Toronto Pearson Noise Management Forums

Neighbourhood Table

December 2, 2020

Welcome + Introductions

Agenda

- Airport Situational Update
  - Healthy Airport Initiatives
  - Trends in Operations and Complaints
- Member Raised Update
  - Previous Meetings/Communications
  - Newly Raised Topics
- NAV CANADA Update
- GTAA Updates
  - Maintenance and Winter Operations Update
  - 2018 – 2022 Noise Management Action Plan Activities
- Discussion and Roundtable

Airport Situational Update

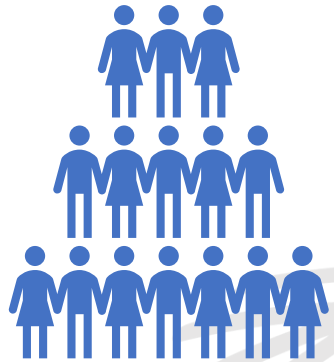
Operations since COVID-19

Operations

- Overall, traffic levels were down 76% in Q3 2020 compared to Q3 2019 – 121,958 in Q3 2019 vs 29,871 in Q3 2020
- During the restricted hours)12:30 a.m. – 6:29 a.m.), traffic levels were down by 69% – 4,185 in Q3 2019 vs 1,295 in Q3 2020

Passengers

- Passenger traffic was down approximately 88% in Q3 2020 compared to Q3 2019 – ~ 14K in Q3 2019 vs ~ 1.7M in Q3 2020



Healthy Airport Initiatives

Healthy Airport Measures

Transport Canada regulations:

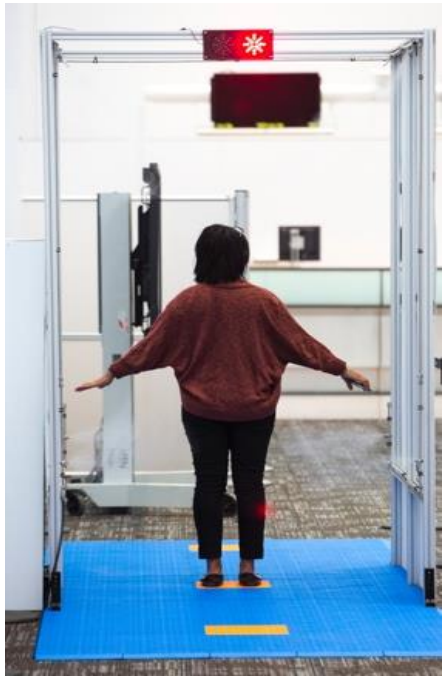
- Passenger health assessment at the final point of departure
- Mandatory temperature checks
- Arrivals health declaration to CBSA with PHAC support
- All incoming passengers must have a 14-day quarantine plan

Toronto Pearson has implemented our own Healthy Airport measures:

- Mandatory masks in all public areas, for passengers and employees
- Physical distancing: plexiglass barriers, separation at kiosks/seating areas signage, floor decals, and increased passenger comms
- Limiting terminal access to only passengers and workers
- Enhanced hygiene and cleaning in high traffic / high touch areas

HEALTHY AIRPORT

Toronto Pearson



HEALTHY AIRPORT MEASURES

Embracing innovation:

- BlueDot to predict/monitor COVID and other infectious disease risks
- Disinfection corridor that sprays a water-based non-toxic sanitizer
- Autonomous floor cleaners that use UV light for disinfection
- Use of probiotics in our washrooms to get rid of bad bacteria.
- Active monitoring duct system offering real time air quality assessment available in terminal and online for passengers to see
- McMaster HealthLabs International Arrivals COVID-19 testing Study, co-sponsor by GTAA and Air Canada

HEALTHY AIRPORT

Toronto Pearson

MCMASTER HEALTHLABS TESTING INTERNATIONAL ARRIVALS FOR COVID-19

- In September, McMaster HealthLabs (MHL) launched a study of international arriving passengers, testing them on a voluntary basis for COVID-19
- Study was co-sponsored by Air Canada and Toronto Pearson
- Largest study of its kind to examine the number and percentage of arriving international travellers who tested positive for COVID-19 during the federal government's quarantine period
- Findings could be useful to the Government of Canada and Government of Ontario in decision-making to control the spread of COVID-19 and in exploring policy options
- Interim results were published on November 17
  - 99% of study participants tested negative for COVID-19 with 1% testing positive
  - Of the 1% testing positive for COVID 19:
    - 0.7% detected on arrival
    - 0.3% detected on day 7
    - <0.1% detected on day 14

HEALTHY AIRPORT

Toronto Pearson

RAPID COVID-19 TESTING PILOT – ALBERTA

- Alberta is participating in a government approved, science-based rapid COVID-19 testing pilot for Canadians arriving from international locations.
- Applies to Canadians arriving by land and by air. Calgary International Airport will participate in the trial as the only airport in Alberta currently approved to accept international flights.
- Travellers will be offered a COVID-19 test upon arrival. If the test comes back negative, they will not be required to remain in quarantine as long as they commit to undergoing a second test on Day 6 or 7 after arrival.
- **“we hope [this] will lead to reducing and one day eliminating the current 14-day self-isolation requirements. This innovative testing is the lifeline our airport and airline partners need to instill confidence in air travel,” Bob Sartor, President & CEO, The Calgary Airport Authority.**

HEALTHY AIRPORT

Toronto Pearson

GOVERNMENT ASKS

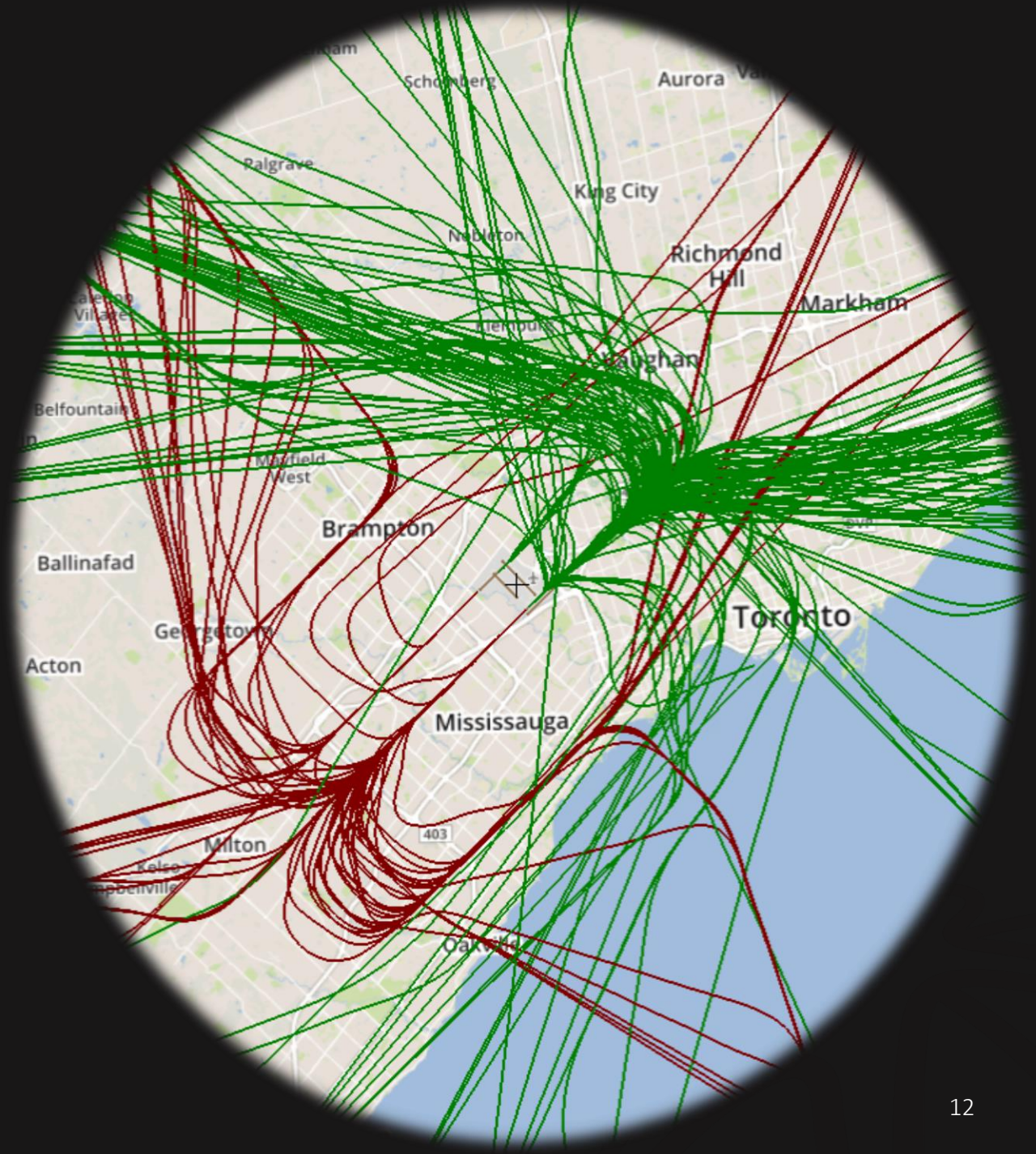
Short-term relief and longer-term stimulus needed to get Toronto Pearson back to being a regional and national economic asset

- Extend federal rent relief to future years
- Risked-based approach to restart air travel: rapid testing, remove inter-provincial travel restrictions and identify low-risk travel corridors
- Invest in airport infrastructure projects and no/low touch solutions
- Investment in better transit connections to Toronto Pearson
- Drive jobs and economic development through a Toronto Pearson Provincially Significant Employment Zone
- Incentivize travel and tourism and non-aeronautical revenue opportunities

HEALTHY AIRPORT

Toronto Pearson

Operational Trends



Operations at a Glance

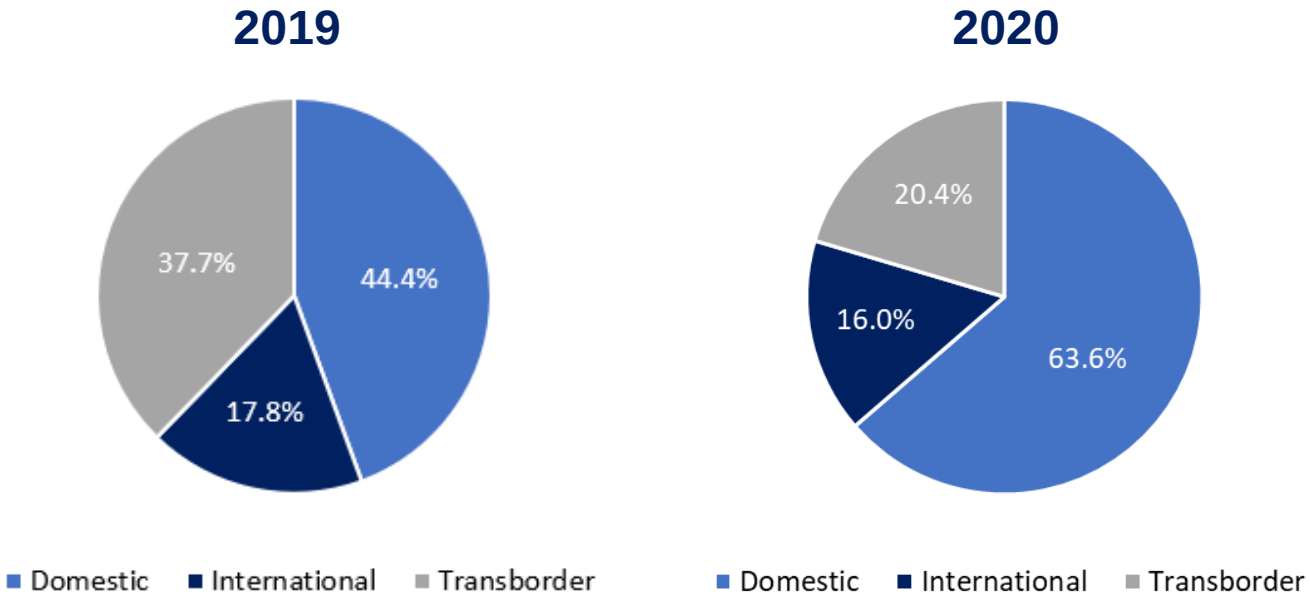
Q3 2019		Q3 2020
121,958 flights **1326** flights per day	VS	**29,871** flights **325** flights per day
4,185 night flights **45** flights per night		**1,295** night flights **14** flights per night

The lower traffic levels in Q3 2020 vs Q3 2019, reflect the impact of COVID-19 on air travel
Overall traffic down by 76%
Night flight traffic down by 69%

Operations at a Glance Q3 2019 vs 2020

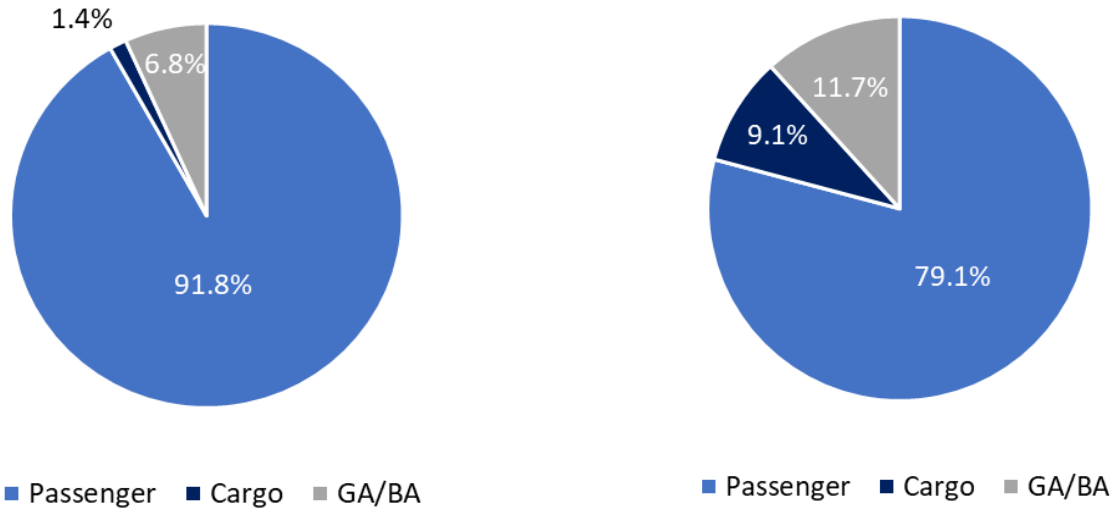
By Sector

- Due to border closures associated with COVID-19, domestic traffic represented a much higher proportion of overall traffic in Q3 2020 compared to Q3 2019.



By Type

- Drastic decrease in demand due to COVID-19 led to a proportional drop in passenger operations.
- Cargo operations increased in Q3 2020 in order to support the demands being placed on the supply chain due to COVID-19. However, Cargo operations decreased in Q3 relative to Q2 2020.



Toronto Pearson
International Airport | Aéroport International

GTAA

CYYZ Traffic Distribution Analysis

July 1st – September 30th, 2019 & 2020

Traffic Distribution Summary

When looking at the following heatmaps, we are watching for changes in flight track patterns and flight track densities.

Overall, we found:

Arrivals

- Arrival density along these tracks has decreased significantly
- Some changes in flight track patterns due to a narrowing of the tracks of arrivals being cut-across direct the downwind
  - -Areas which have seen increased track densities due to this include Georgetown, Oakville, Nobleton, Vaughan and Central Toronto
- In most cases, average altitudes of arriving aircraft along the downwind were higher in Q3 2020 compared to the historical average
- Arriving aircraft are flying shorter downwinds

Departures

- The location of departure flight tracks has remained very consistent
- Departure density along these tracks has decreased significantly

Toronto Pearson
International Airport | Aéroport International

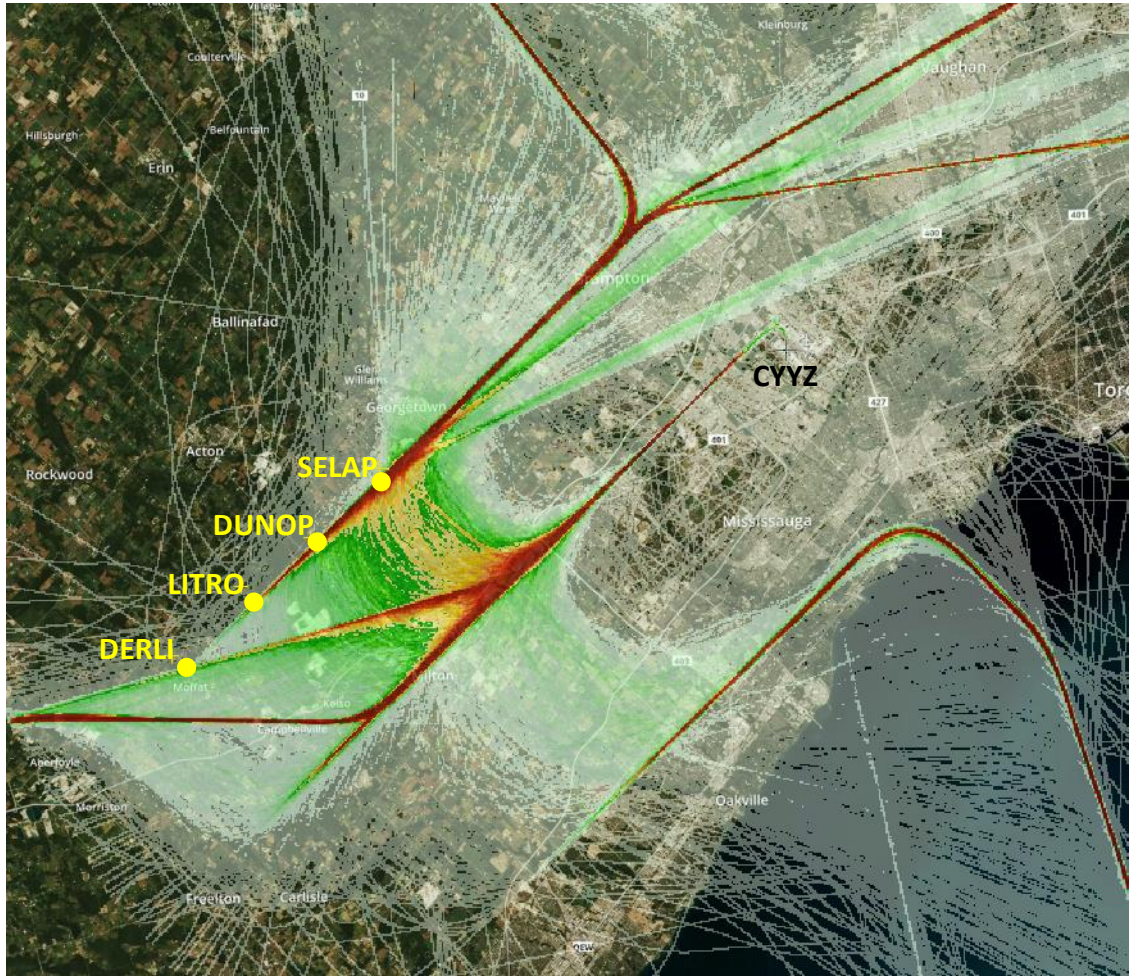
GTAA

Arrival Tracks

July 1st – September 30th, 2019 & 2020
Daytime Hours (0630-2359 local)

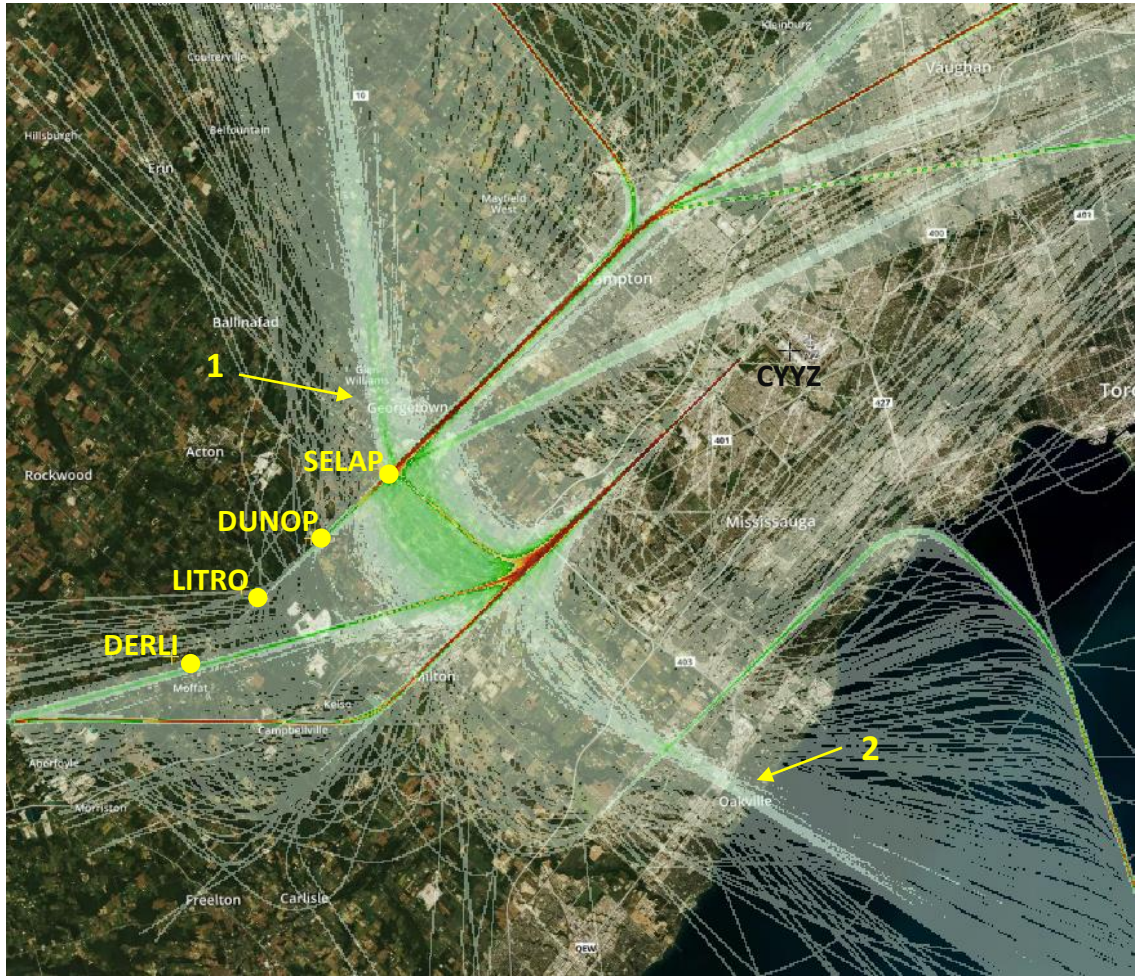
Arrivals Track Density – Runway 05

Q3 2019



Ops: 13,722

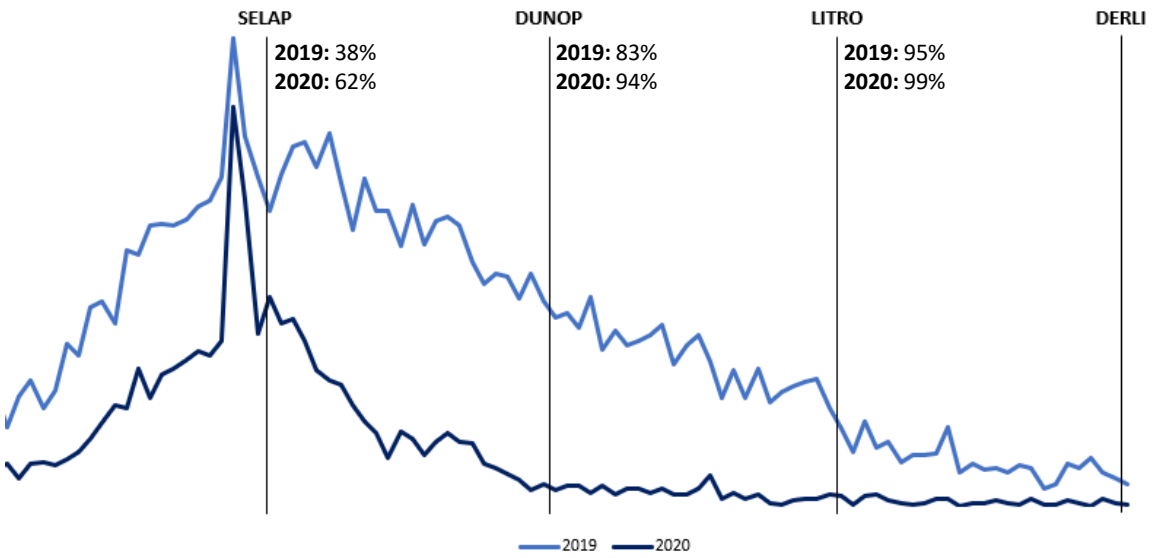
Q3 2020



Ops: 3,391
(-75%)

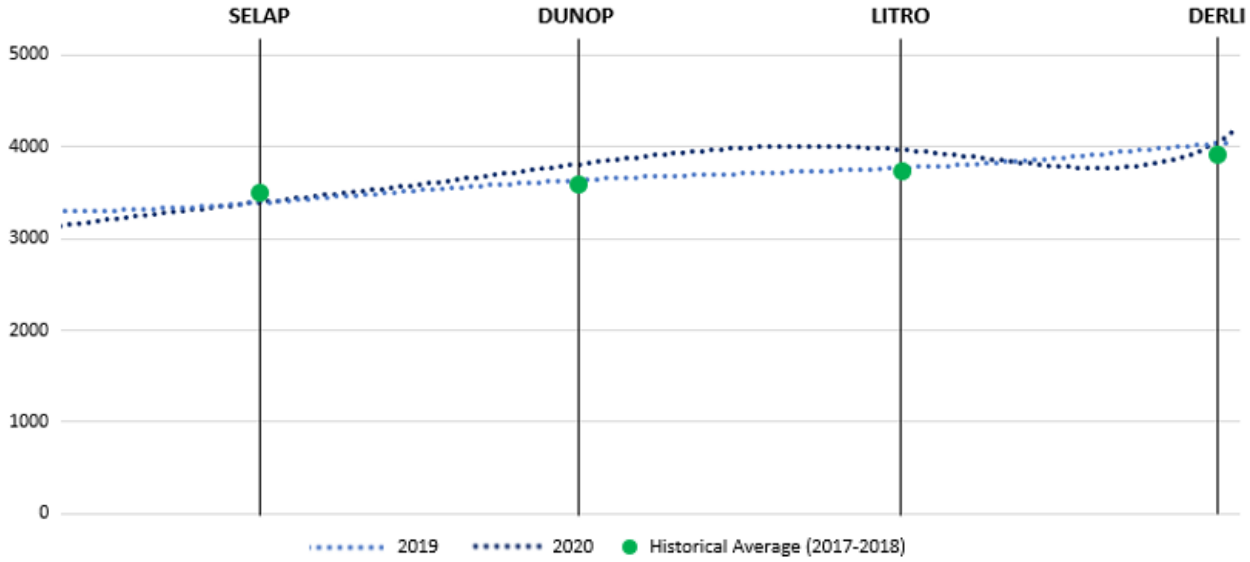
NW Downwind – Detailed Analysis

Location of Base Turns



- The distribution of base turn locations in Q3 2020 is very similar to that of Q3 2019
- There are no locations along the downwind experiencing a higher volume of base turns compared to Q3 2019
- Arriving aircraft are flying shorter downwinds, with very few arrivals making their base turn past DUNOP

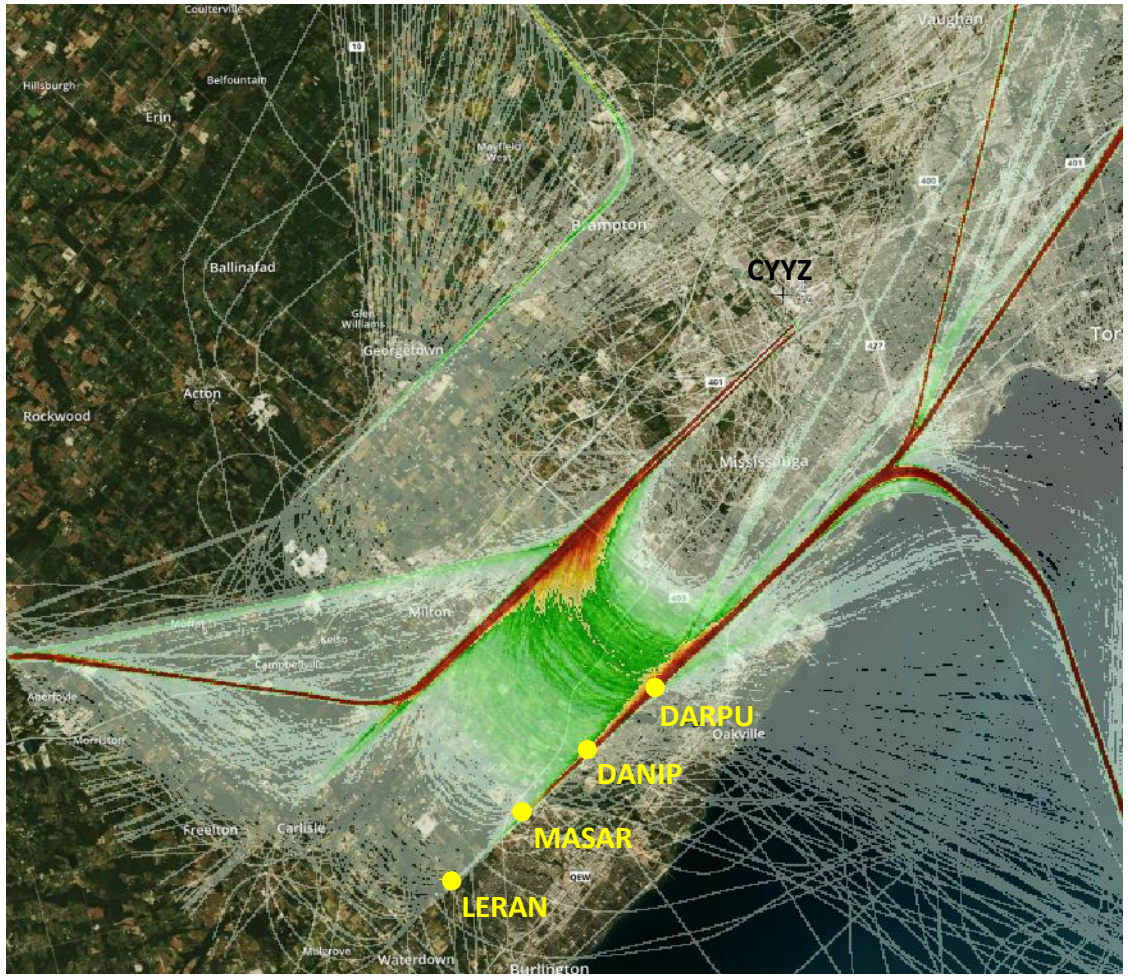
Altitude of Base Turns (AGL)



- Average altitudes along the downwind have remained extremely consistent
- There are no points along the NW downwind where the average altitude of arrivals has materially decreased compared to the historical averages

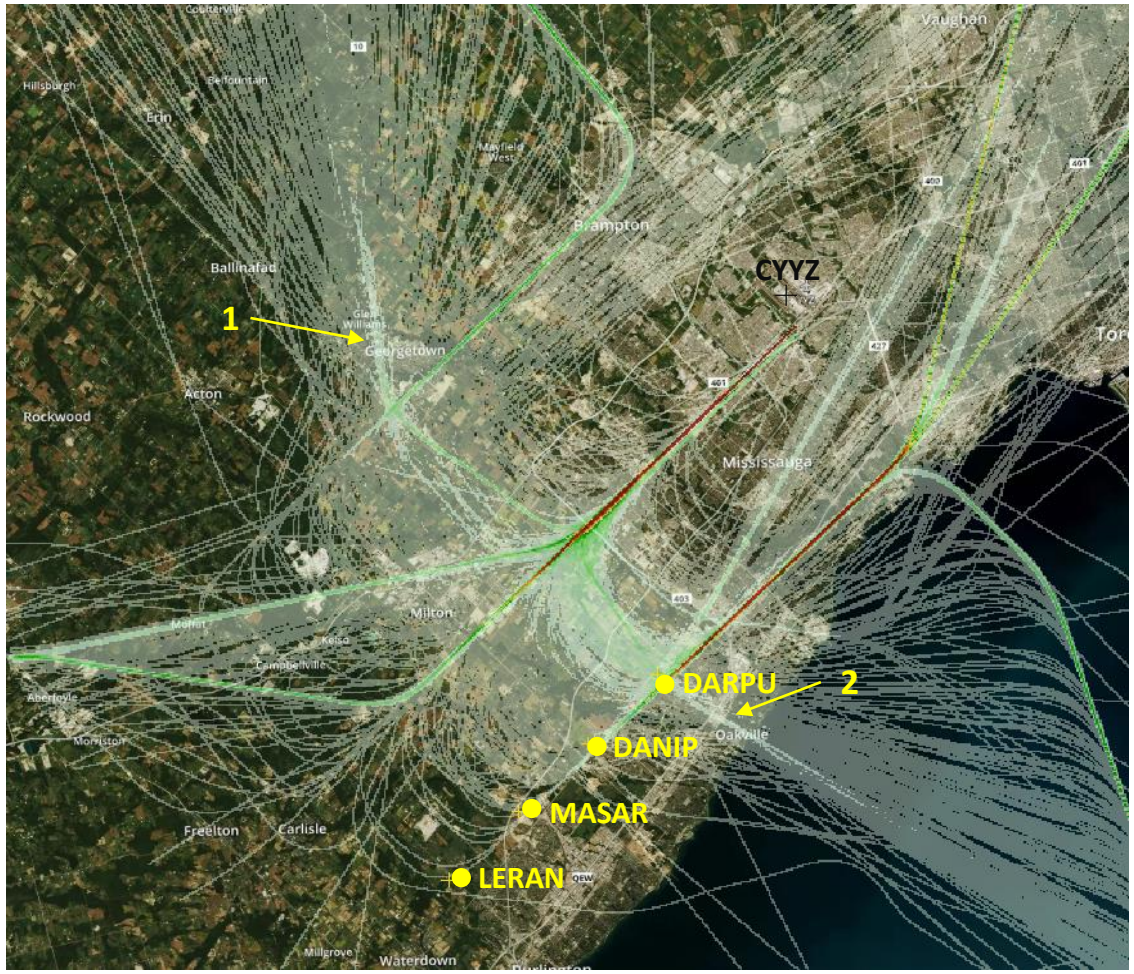
Arrivals Track Density – Runways 06L/R

Q3 2019



Ops: 8,983

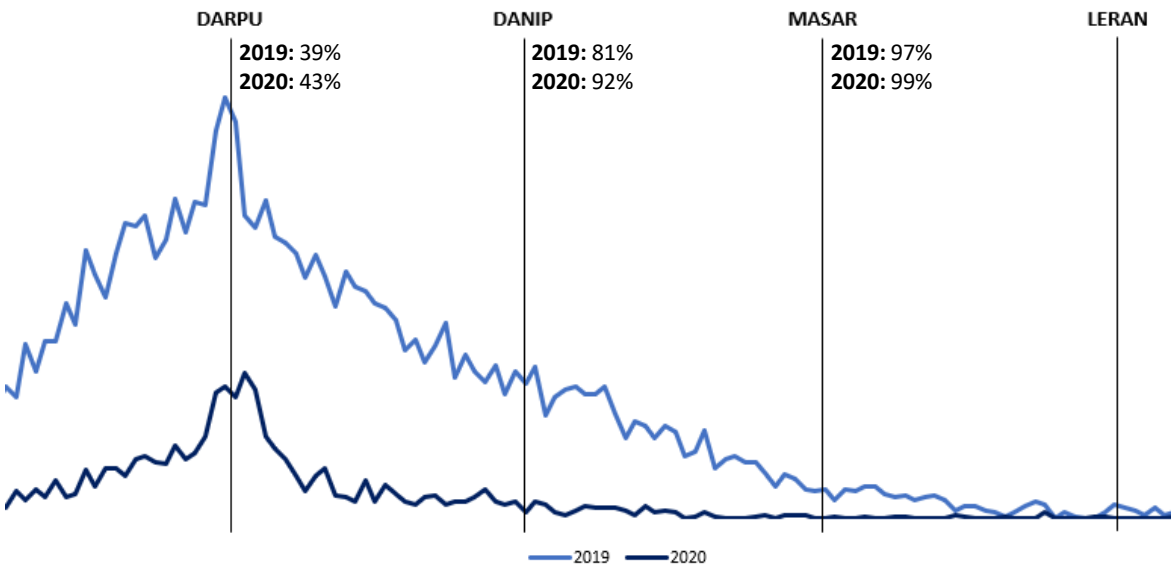
Q3 2020



Ops: 1,641
(-82%)

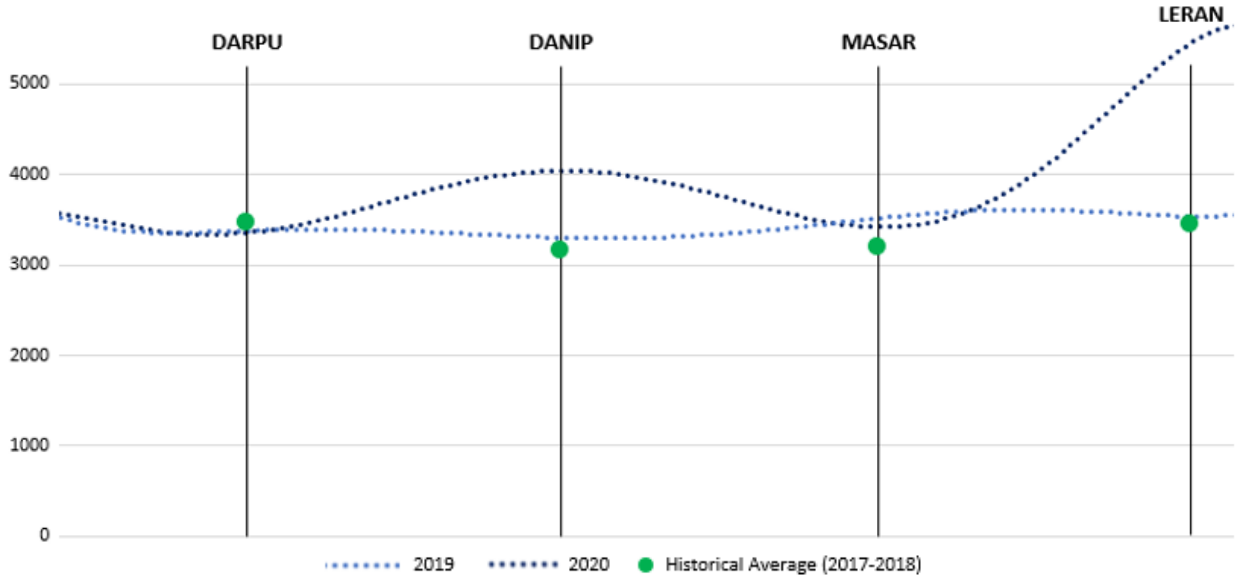
SW Downwind – Detailed Analysis

Location of Base Turns



- The distribution of base turn locations in Q3 2020 is very similar to that of Q3 2019
- There are no locations along the downwind experiencing a higher volume of base turns compared to Q3 2019
- Arriving aircraft are flying shorter downwinds and most aircraft are turning base around DARPU

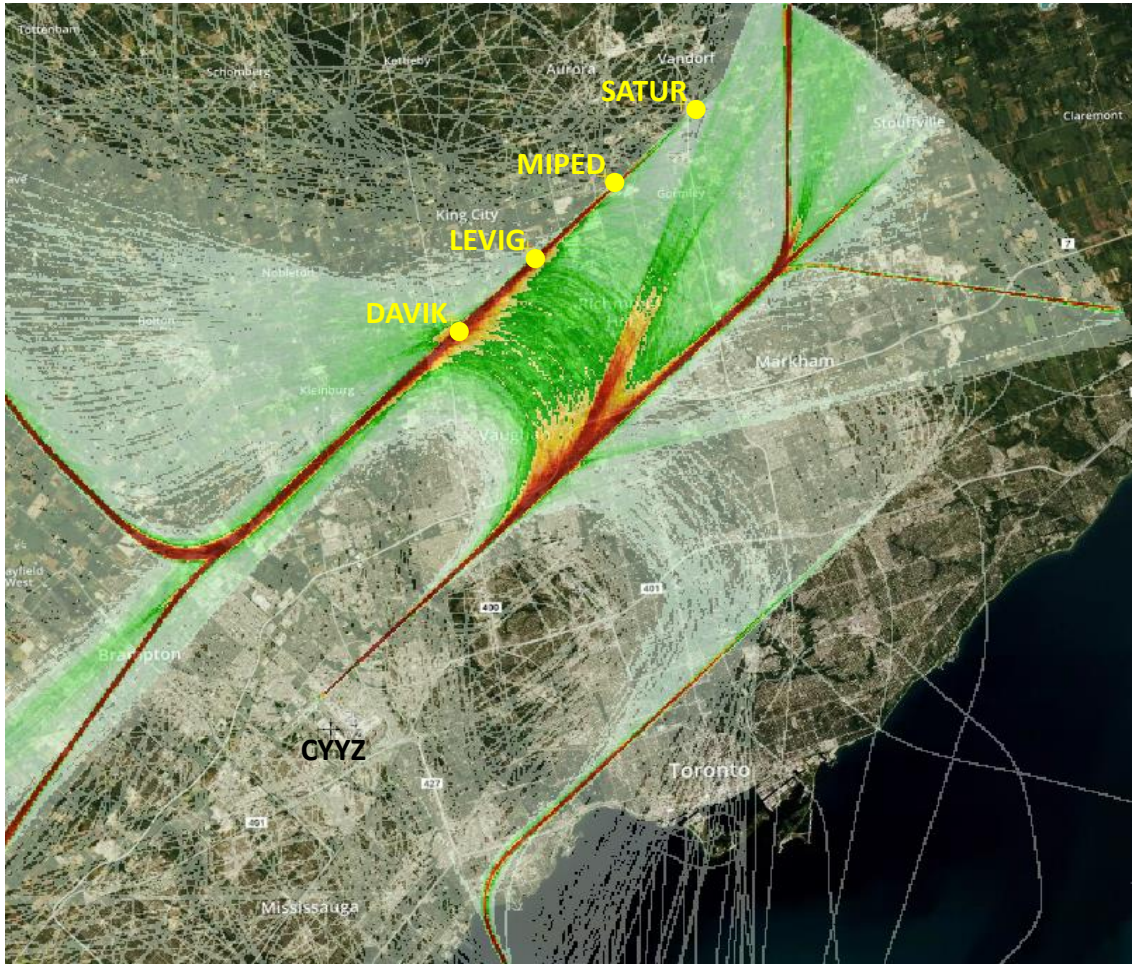
Altitude of Base Turns (AGL)



- Average altitudes along the SW downwind have remained either the same, or higher than, the historical average altitudes

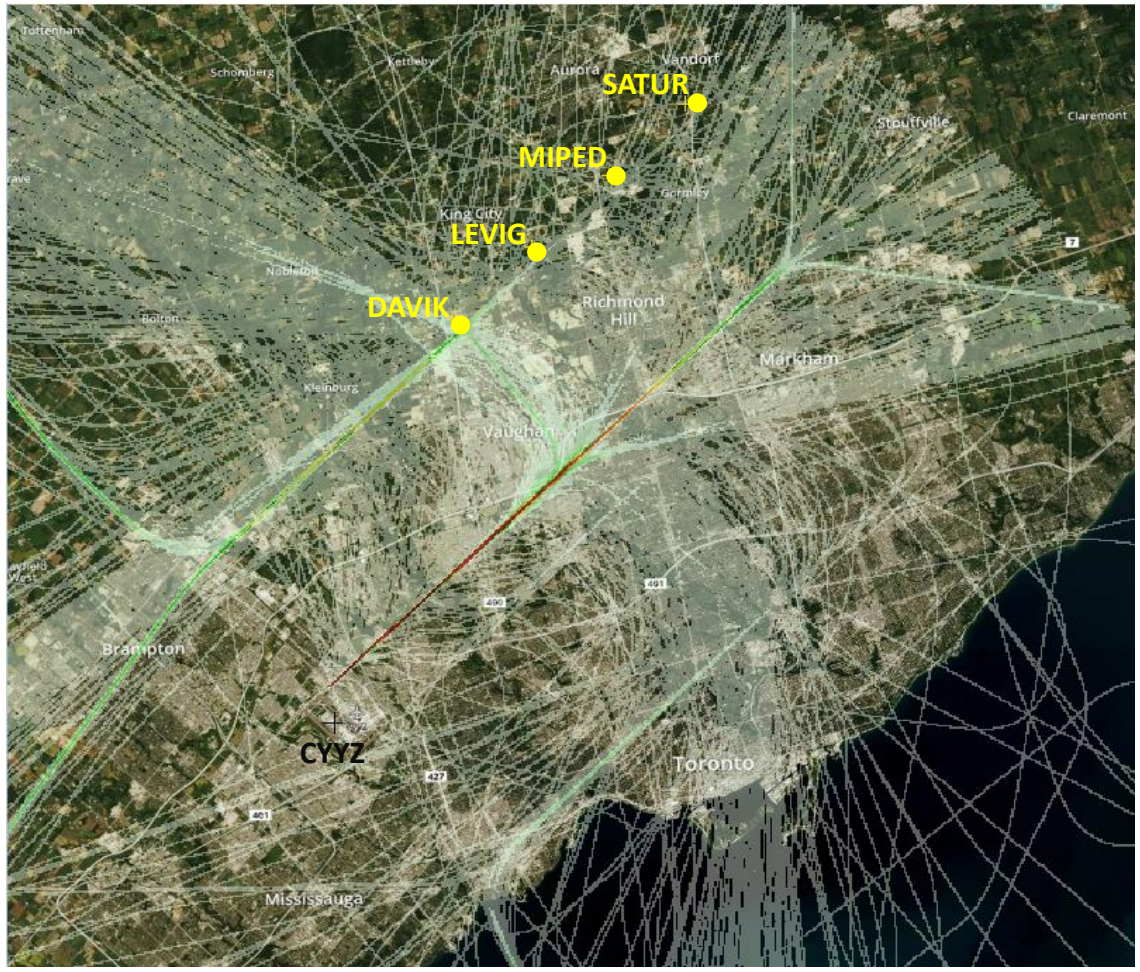
Arrivals Track Density – Runway 23

Q3 2019



Ops: 14,038

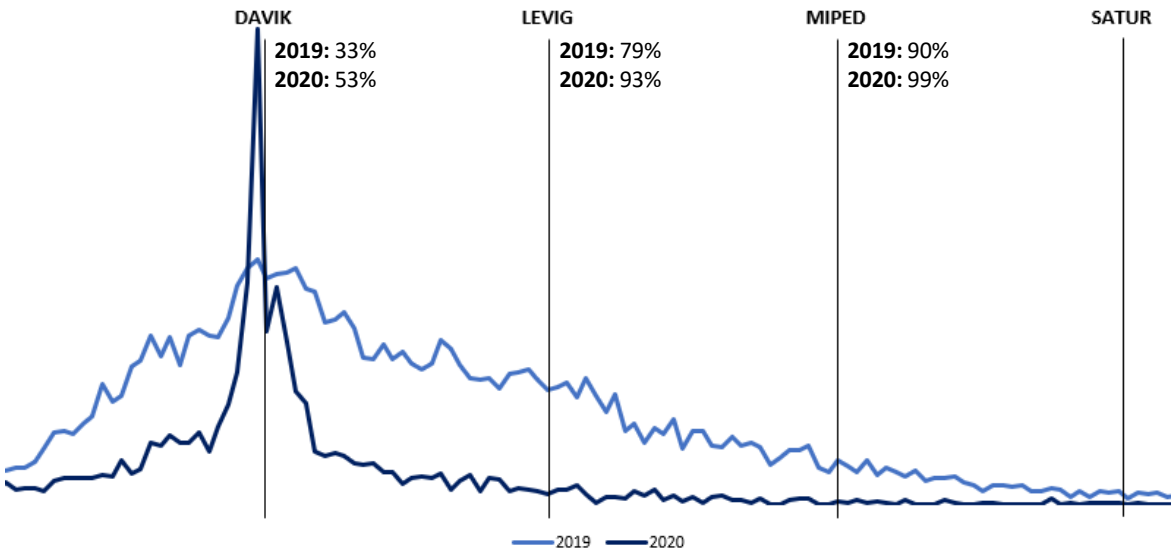
Q3 2020



Ops: 1,177
(-92%)

NE Downwind – Detailed Analysis

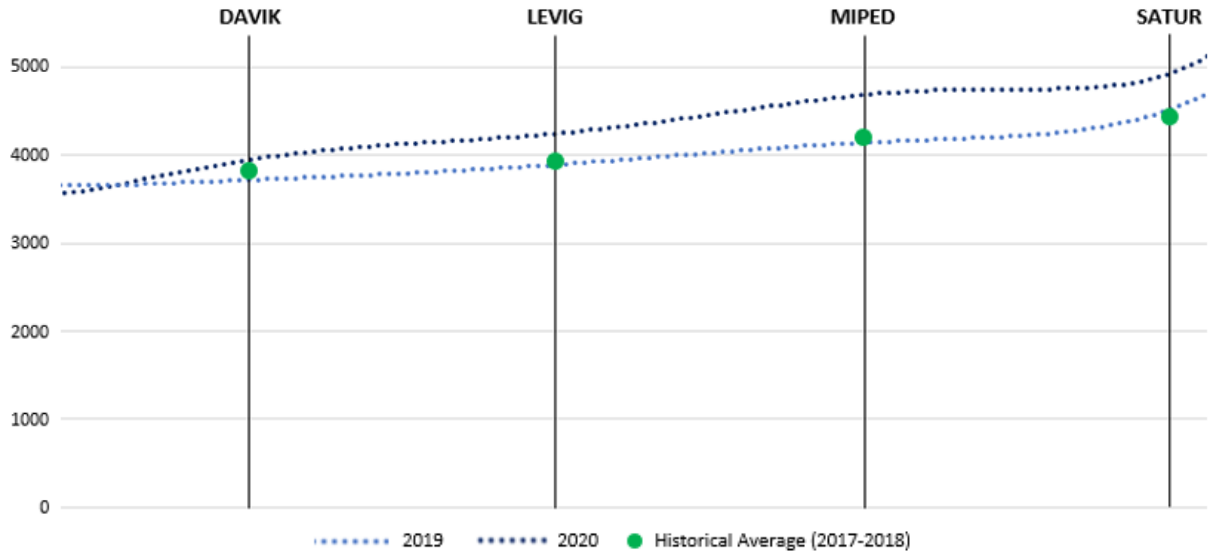
Location of Base Turns



- DAVIK is the only point of all the downwinds where the amount of base turns is higher in Q3 2020 compared to Q3 2019. This can be attributed to the high number of arrivals being cut-across direct the downwind for Runway 24L/R

- Arriving aircraft are flying shorter downwinds and most aircraft are turning base around DAVIK

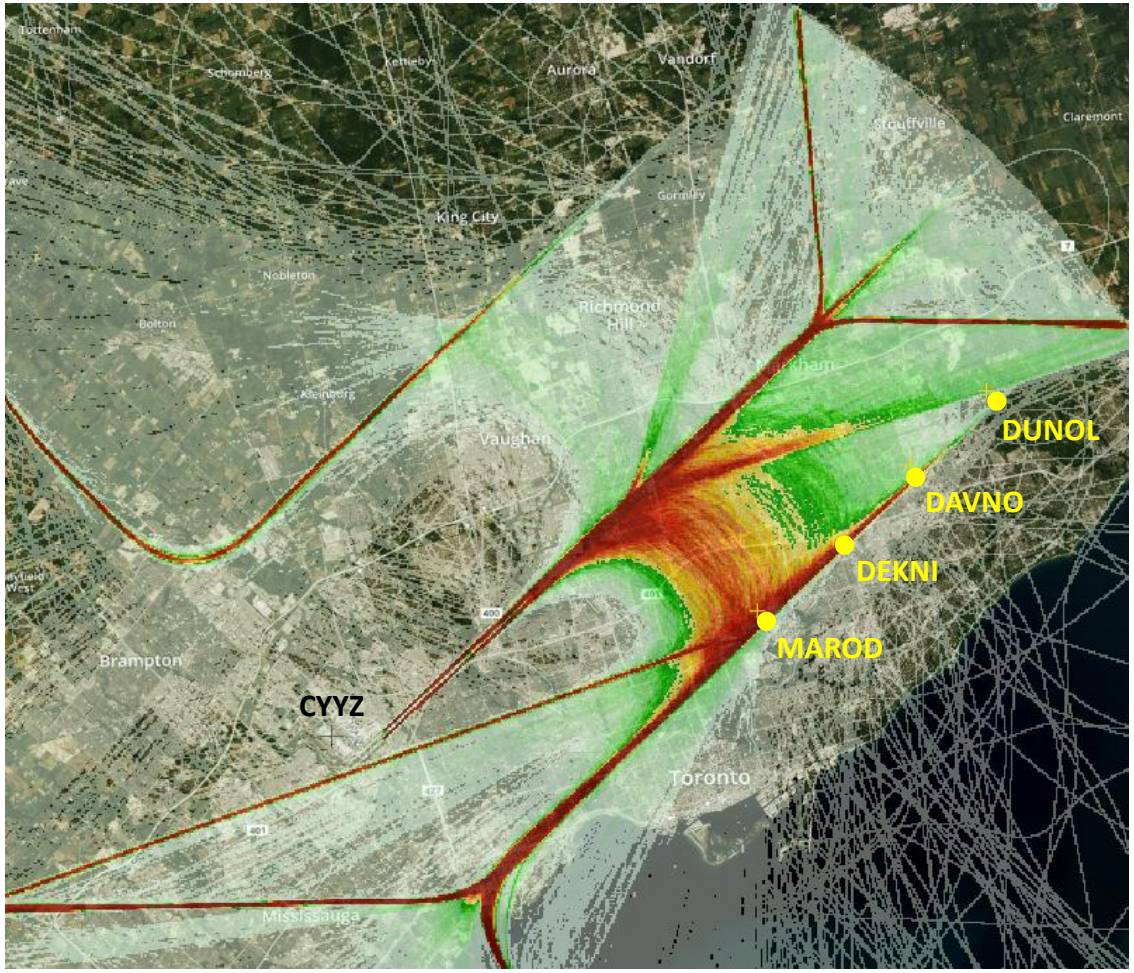
Altitude of Base Turns (AGL)



- Average altitudes along the NE downwind have been consistently higher in Q3 2020 than historical average altitudes

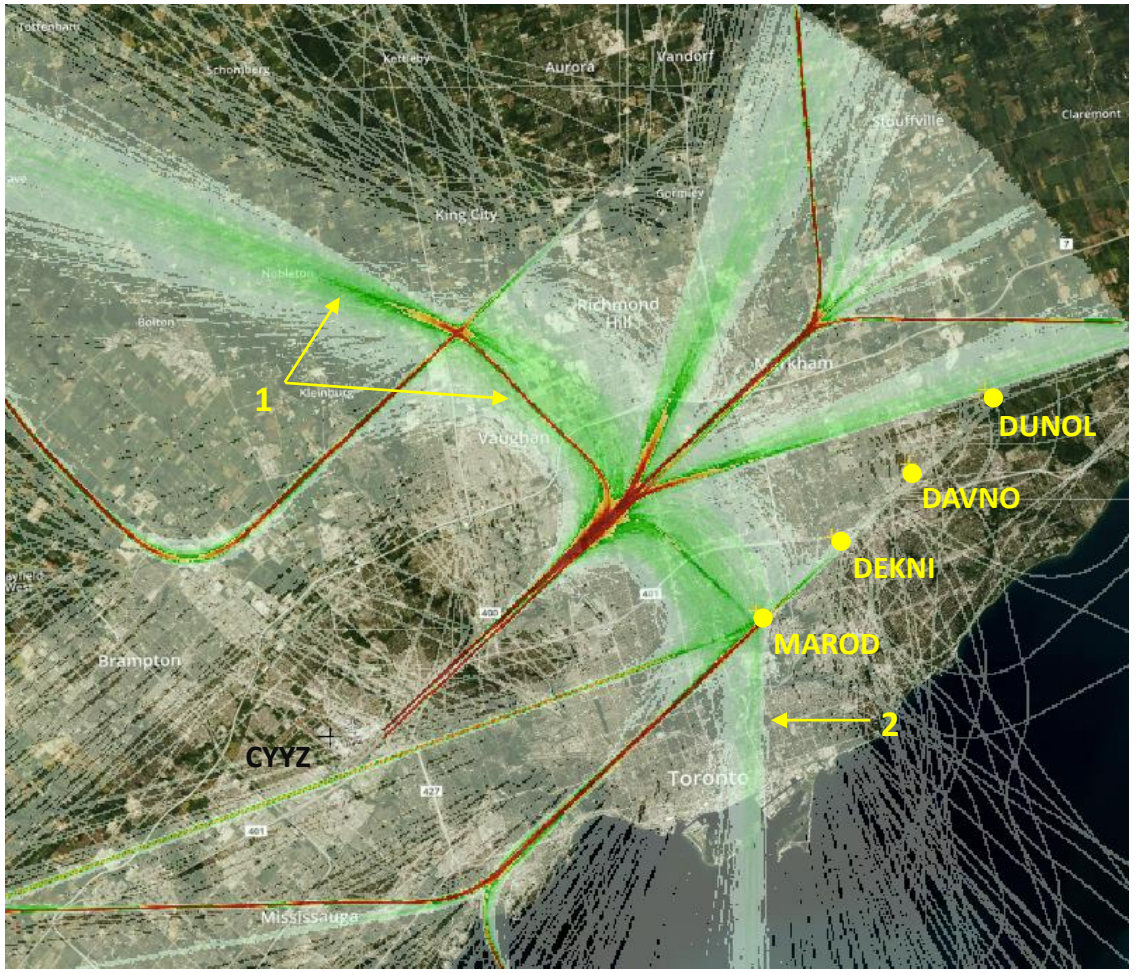
Arrivals Track Density – Runways 24L/R

Q3 2019



Ops: 19,868

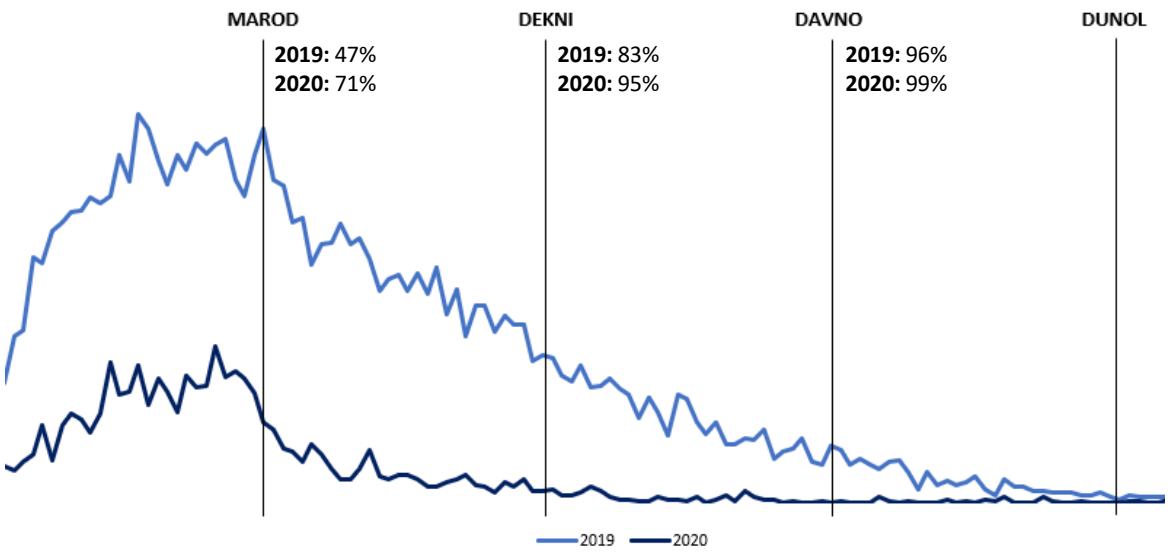
Q3 2020



Ops: 7,621
(-62%)

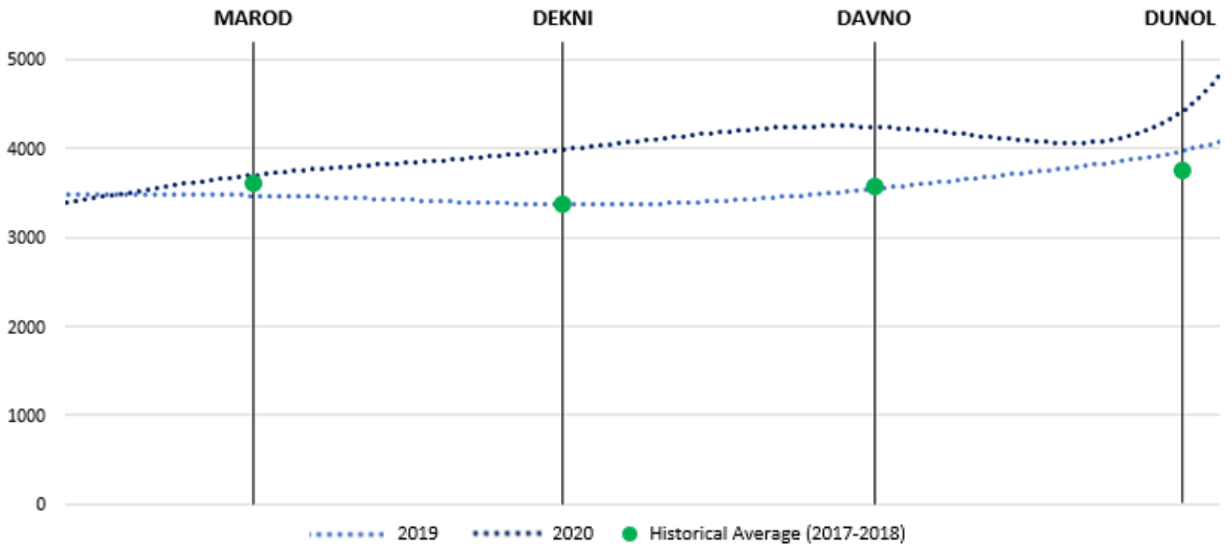
SE Downwind – Detailed Analysis

Location of Base Turns



- The distribution of base turn locations in Q3 2020 is very similar to that of Q3 2019
- There are no locations along the downwind experiencing a higher volume of base turns compared to Q3 2019
- Arriving aircraft are flying shorter downwinds, with very few arrivals making their base turn past MAROD

Altitude of Base Turns (AGL)



- Average altitudes along the SE downwind have been consistently higher in Q3 2020 than historical average altitudes

Toronto Pearson
International Airport | Aéroport International

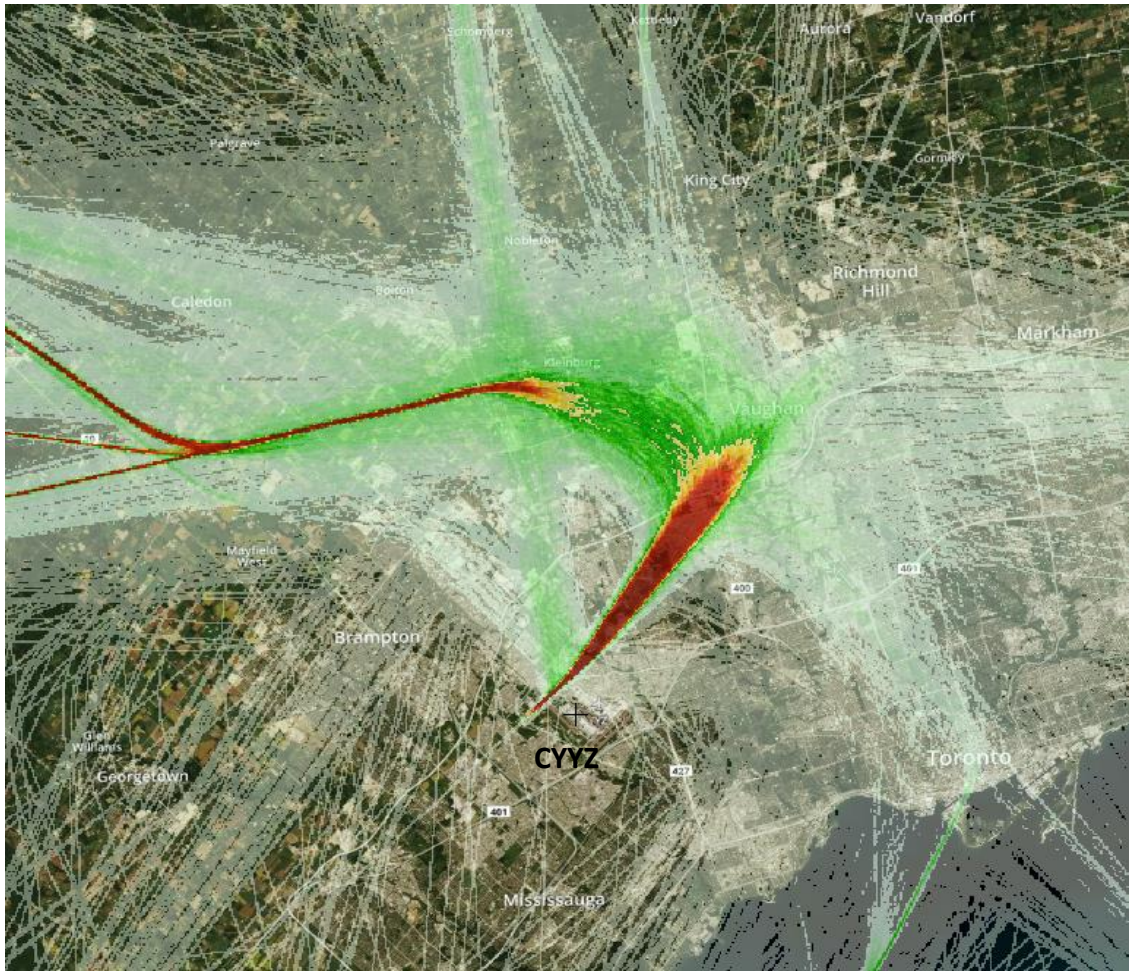
GTAA

Departure Tracks

July 1st – September 30th, 2019 & 2020
Daytime Hours (0630-2359 local)

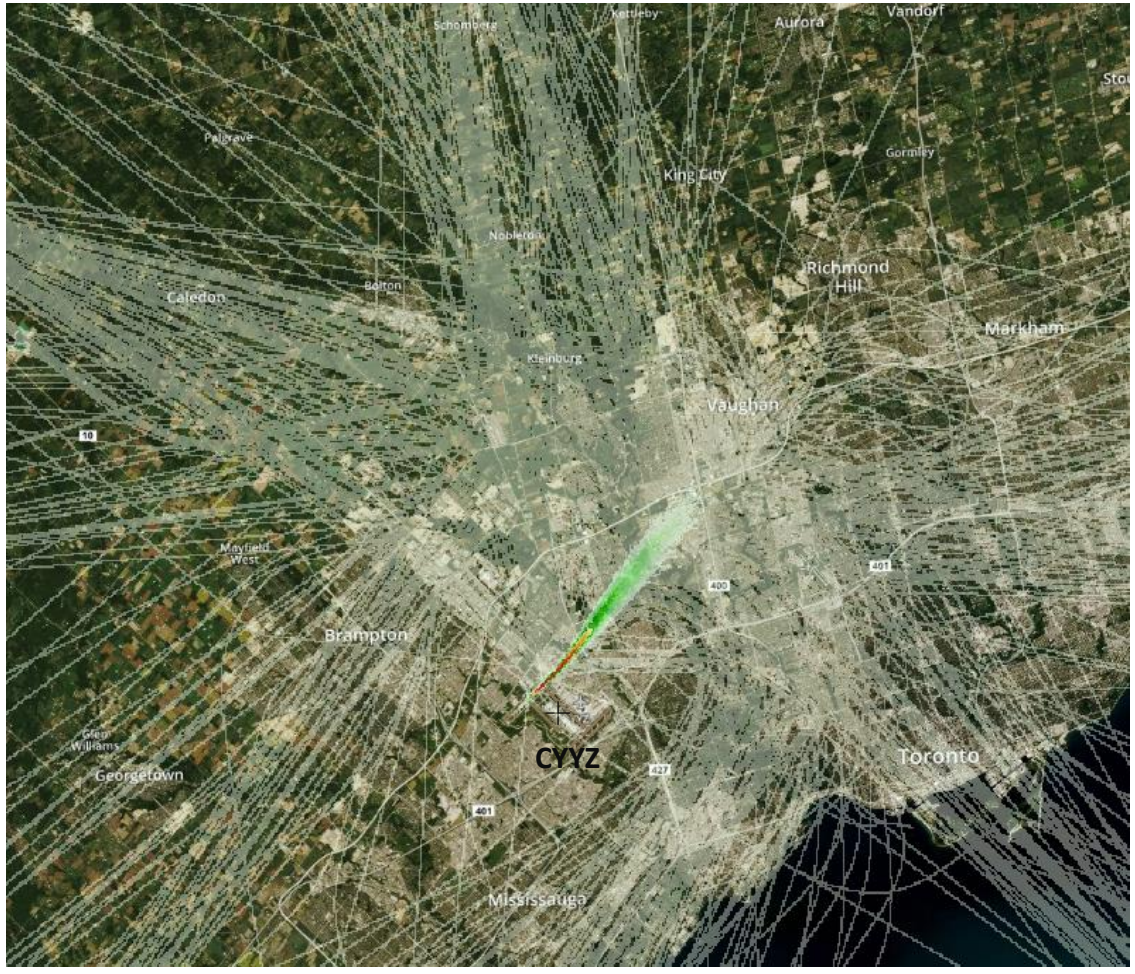
Departures Track Density – Runway 05

Q3 2019



Ops: 7,812

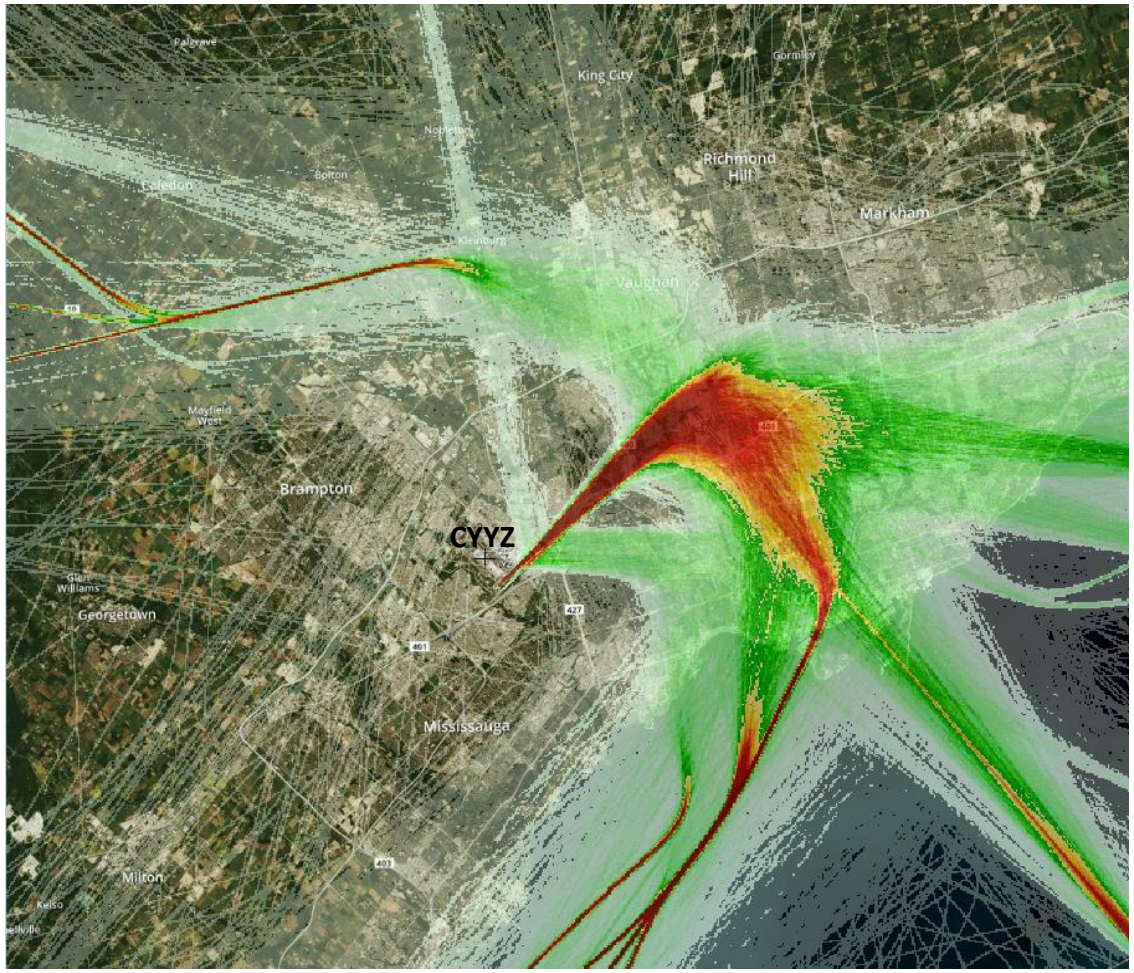
Q3 2020



Ops: 603
(-92%)

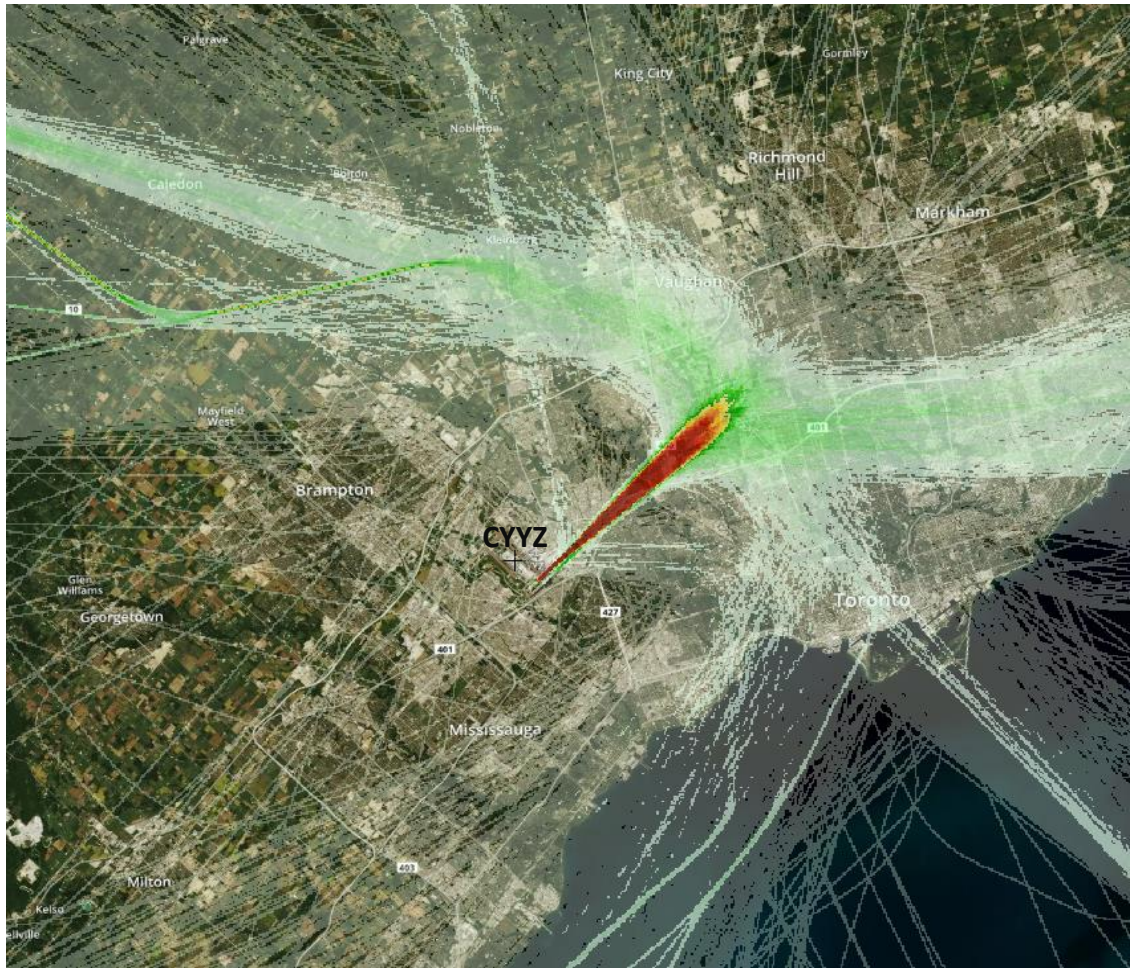
Departures Track Density – Runways 06L/R

Q3 2019



Ops: 16,527

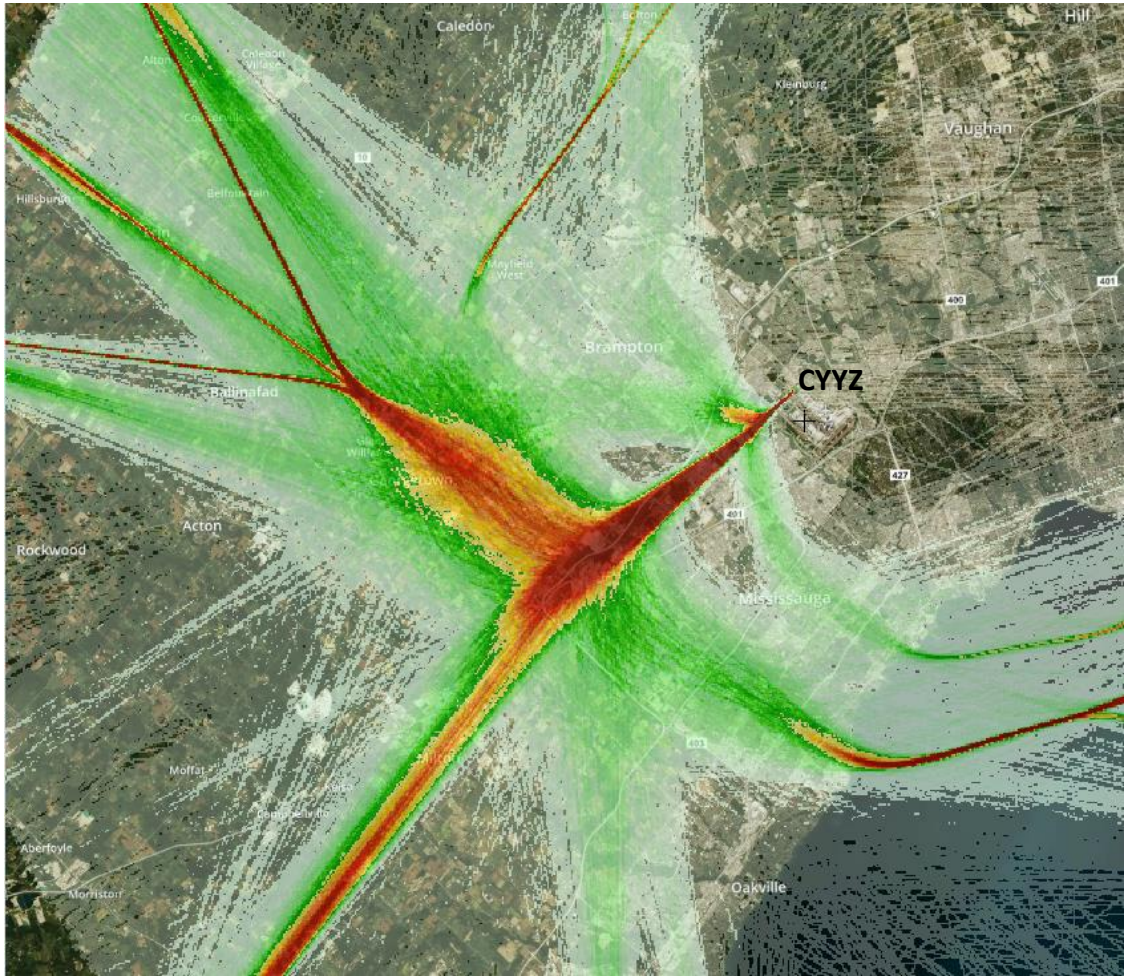
Q3 2020



Ops: 4,320
(-74%)

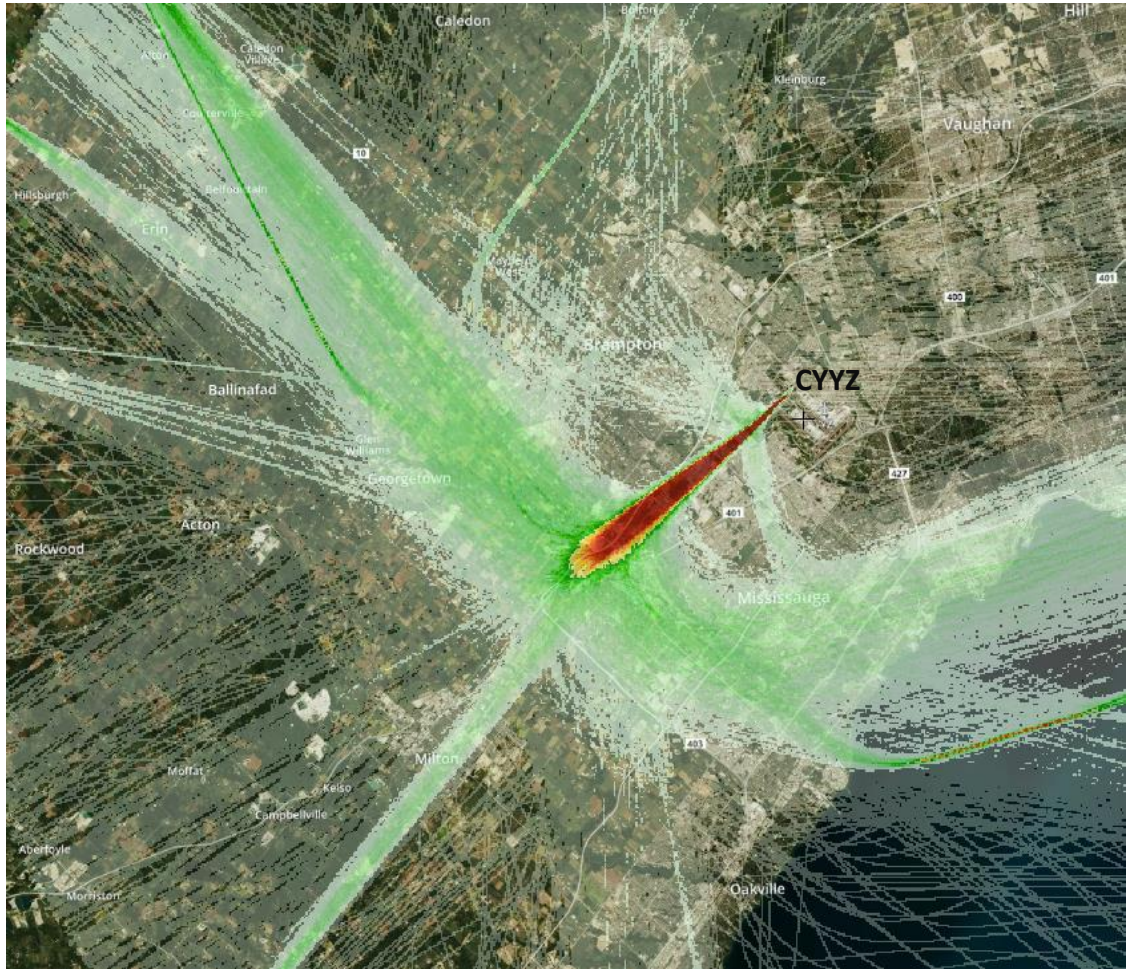
Departures Track Density – Runway 23

Q3 2019



Ops: 19,722

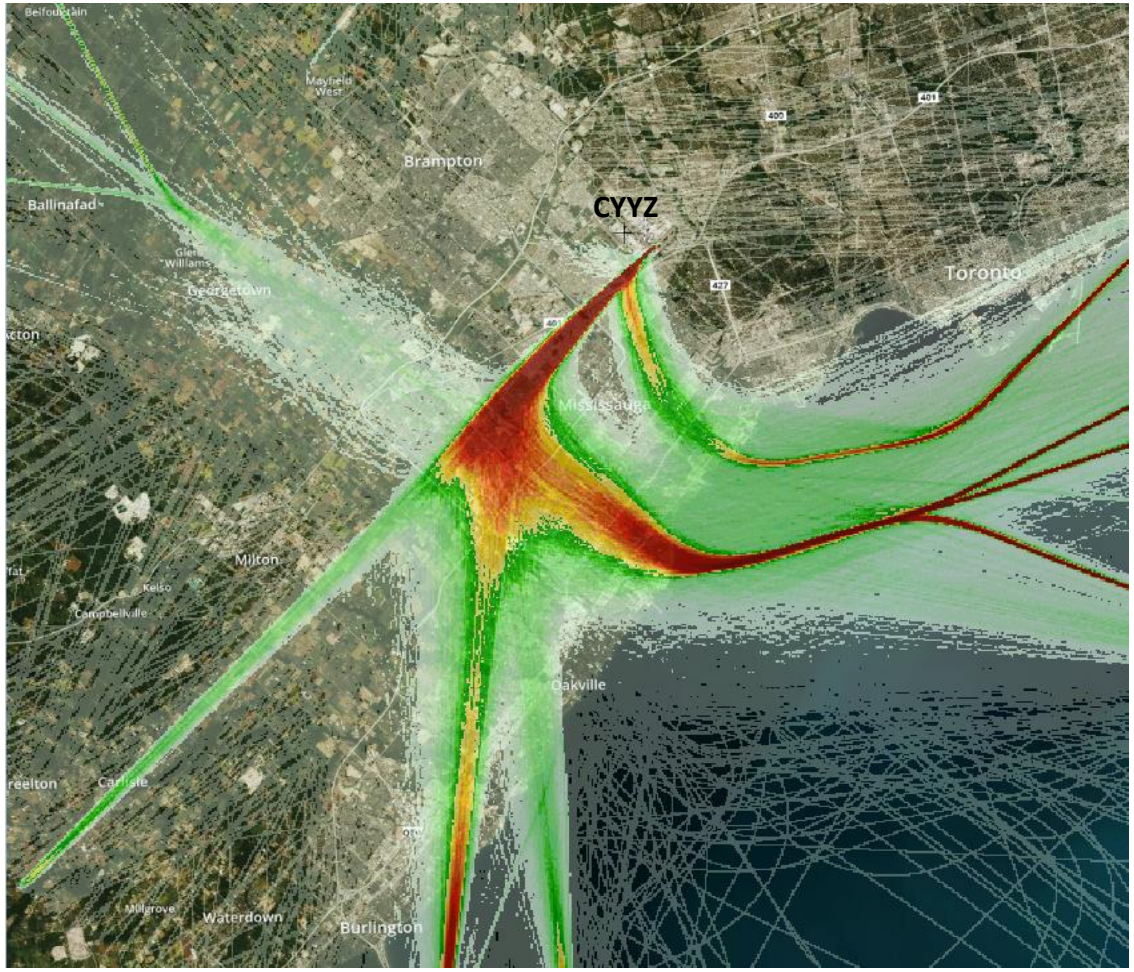
Q3 2020



Ops: 6,531
(-67%)

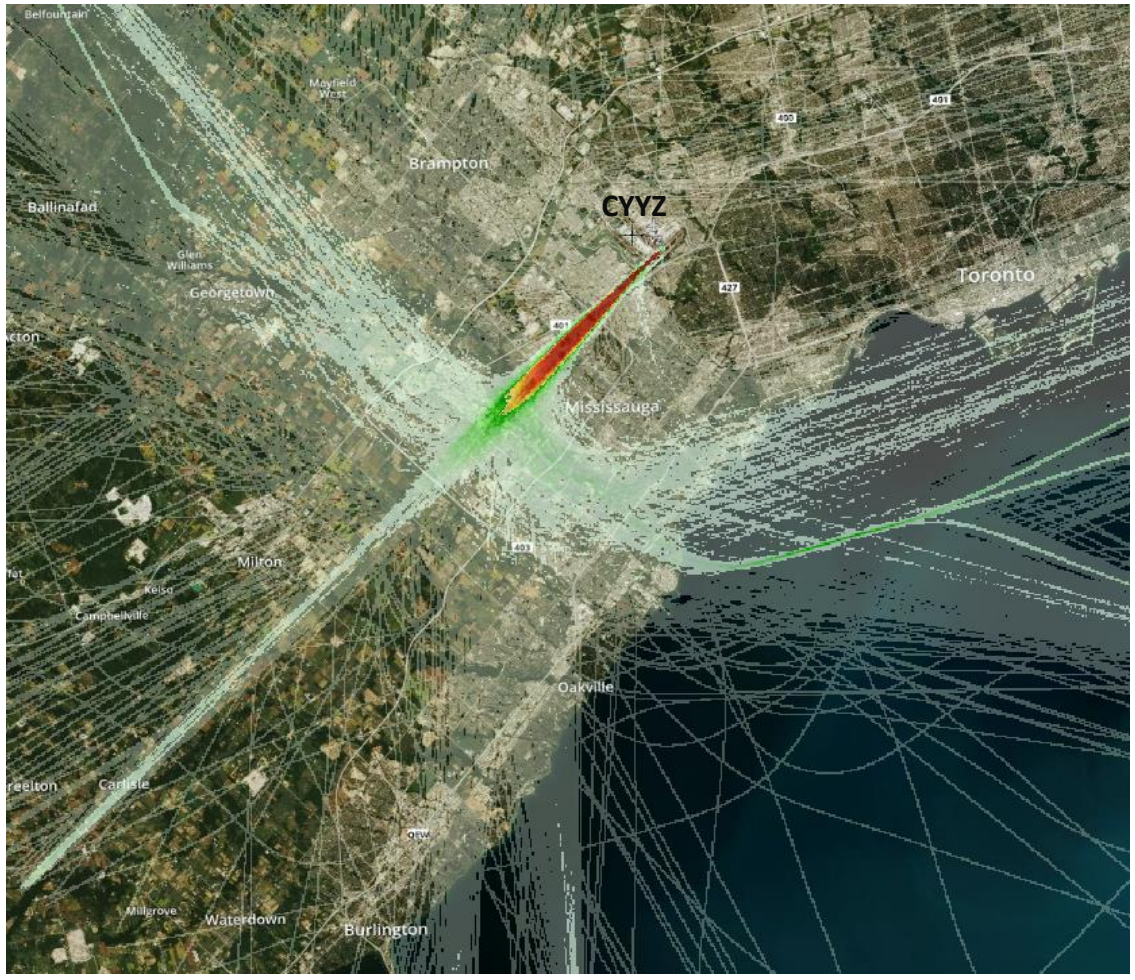
Departures Track Density – Runways 24L/R

Q3 2019



Ops: 14,260

Q3 2020



Ops: 2,268
(-84%)

Complaints at a Glance

Q3 2019

34,268 complaints
from **573** complainants

280 complaints per 1000 movements
4 complainants per 1000 movements

VS

Q3 2020

4,795 complaints
from **153** complainants

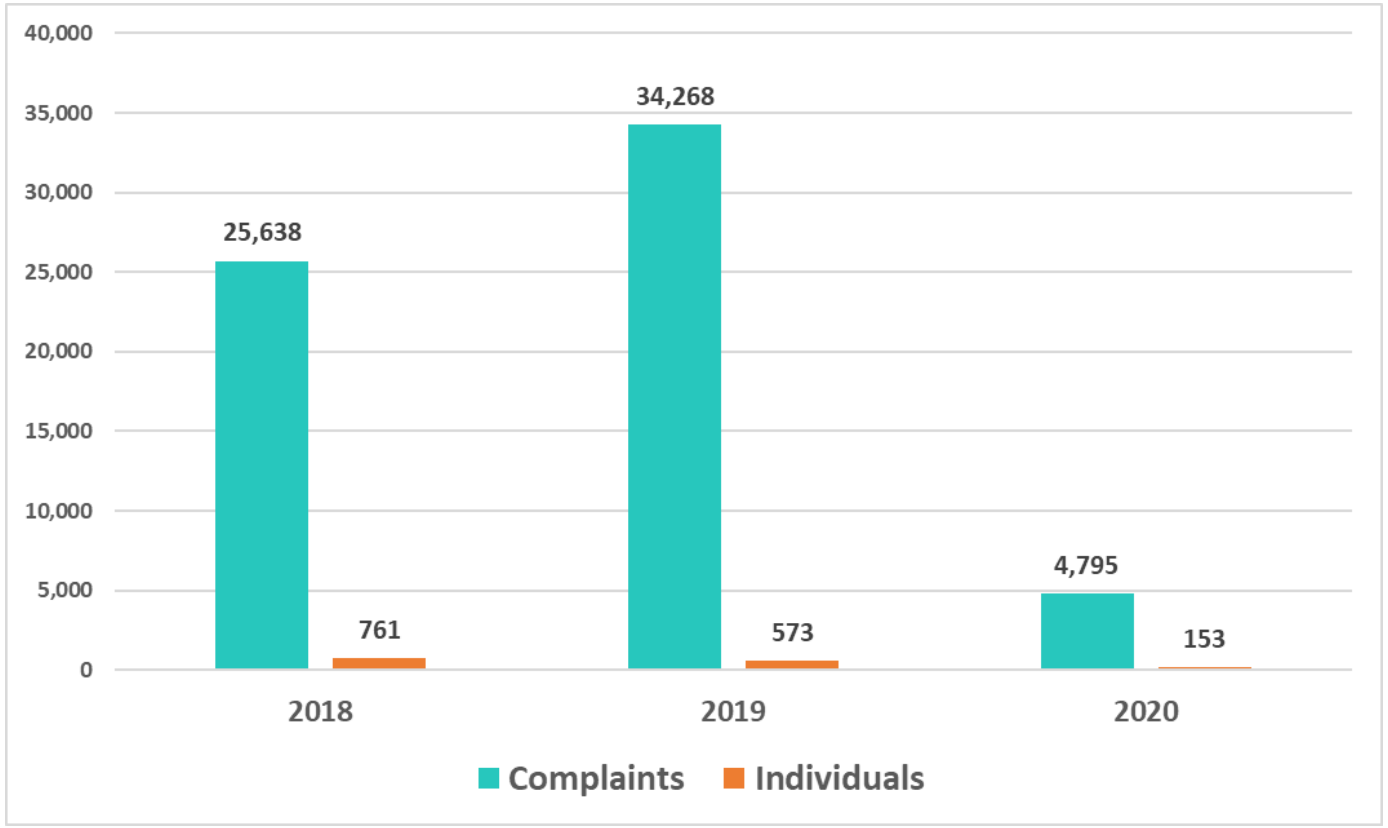
160 complaints per 1000 movements
4 complainants per 1000 movements

The decrease in complaints - Q3 2020 vs Q3 2019 reflects lower traffic levels

- complaints down by 86%
- Number of individuals submitting complaints down by 73%
- Although the drop in individuals is similar to the decrease in traffic (76%), the drop in complaints is more pronounced. This difference could be attributed to reduced use of the downwind due to lower traffic levels as described in operational slides

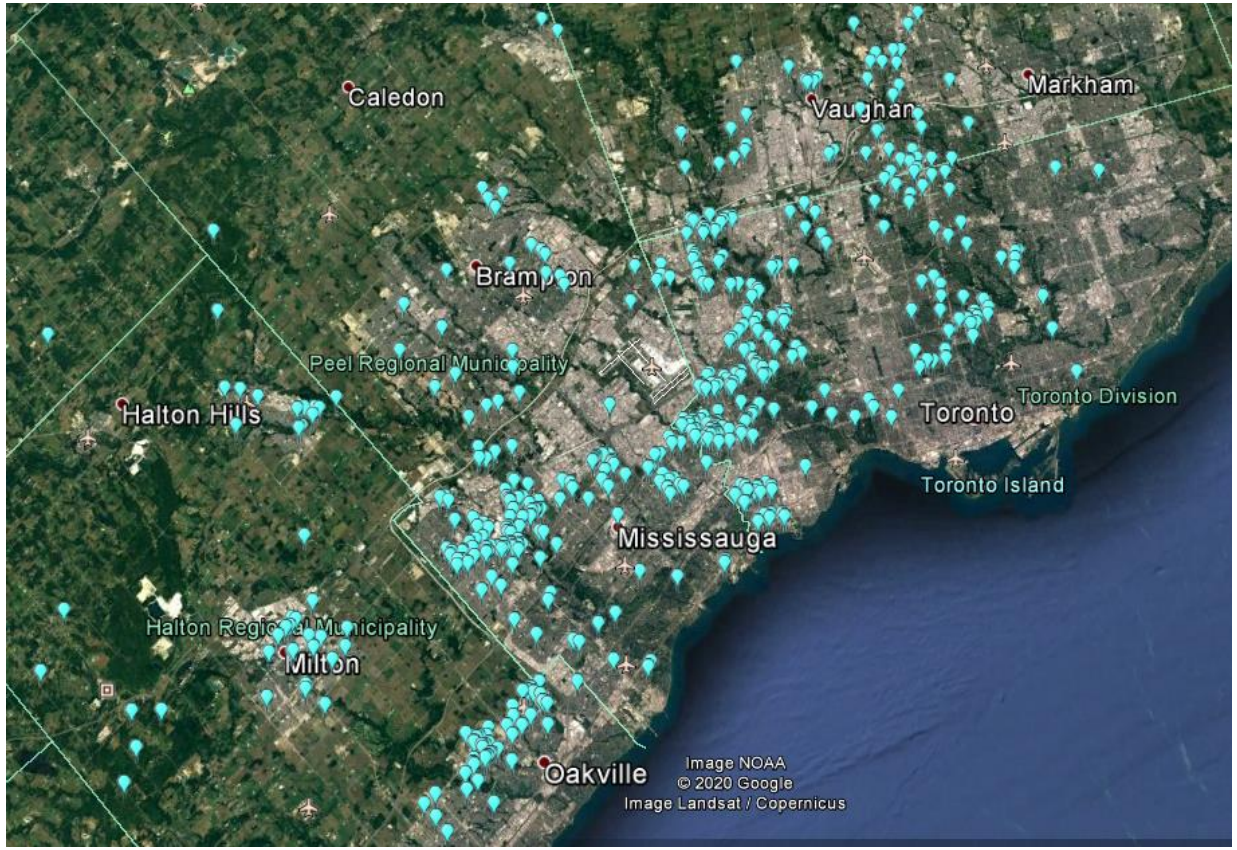
Complaints Summary – Q3 2020

- Compared to Q3 2019: 29,473 fewer complaints (-86%) from 420 fewer individuals (-73%) due to the significant reduction in air traffic from COVID-19
- In Q3 2019 there were 280 complaints from 4 people for every 1000 operations compared to 160 complaints from 4 people in Q3 2020

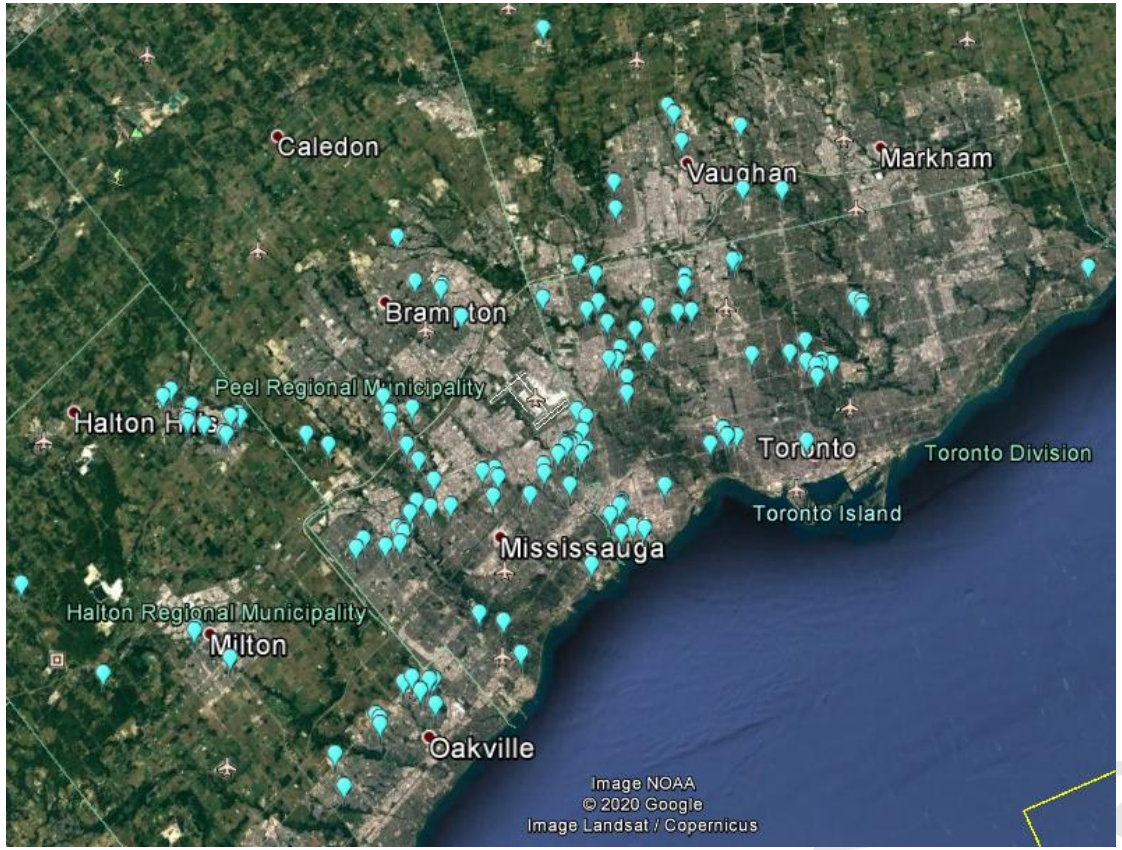


Complaint Distribution

Q3 2019: 34,268 complaints from 573 individuals



Q3 2020: 4,795 complaints from 153 individuals



Far fewer residents submitting complaints. Most evident in areas south of the airport and areas underneath the downwind flight path for the east/west runways. This likely related to overall fewer operations, less frequent use of the downwind.

Member Raised Updates

Previously Raised

Effects of CDO on downwind

Member requested analysis to determine if the descent procedures for the STAR on Runway 24L/R are actually leading to increased noise:

- "a descent that would require use of flaps and/or speedbrakes to meet a crossing restriction at MAROD and that the design of the current STAR, without a *published* altitude at MAROD, means that pilots have to estimate rather than use the FMS predictions. This would actually exacerbate the use of high drag surfaces so the pilot *guarantees* the crossing restriction in an already steeply designed descent"

Response to date:

- Analysis conducted on altitudes along the downwind for each east/west runway configuration.
- Analysis for Runway 24L/R downwind operations demonstrate that altitudes were consistently higher in Q3 2020 than historical average altitudes, however further discussion is needed to fully explore the member's questions/comments.

- **Next Steps**:
  - The member will meet with NAV CANADA/ GTAA technical staff in early January 2021 to delve further into the questions raised.
  - Copies of the materials used in this meeting will be shared with all Neighbourhood Table members.

Traffic Patterns

Member asked about traffic patterns affecting the Don Mills area

- Factors affecting location of base turn and length of downwind
  - Aircraft typically line up on final approach at approximately 10 Nautical Miles (NM) from the runway, which results in a fair number of aircraft turning on to base leg aligned with the 10 NM final point. However, air traffic control may keep aircraft on the downwind longer for sequencing purposes.
- Factors affecting location of departure flight patterns:
  - The routes for departing aircraft are mainly dependent on the runway used and its destination. Aircraft with destinations other than straight from the runway, will turn once reaching the minimum of 3600’ for noise abatement. After that, the aircraft heads toward the waypoint for flights heading in similar directions ie. flights to the south head toward one waypoint, while flights to the west use a different waypoint.
- Impact of Nighttime approaches on Don Mills area
  - The nighttime arrival procedures use what’s called an RNAV approach. Aircraft using an RNAV all fly the same route. The RNAV approach for Runways 24R and in similar cases, Runway 23, follows a direct path to final approach that brings aircraft over the Don Valley Parkway and as a result can be observed from Don Mills.

Member Raised Updates

New Items

Member presentation

Night Flight Restriction Program

- Slides 39 through 42 were prepared and presented by a Neighbourhood Table member and is not approved or validated content by the GTAA.

Night Flight budget 1996 to 2019

- 1996 — In the last year of Transport Canada operating the airport there were 9655 restricted hour operations (0031 to 0629 L) made up of approx. 80 % operating extensions (day of operation delays from regular daytime operations) and 20 % exemptions (scheduled in the restricted hours). Exemptions granted to only the quietest Chapter 3 types (no B727, B747, DC10)

- Early 2000s — Fedex continued to operate up to 5 operations 5 days per week with B727-200 aircraft in spite of repeated requests by Noise Management Committee members to change to quieter aircraft. Fedex used quieter B757 aircraft on other North American routes at the time. Eventually Fedex B727 were replaced by B757

- Nov2018-Oct2019 — Under GTAA management, the night flight budget was 20,433 with approx. 20 % operating extensions and 80% exemptions. No published limit to specific quietest Chapter 3 types (DC10 operated by Fedex scheduled to arrive approx. 0545 L 5 days per week)

Night Flight budget 1997 to 2019

- 2020 the night flight budget averages 57 movements per night. Majority of exemptions for passenger flights are scheduled before 0100 L or after 0600 L, while Fedex operates 9 flights at any time in the restricted hours including a DC10 arrival at approx. 0545 L

- In 1997 there were 396,475 total annual aircraft movements and 26,094,744 total annual passengers
- In Nov. 2018 – Oct. 2019 there were 449,239 total annual aircraft movements and 50,287,025 total annual passengers

- Over the 23 year period total annual movements increased 13.3 % while total annual passengers increased 92.7 %
- Over the 23 year period the night flight budget (maximum permitted flights 0031 to 0629 L) has increased an overall 96.8 % from 10,389 to 20,443

A Way Forward

- the 2021 night flight budget will not increase based on the 2020 annual passengers
- The night flight budget should be frozen at 20,889 until the GTAA has developed a revised night flight program that has been fully consulted with the industry, politicians and surrounding communities and approved by Transport Canada
- A revised night flight program should include:

1. An expansion of the restricted hours to 0000 to 0700 L
2. Freezing the night flight budget for a period of 5 years and basing any future increases on total annual aircraft movements
3. Exemptions restricted to only Chapter 4 or better aircraft
4. Development of Night flight aircraft categories that allow only the quietest new technology types to have the least restrictions on times for exemptions and extensions
5. A night flight restriction operating fee based on noise levels with proceeds directed to noise insulation programs
6. Consideration of a curfew period 0300 to 0500 L when only the quietest extensions only are allowed
7. Development of a total night flight noise dosage limit that can be monitored

Prepared and presented by Neighbourhood Table Member

A Way Forward

- The GTAA has failed to “Explore potential changes to Night Flight Restriction Program” in the Short term timeline January 2018 to June 2019 of the Noise Management Action Plan
- The inappropriate night flight budget calculation has been a contentious issue with members of the Noise Management committee and the Neighbourhood table group for many years
- I am prepared to complete a more detailed analysis of the current night flights and develop a proposal for a revised night flight program that reflects operations at other major airports as reported by Helios provided that the GTAA will make requested data available

Prepared and presented by Neighbourhood Table Member

Member Raised Updates

NMAP Night Flight Restriction Program

Night Flight Restriction Program

Night flights refers to those flights that operate between 12:30 am and 6:30 am (Restricted Hours)

Night Flight Restriction Program

- Limits the number of night flights that operate annually; only Canadian airport with a budget, or cap
- Budget year runs from November 1 – October 31;
- 80% is scheduled flights, 20% is day-of extensions (eg. delays, Medevac)

Formula: Night Flight Budget

- Previous year's budget (aircraft movements) + % passenger growth
- As of 2013, also eligible for three 10% "bump ups" in years when the previous year's budget reached 95%
  - Have not yet activated a 10% bump up
- Budget growth is not capped/limited - can grow in perpetuity
- Starts to grow again only after the Passenger traffic level surpasses the levels from the year before the decrease (i.e. surpass 2019 PAX levels in this case)

Night Flights + COVID-19

2019/2020 budget year

- Night flight budget for 2019/2020 was 20,889
  - Actual was 10,023 night flights or 48% Prior to onset of COVID, November-February, near 100% budget usage per month

Compared to 2018/2019 budget year

- Night Flight budget in 2018/2019 was 20,433
- Approximately 81% of the budget was used, or 16532

Prediction for 2020/2021 budget year

- Predict that night flight actuals for the 2020/2021 budget year will be similar or less than in 2019/2020 - ~ 10,000 night flights

Month	Actuals	Allocated	% Used
PRE-COVID			
Nov	1248	1223	102%
Dec	1446	1497	97%
Jan	1574	1693	93%
Feb	1519	1564	97%
March	1150	1723	67%
PRE-COVID Totals	**6937**	**7700**	**90%**
POST-COVID			
April	438	1730	25%
May	478	1630	29%
June	420	1495	28%
July	456	1699	27%
August	408	1731	24%
September	431	1580	27%
October	455	1490	31%
POST-COVID Totals	**3086**	**11,355**	**27%**
2019/2021 BUDGET YEAR TOTALS			
Nov1-Oct 31	**10023**	**19055 Allocated**	**52.6%**
		28889 Budget	**47.9%**

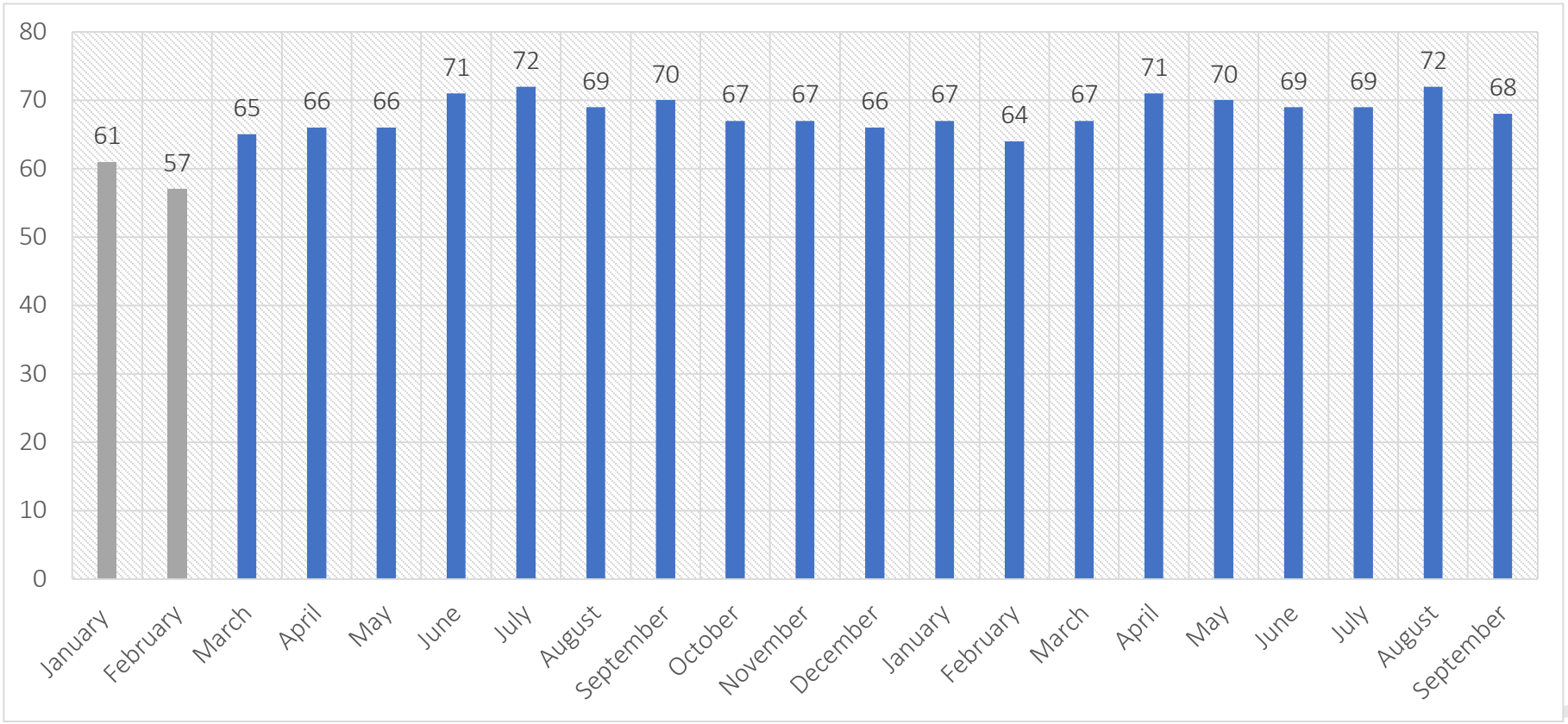
Night Flight Restriction Program

- Due to the impacts of COVID-19, Night Flight traffic is currently at levels similar to what they were over 20 years ago (just under 10,000 night flights in 1997).
- Based on the current system, the night flight budget remains at its current level until there is passenger growth beyond 2019 levels. Passenger traffic is not expected to exceed 2019 levels for 3 to 4 years.
- Night flights for the 2020/2021 budget year are not expected to exceed 10,000 movements

NAV CANADA Updates

Percentage of Aircraft Using CDO Procedures

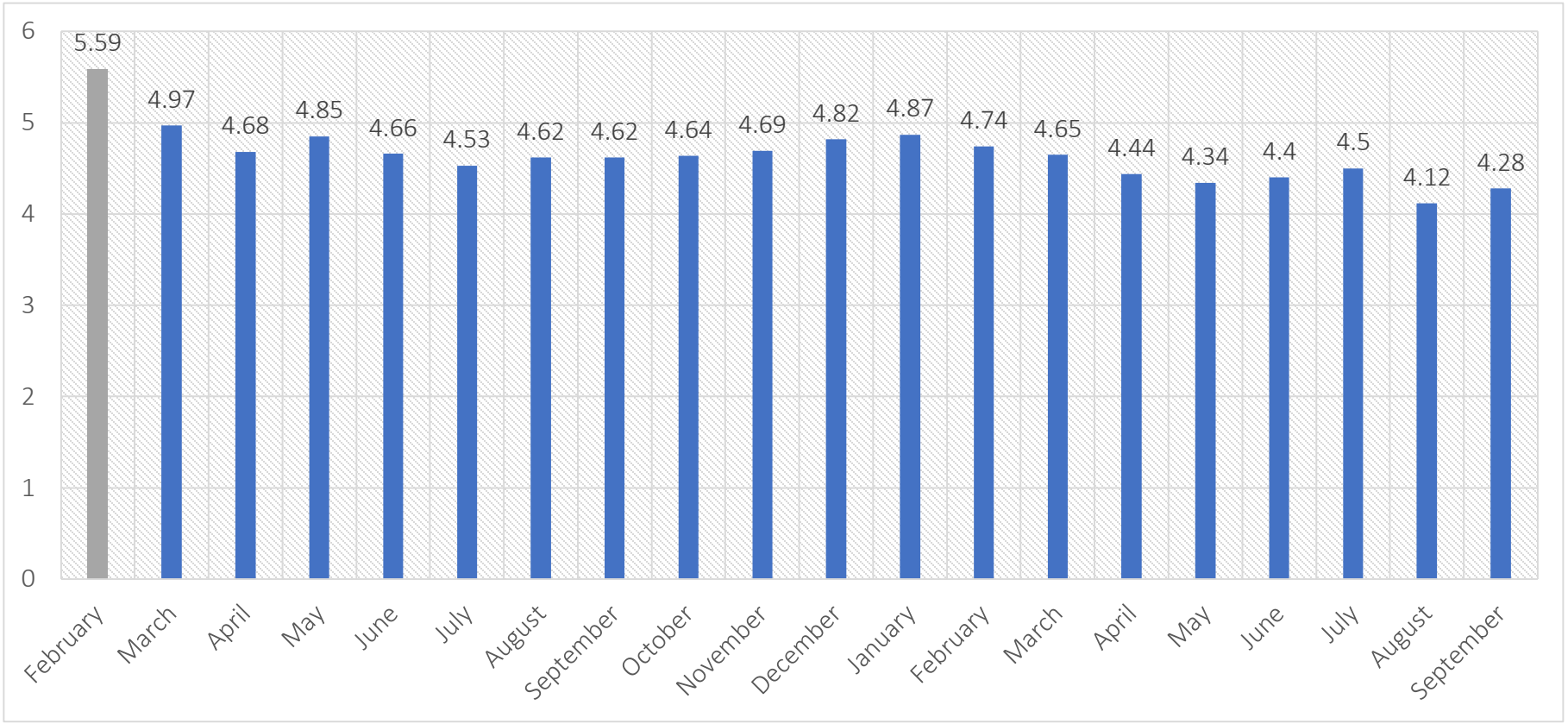
New CDO arrival procedures for the downwind segments were implemented February 28, 2019.
Current traffic levels and seasonality may influence usage of CDO.



Percentage of aircraft using CDO procedures **pre-implementation**

Percentage of aircraft using CDO procedures **post-implementation**

Average Level Segment Distance (for aircraft not achieving CDO)



Percentage of aircraft using CDO procedures **pre-implementation**

Percentage of aircraft using CDO procedures **post-implementation**

LOOKING AHEAD

HELIOS Recommendation: Design RNP-AR procedures that can reduce the need for a high / low operation

- New ‘Established on RNP-AR’ separation standard approved by ICAO and NAV CANADA has worked with Transport Canada to gain approval for use in Canada.
- NAV CANADA, the GTAA and INMB are undertaking preliminary analysis work on how the concept could be deployed at Toronto Pearson

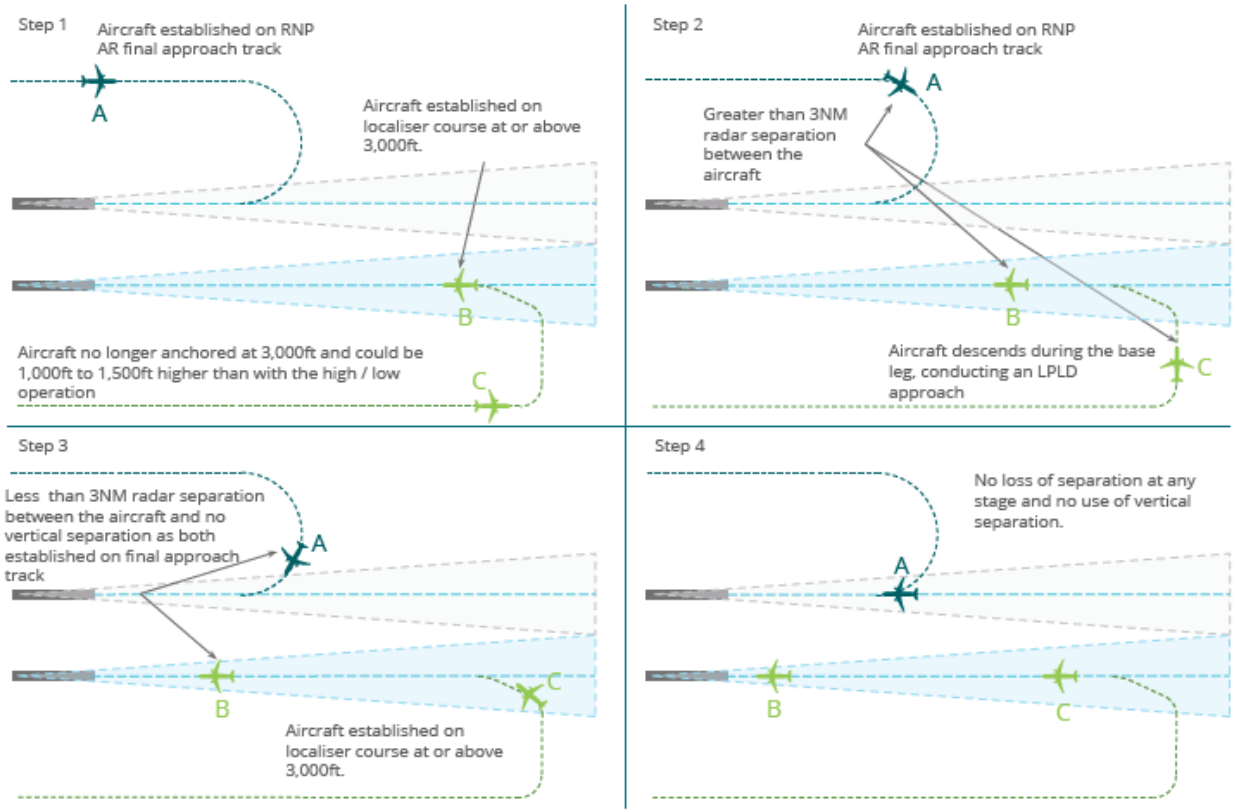


Figure 26. Established on RNP AR

Establish on RNP-AR

World First: NAV CANADA Implements New ICAO Separation Standard at YYC - YouTube

GTAA Updates

Maintenance Update

Maintenance and Winter Operations Update

2020 Capital Maintenance projects

- All projects are complete as of November 12
- All preferential runways are available
- Regular maintenance continues and Noise Advisories are posted at torontopearson.com

Temporary Closure of Runway 06R/24L

- Runway 06R/24L and associated taxiways are temporarily closed for the winter of 2020/2021. The exact re-opening dates will be confirmed in 2021.

Winter operations

- During the colder months the airport undertakes the following activities to maintain safe operation:
  - de-icing of aircraft
  - surface treatment and snow removal on runways, taxiways, aprons.
  - Runway availability is affected during surface treatment and snow clearing activities

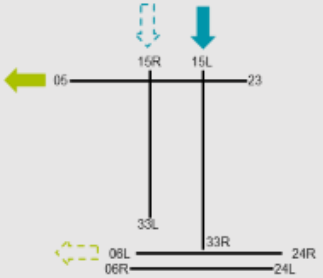
Noise Management Action Plan

Preferential Runway System Trial

- A Preferential Runway System manages nighttime noise by using runways that affect the fewest number of residents. A review of Toronto Pearson's Preferential Runway system was included as part of the Six Ideas for noise mitigation.
- The GTAA began a one-year trial of an updated system on February 27, 2020 to assess its effectiveness in multiple conditions - weather, runway construction and winter operations

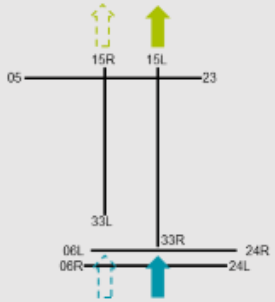
1st Choice - Whenever crosswind, tailwinds & winds-aloft allow

2nd Choice - Whenever crosswind, tailwinds & winds-aloft allow

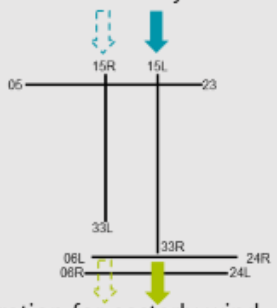


Selection driven by weather conditions and infrastructure availability when 1st or 2nd choice are not operable. Ultimately any single or pair of runways can be used.

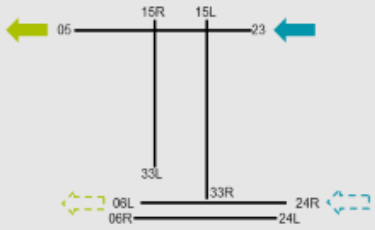
Operation for northerly wind



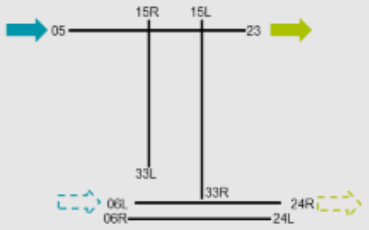
Operation for southerly wind



Operation for westerly wind



Operation for easterly wind



Key:

- Primary departures
- Primary arrivals
- Maintenance adjusted departures
- Maintenance adjusted arrivals

Preferential Runway System Trial

- Reports on the usage of the updated Nighttime Preferential Runway System are published on our website every three months
  - We have seen an increase in adherence to the amended Preferential Runway System. Overall adherence for February 27 to August 31, 2020 was 92%, compared to 59% for the same period in 2019 under the original system
- Feedback survey will be open during trial for residents to provide their input on the same webpage as the reports

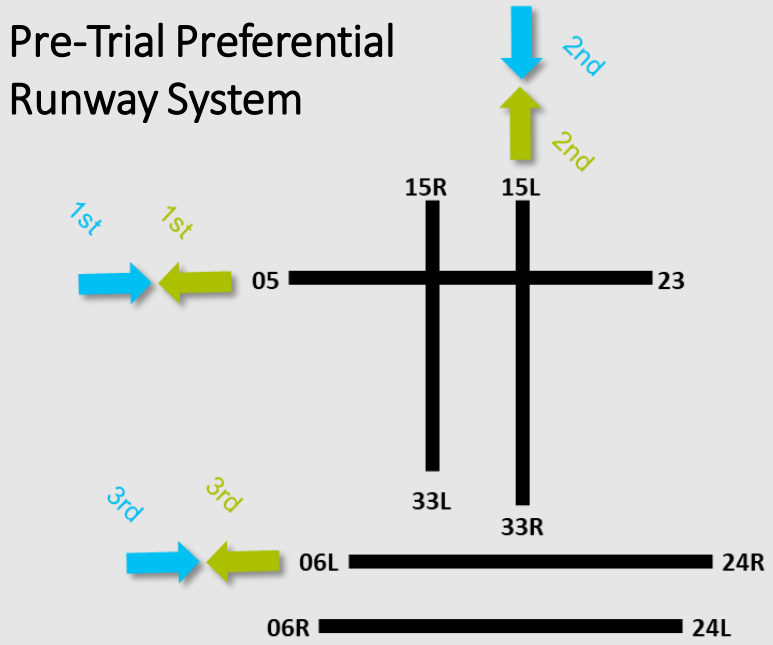
Preferential Runway System Trial

Trial Month	Pre-Trial Adhered	Pre-Trial Non-Adhered	Trial Adhered	Trial Non-Adhered
Month 1 (Feb 27-Mar 31)	47.7%	52.3%	91.6%	8.4%
Month 2 (April 1-30)	60.5%	39.5%	98.4%	1.6%
Month 3 (May 1-31)	56.8%	43.2%	98.2%	1.8%
Month 4 (June 1-30)	52.1%	47.9%	98.0%	2.0%
Month 5 (July 1-31)	70.0%	30.0%	81.7%	18.3%
Month 6 (August 1-31)	67.1%	32.9%	97.2%	2.8%
Month 7 (September 1-30)				
Month 8 (October 1-31)				
Month 9 (November 1-30)				
Month 10 (December 1-31)				
Month 11 (January 1-31)				
Month 12 (February 1-26)				

Note: There was lower adherence during the capital construction work during the summer. The overall adherence for each month was still higher than for the pre-trial period.

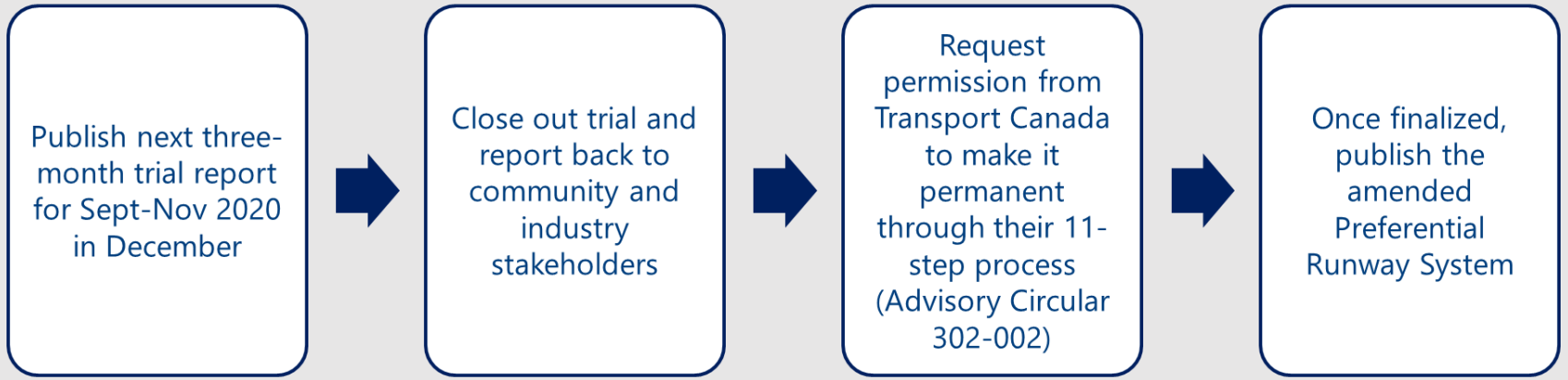
Preferential Runway System Trial

- The increase in adherence is related to two challenges that the amended Preferential Runway System was designed to address:
    1. The amended system provides Air Traffic Controllers with more flexibility for wind-dictated operations, as well as alternatives during maintenance work, snow clearing, etc.
    2. In the pre-trial system, the first-choice runway for departures and the first-choice runway for arrivals could not be used together for safety reasons.



Preferential Runway System Trial

Next Steps



A320 Family Retrofit Program

A320 Family Retrofit Program

- We are monitoring usage of the A320 family operations at Toronto Pearson against the audit conducted in 2019
- Reports on the usage are shared through the Noise Management Forums and in the Noise Management Action Plan updates on our website at torontopearson.com/nmap

- **A320 Usage Report Summary**
  - The reports for January to September 2020 show that:
    - 31% of A320 family aircraft operating at CYYZ are retrofitted
    - 50% of A320 family movements are performed by retrofitted aircraft
  - This means that airlines are using proportionally more of their retrofitted aircraft for operations at CYYZ
  - Based on retrofit schedules provided by the airlines, more than 90% of A320 movements will be performed by retrofitted aircraft by the end of 2021*

*This timing could be changed due to impacts of COVID-19

Quieter Fleet Incentive Program

The intent of a Quieter Fleet Incentive program is to encourage operators to use quieter aircraft.' Next steps include:

Noise Chapter Database

- Developing a database of aircraft operating at Toronto Pearson by Noise certification 'chapter'.
  - The International Civil Aviation Organization (ICAO) define noise standards for aircraft manufacturers. Over the years, the standards have become increasingly more stringent. The standards are known as 'chapters'.

A320 series retrofit

- Determine timing for the next A320 family audit.
- GTAA exploring "impact charge" for airlines that operate non-retrofitted A320 family aircraft after 2022

Phase 2 of Quieter Fleet Incentive Program

- Explore options for Phase 2 of the Quieter Fleet Incentive Program including encouraging quieter fleet operations, looking at a potential phase out of noisier aircraft or possible noise charges

Fly Quieter & Greener Program

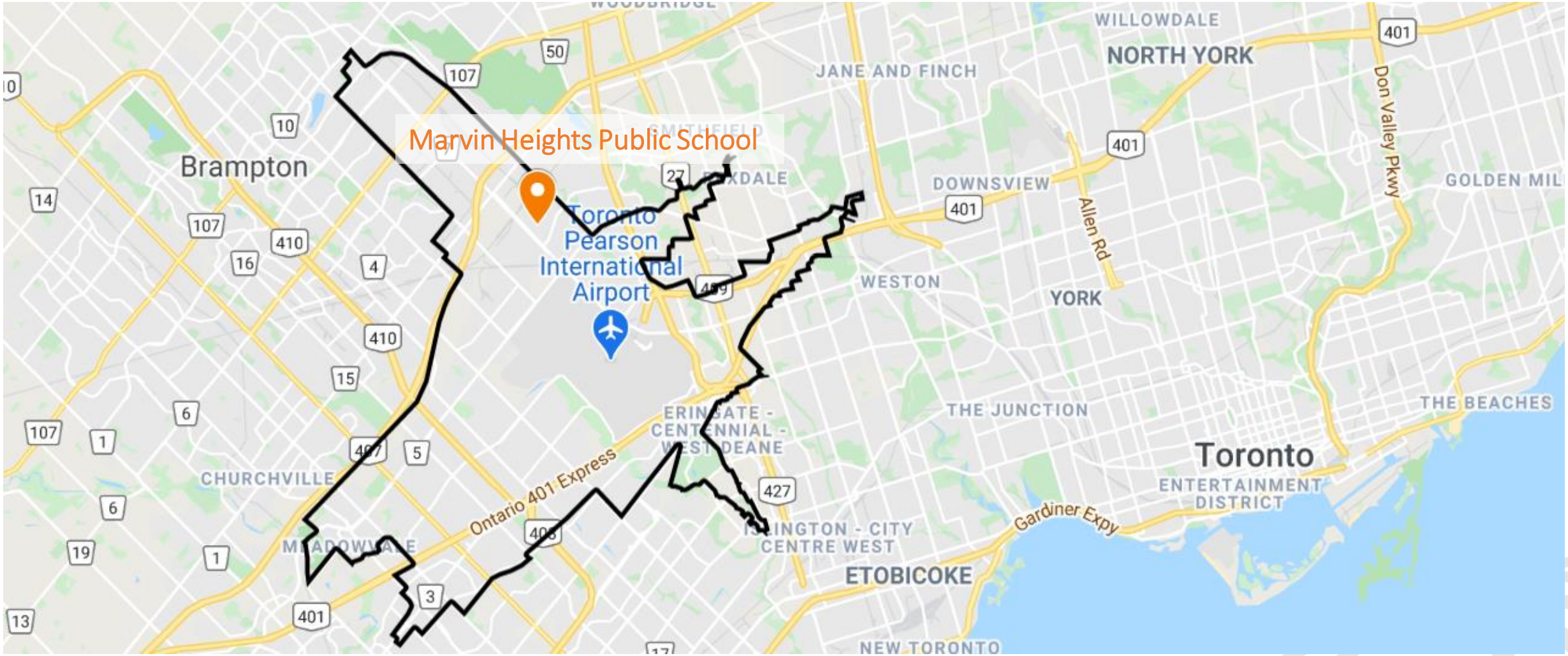
A Fly Quieter and Greener program compares the performance of operators using a variety of noise and environmental related metrics.

- Met with airlines and Nav Canada at the October 2020 Industry Noise Management Board meeting and discussed proposed program structure and initial set of draft metrics.
- Aviation partners were amenable to the proposed structure and metrics, and consultation will continue in 2021 to finalize first phase metrics and development of reporting.

Pilot: School Air Conditioning Program

- Committed to exploring a pilot program to provide funding for HVAC systems for a school within the most noise impacted communities
- Similar programs offered by leading international airports
- Based on criteria matrix, selected Marvin Heights Public School was selected, and work is currently underway
- When operational in Spring 2021, the system will have an added benefit of improving the air quality at the school
- We have learned lessons and started working on plans to evolve the program, however given the airport's current financial constraints, determining what phase 2 of the program will look like is on hold

Marvin Heights Public School within the AOA



Noise Management Forums

- As part of the Noise Management Forums launched in 2019, the GTAA committed to adding a Community-Proposal Review Process and an External Process Audit
- These two initiatives ensure continued accountability and representation of the community interests

Community Proposal Review Process	External Process Audit
A formalized way to have community-submitted noise management proposals reviewed **Next steps:** 1. Review criteria and process with NT in Q1 2021 2. Launch program	A third-party review of Toronto Pearson's activities and progress towards the Noise Management Action Plan **Next steps:** 1. On pause due to financial constraints 2. Consider undertaking review as part of next Best Practices study in preparation of next Noise Management Action Plan

Discussion + Roundtable

Thank You