

Noise Management Action Plan

2021 Year-End Update

Prior to COVID-19, Toronto Pearson was the sixth most connected airport in the world, facilitating 50.5 million passengers and over 450,000 aircraft movements in 2019, directly employing 49,000 people and enabling \$42 billion of Ontario's GDP.

We understand that airport operations have an impact on the surrounding communities, and we work closely with our industry partners to make sure that [noise management](#) remains a central part of the conversation as the airport recovers from the impacts of COVID-19.

Toronto Pearson's Noise Management Program works to strike a balance in operating a growing airport and regional economic engine with the impact on surrounding communities.

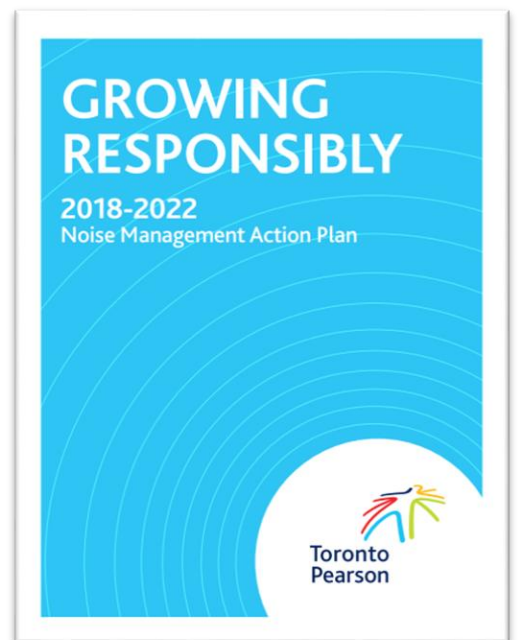
The Program is based on the International Civil Aviation Organization's (ICAO) Balanced Approach to Aircraft Noise Management, which includes four principles:

1. Reduction of noise at source
2. Land use planning and management
3. Noise abatement procedures
4. Operating restrictions

In 2018, Toronto Pearson released an ambitious five-year plan, titled, **Growing Responsibly: 2018-2022 Noise Management Action Plan**, which includes a series of programs and policies designed to enhance the airport's existing Noise Management Program.

This Noise Management Action Plan Update shares the progress on the initiatives that are currently underway.

Learn more about how the plan was created, and read the Growing Responsibly: 2018-2022 Noise Management Action Plan on our website at torontopearson.com/NMAP



Questions?

To learn more about the Noise Management Program or the Noise Management Action Plan, contact the Noise Management Office at 416-247-7682 or visit torontopearson.com/noisemanagement

Monthly noise statistics are available on our website at torontopearson.com/noise-publications

To stay up to date on upcoming meetings, events and noise initiatives, sign up for the Checking In Newsletter at torontopearson.com/checkingin

Communications, Outreach and Noise Committees
Noise Management Forums



The Commitment

A strong relationship with our surrounding community is vital to ensure that our Noise Management Program is adapting as the airport evolves. We will provide residents with new avenues to share feedback so that we can have more meaningful dialogues and resolve future challenges together.

Launched in 2019, the Noise Management Forums offer a more inclusive approach to discussions with our neighbors, stakeholders, and partners. Learn more about the Noise Management Forums on our website at torontopearson.com/en/community/noise-management/noise-forums.

Recent

- Launched the new [Community Proposal Review Process](#) (CPRP) in June
 - The process is a formalized way to have community-submitted noise management proposals reviewed by an independent panel of internationally recognized aviation experts
 - Backgrounder and submission form can be found under Community Proposal Review Process on the [Noise Management Forums](#) webpage

Next Steps

- We will continue to hold Noise Management Forum meetings. These will be virtual meetings until further notice.
- Meeting materials or summaries are available on our website at torontopearson.com/nmf

Communications, Outreach and Noise Committees

InsightFull

The Commitment

We will launch a new noise management website so residents can better understand our operations.

In May 2019, we held a workshop with the Neighborhood Table to gather their input on the content and structure for the InsightFull web-portal. This new interactive noise information site provides residents with localized and personalized information and statistics about airport operations and impacts.

Complete

- This initiative is now complete.
- Residents can access InsightFull from our website at torontopearson.com/en/community/noise-management

Noise Reporting and Metrics

Noise Reports

The Commitment

The GTAA committed to developing noise reports from our 25 Noise Monitoring Terminals that will be valuable for the community.

Complete

- This initiative is now complete. We will continue to update the noise reports on a quarterly basis.
- Interactive dashboard of noise reports can be accessed through [InsightFull](#).

Quieter Fleet Incentive Program A320 Family Retrofit Compliance Program

The Commitment

Many airports incentivize airlines to use the quietest aircraft in their fleets or expedite purchase of quieter aircraft. The GTAA will implement a new Quieter Fleet Incentive Program, starting with the A320 family retrofit program.

What is the A320 retrofit program?

The Airbus A320 family aircraft produce a high-pitch whining sound on approach caused by small vents on the aircraft's wings designed to help equalize and mitigate over-pressurization (Fuel tank Over Pressure equalization Ports – FOPP). The A320 family includes the A318, A319, A320 and A321 aircraft. Retrofit kits can be installed to eliminate the high-pitch sound and reduce noise by up to 9dB, resulting in a significant noise reduction for communities.

Update

- We are monitoring usage of the A320 family operations at Toronto Pearson based on updated retrofit status provided by airlines
- Working with major operators to complete status update of the A320 family aircraft operating at Toronto Pearson and continue to monitor operations of retrofitted vs non retrofitted aircraft
- Latest reports with updated database demonstrate significant progress – 94% of A320 family operations were conducted by retrofitted aircraft.







A320 Family Aircraft at Toronto Pearson – Usage Report

The following tables show the A320 family movements at Toronto Pearson for July-December (Quarter 3) and are based on updated details provided by airlines operating these aircraft. We are encouraged by the progress we are seeing with the A320 Family Retrofit program.

The tables highlight the number of operations that used retrofitted/modified aircraft, the number of operations that used aircraft that are scheduled to be retrofitted, and the number of operations conducted by non-retrofitted aircraft.

By Total Movements








The total movement by retrofitted aircraft is the most meaningful of the two reports as it is the proportion of *operations* by retrofitted versus non-retrofitted aircraft that has noise implications, not the proportion of retrofitted versus non-retrofitted *aircraft in the fleet*.

Q3 2021							
Airline	Retrofitted	% Retrofitted	Scheduled for Retrofit/Retirement*	% Scheduled for Retrofit/Retirement	Not Scheduled for Retrofit/Retirement	% Not Scheduled for Retrofit/Retirement	Total A320 Aircraft
Air Portugal 	8	100%	0	0%	0	0%	8
Azores Airlines 	4	100%	0	0%	0	0%	4
Aer Lingus 	4	100%	0	0%	0	0%	4
United Airlines 	2	100%	0	0%	0	0%	2
Air Transat 	8	89%	0	0%	1	11%	9
Air Canada Family 	32	86%	5	14%	0	0%	37

Noise Management Action Plan Update – December 2021

- 82% of A320 family aircraft that operated at CYYZ in Q3 were retrofitted, compared to 46% in Q2
- 71 unique A320 family aircraft operated in Q3 vs. 123 in Q2
- 7 airlines operated A320 family aircraft in Q3

By Aircraft

Q3 2021							
Airline	Retrofitted	% Retrofitted	Scheduled for Retrofit/Retirement*	% Scheduled for Retrofit/Retirement	Not Scheduled for Retrofit/Retirement	% Not Scheduled for Retrofit/Retirement	Total A320 Movements
Air Portugal 	110	100%	0	0%	0	0%	110
Azores Airlines 	94	100%	0	0%	0	0%	94
Aer Lingus 	12	100%	0	0%	0	0%	12
United Airlines 	4	100%	0	0%	0	0%	4
Air Transat 	186	99%	0	0%	1	1%	187
Air Canada Family 	3,318	96%	144	4%	0	0%	3,462
Avianca 	0	0%	0	0%	84	100%	84
TOTAL	3,724	94%	144	4%	85	2%	3,953

*Although not currently retrofitted, the airline has indicated these aircraft will be either retrofitted or retired in the near future.

- 94% of A320 family movements in Q3 were performed by retrofitted aircraft compared to 78% in Q2 (+16%)
- 2.4% of A320s operated during the restricted hours in Q3 compared to 3.1% in Q2

Next Steps

- Continue to provide [usage reports](#) of retrofitted A320 family aircraft operations
- Continue to update records for retrofit status of aircraft based on details provided by airlines
- Explore options for Phase 2 of the Quieter Fleet Incentive Program
- Working to understand recent and upcoming fleet changes and associated noise implications

Quieter Fleet Incentive Program

Phase 2

The Commitment

The intent of a Quieter Fleet Incentive program is to encourage operators to use quieter aircraft. The first phase of this program was to introduce the A320 Family Retrofit Program. The GTAA is now exploring options for Phase 2 of the Quieter Fleet Incentive Program looking at a potential phase out of noisier aircraft

The GTAA committed to the implementation of a new Quieter Fleet Incentive Program

Many airports incentivize airlines to use quieted aircraft in their fleet or expedite purchase of quieter aircraft.

Underway

- Develop a database of aircraft operating at Toronto Pearson by Noise certification 'chapter' to have an up-to-date inventory of what is currently, and planned to, operate to identify potential opportunities for phase 2 of this program
- The [International Civil Aviation Organization \(ICAO\) define noise standards known as Chapters](#), for aircraft manufacturers. Over the years, the standards have become increasingly more stringent
- Prepare proposals for Phase 2 of the Quieter Fleet Incentive Program

Fly Quieter & Greener Program

The Commitment

The GTAA committed to developing a Fly Quieter and Greener Program that compares the performance of airlines operating at Toronto Pearson using a variety of noise and environmental related metrics.

Update

- Airline Consultation continues in 2022 to determine first phase metrics and development of reporting.

Next Steps

- Continue consultation with industry and community stakeholders around this program
- Testing phase – use actual data to test the effectiveness of the selected metrics and associated weightings to develop report.
- Release first public Fly Quieter and Greener report in 2022

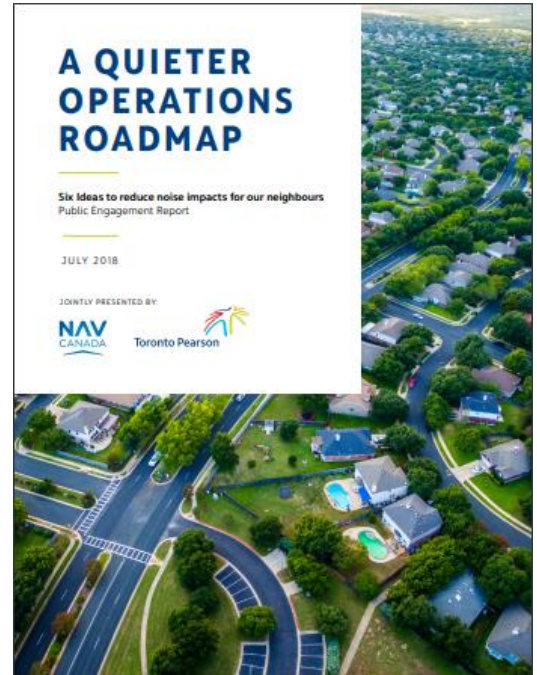
Runway Usage

The Six Ideas – A Quieter Operations Roadmap

Background

The Six Ideas: A Quieter Operations Roadmap is a joint initiative between the GTAA and NAV CANADA to explore noise mitigation ideas that would reduce noise impacts for the surrounding communities. Ideas 1 to 4 focused on how aircraft approach and depart Toronto Pearson and were led by NAV CANADA. Idea 5 and 6, which are being led by the GTAA, explore the way the runways are used by aircraft arriving to and departing from Toronto Pearson.

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 Tried Summer 2019 <i>Will not be pursued based on trial results and community feedback</i>
Idea 6: Review of the Preferential Runway System	Trial Underway Commenced February 27, 2020 – ongoing

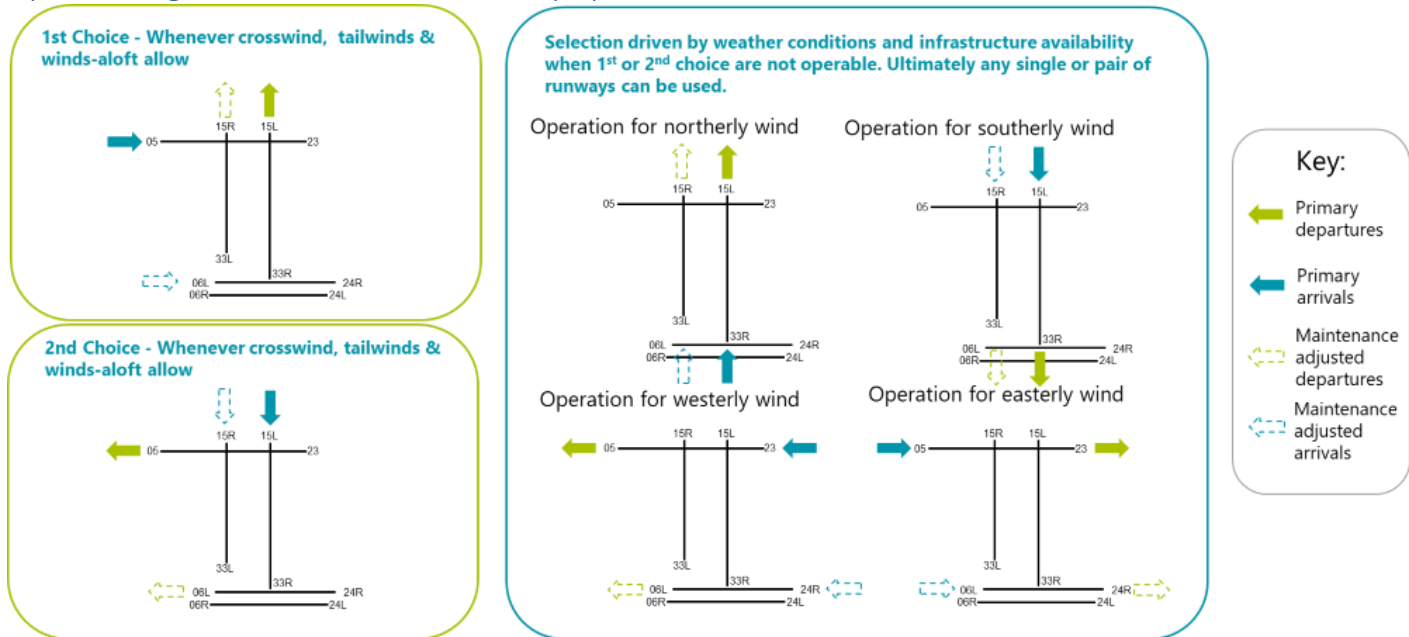


Idea 6 – Nighttime Preferential Runway System Review

Toronto Pearson operates 24 hours a day, seven days a week. We know that nighttime noise can be particularly bothersome for some. Between midnight and 6:30 a.m. each night, the airport prioritizes the use of runways so that planes fly over the fewest people. This is called the Nighttime Preferential Runway System.

Following technical analysis, the GTAA consulted on an updated Preferential Runway System in Spring 2018.

Updated Nighttime Preferential Runway System



Update

- The GTAA began trial of the updated Preferential Runway System on February 27, 2020
- The Trial was intended to last for one-year to test usage of the updated system across multiple weather conditions, during runway maintenance season, and winter operations
- Regular [quarterly reports](#) produced on the usage of the updated Nighttime Preferential Runway System indicate high adherence to the system.
- A survey was open during the one-year period to gather feedback from residents
- At the end of the one year, the Trial was found to have met its objectives of providing clear guidelines for runway assignment under various circumstances (e.g., weather, maintenance) and enabled clear reporting for residents.,
- The system was designed to be effective under much higher traffic levels than in recent months, however based on community feedback the Trial has been extended to allow for further testing of the system under higher traffic levels.
- Construction activities on runways 05/23 and 06L/24R and increasing traffic levels led to the following impacts in Q3:
 - Runway 06R/24L being the primary runway used on the south complex instead of runway 06L/24R
 - Significant increase in multi-direction runway configurations to accommodate demand when 05/23 and 06L/24R were unavailable
 - Multi-direction configurations were also used much more during the preferential runway hours in Q3 2021 whereas single runway configurations were primarily used in Q3 2020
- For information on impacts and benefits, visit torontopearson.com/en/community/get-involved/community-conversations/quieter-operations-roadmap

Next Steps

- Continued reporting on trial usage on a quarterly basis
- Re-opening the Idea 6 Trial survey for one month
- Submit application and community feedback to Transport Canada to formalize the Trial into a permanent new system

Land Use Planning

Pilot: School Air Conditioning Program

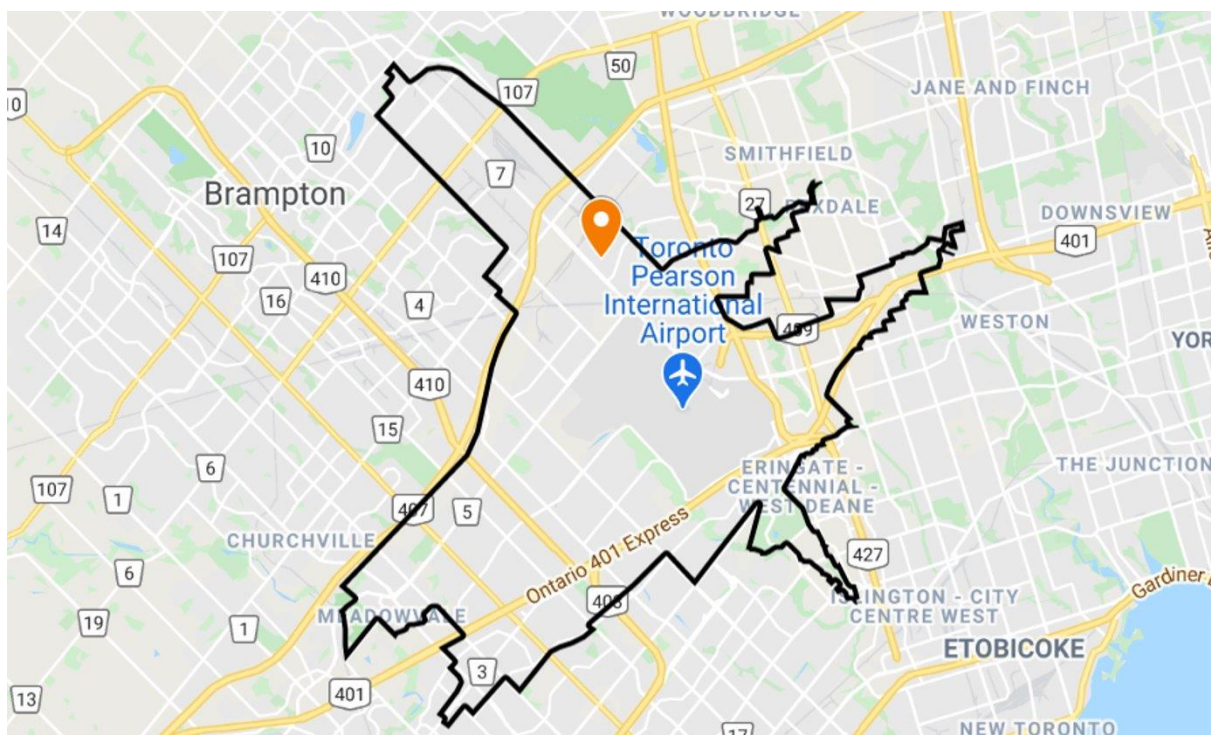
The Commitment

The GTAA 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.

By installing air conditioning in schools, windows can remain closed which helps to minimize the impact of external noise in the classroom. Air conditioning has the additional benefits of providing a more comfortable environment for students in warmer months and improved air quality.

Complete

- As a first step of the pilot school air conditioning program, local school boards were invited to apply to the program for non-air-conditioned schools located in high impacted areas (see below).
- Marvin Heights Public School located in Mississauga (Malton) was selected based on a criteria matrix.
- The GTAA provided funding to the Peel District School Board to cover the costs of the air conditioning system.
- The project was completed in fall 2021. HVAC installed and functioning.



*Note black line defines the Airport Operating Area (AOA). Areas within the AOA experience high noise exposure

Next Steps

- We have learned lessons and started working on plans to evolve the program, however given the airport's current financial constraints, developing next phase of the program is on hold.

NMAP Workplan & Accomplishments

NMAP Accomplishments to Date

- ✓ Launched Noise Management Forums
 - ✓ Community Proposal Review Process launched in June 2021
- ✓ Published updated Complaint Process
- ✓ Completed A320 Family review and began tracking usage at Toronto Pearson against 2019 and 2021 database
- ✓ Six Ideas:
 - ✓ Ideas 1-4 implemented
 - ✓ Idea 5 tested summer 2018, trialed summer 2019 (will not be pursued based on trial results and community feedback)
 - ✓ Idea 6 one-year trial began February 2020, (now extended)
- ✓ Launched InsightFull, a new noise management website
- ✓ Began publishing standard noise reports
- ✓ Working with selected school on the Pilot School Air Conditioning Program

Community Engagement

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Pearson Airport Explorers Club, winner of the 2020 ACI-NA Award for the Best Educational and Outreach Program

Launched in April 2020, our Explorers Club was created to teach children in grades 3 through 8 about all things aviation and give them a behind-the-scenes look at Toronto Pearson through fun activities and virtual camps. In 2021, we held nine virtual camps engaging close to 1,400 children. Since the program's inception, 714 children have signed up to become official Pearson Airport Explorer Club members. Learn more about the camps, access past presentations and materials and join the club today at [airportexplorers.club](https://www.airportexplorers.club).

Pearson Connects Virtual Coffee Chats

Pearson Connects Virtual Coffee Chats were created to provide a unique look at what it takes to keep the airport operating safely every day. Communities virtually meet with the Community Relations team and subject matter experts to learn about the history of the airport and its economic impact, the operations, and how Pearson is giving back to local communities. These coffee chats provide the opportunity for an open dialogue with the community and helps build trust with our neighbors. In 2021, we met with over 650 community members at 35 coffee chats across the region. Keep us in mind for your next community event! We'd love to join the conversation! [Pearson Connects Virtual Coffee Chat - Topics](#)

Noise Management Forums –Virtual Meetings

Details on the 2021 Noise Management Forums are available at [Noise Management Forums.](#)

Presentations and other relevant information from all meetings can be accessed under [Meeting Materials](#)

2021 Public Meetings were held:

April 15th

September 22nd

December 2nd

2022 Public Meetings will be held:

April 7th

September 22nd

December 8th