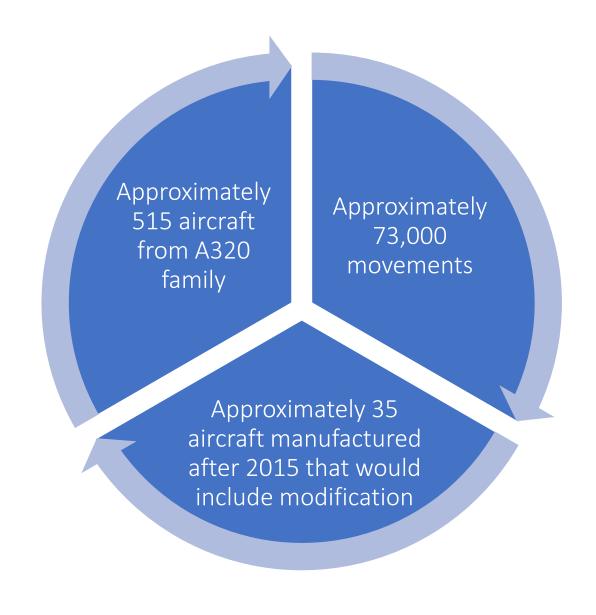
Implement a new Quieter Fleet Incentive Program, starting with incentives for airlines that retrofit A320 family by 2020

#### A320 Family Retrofit Program

- A high pitch sound on approach caused by small vents on wings of Airbus A320 family aircraft
- The A320 Family Retrofit Program at Toronto
  Pearson will be the first step towards a more
  fulsome Quieter Fleet Incentive Program (QFIP)
- Communications with airlines to inform them of the program, and what we need from them



## A320 family aircraft at Toronto Pearson | 2018



## Next Steps

Working with airlines to complete an audit of A320 family aircraft – validate how many, modification status and retrofit implementation plan.

Report back to community on audit, retrofit implementation plans and next steps in the fall.

## What You Can Expect in 2019

- Idea 5 & 6 Test/Trial
- School Air Conditioning Pilot Program Update
- Work with Neighbourhood Table to develop InsightFull and new NMT reports
- Quieter Fleet Incentive Program Development
  - Results of audit and full A320 Family Retrofit Implementation Plan
- Fly Quiet Reporting Program Development
  - Metrics Selection
- Update on Night Flight Restriction Program Review

## Other Business

Update: April 2019

## Pearson Open Houses

 Starting this spring, we are hosting Open Houses to talk to our neighbours about airport operations, our Noise Management Action Plan, our transit vision and the community investment program

March 28, 2019
Vellore Village Community
Centre
Woodbridge, ON

April 25, 2019 Julius Banquet Centre Inc. North York, ON

May 16, 2019 Mississauga Living Arts Centre Mississauga, ON May 22, 2019
Vic Johnson Community
Centre
Streetsville, ON

## Standing Committee on Transport, Infrastructure & Communities Report

- The GTAA participated in the hearings, and shared details about the importance of Toronto Pearson to local and national economy, and our noise management work
- We are pleased to see many of our own Noise Management Action Plan initiatives reflected in the report
- We look forward to working with Transport Canada as it considers the Committee's recommendations

# Transportation Safety Board of Canada Report South Complex Runway Incursions

- The GTAA is reviewing the recommendations of the Transportation Safety Board regarding the south complex runway incursions
- We welcome the findings and we have fully participated in the review
- Safety is our top priority, and we will continue to make improvements that enable continued safe operations for the surrounding communities and the nearly 50 million people who use Toronto Pearson on an annual basis

## Maintenance Work

- Starting in the spring, we will be ramping up on maintenance work
- Visit our Noise Advisory page to stay up to date on upcoming runway closures at torontopearson.com/en/noiseadvisory

PUBLICATION DATE	ADVISORY NAME	RUNWAYS
March 27, 2019	Runway Maintenance Notice for March 28 to April 3, 2019	06L/24R, 06R/24L, 15L/33R
March 20, 2019	Runway Maintenance Notice for March 21 to 27, 2019	06L/24R, 15L/33R, 15R/33L, 05/23
March 13, 2019	Runway Maintenance Notice for March 14 to March 20, 2019	06R/24L, 15L/33R, 15R/33L
March 6, 2019	Runway Maintenance Notice for March 07 to 13, 2019	05/23, 06R/24L, 06L/24R
February 28, 2019	Runway Maintenance Notice for February 28 to March 6, 2019 (updated)	06L/24R, 15L/33R, 15R/33L, 05/23
February 21, 2019	Runway Maintenance Notice for February 21 to 27, 2019	06R/24L, 15L/33R
February 18, 2019	Runway Maintenance Notice for February 14 to 20, 2019 (updated)	15L/33R, 15R/33L, 05/23 06L/24R, 06R/24L
February 14, 2019	Runway Maintenance Notice for February 14 to 20, 2019	15R/33L, 05/23, 06L/24R
February 7, 2019	Runway Maintenance Notice for February 7 to 13, 2019	06R/24L, 15L/33R
February 1, 2019	Runway Maintenance Notice for February 1 to 6, 2019	06L/24R, 06R/24L
January 23, 2019	Runway Maintenance Notice for January 23 to 30, 2019	15L/33R, 15R/33L, 05/23
January 16, 2019	Runway Maintenance Notice for January 16 to 22, 2019	06L/24R, 15L/33R, 06R/24L
1 0 2040	D 11'1 AL C L 0 2040 L 4E 2040	05/22 0/1/245

## Thank You

