

Noise Management Action Plan

Update | December 2019

Toronto Pearson is working towards a bold vision: to be the best airport in the world. Today, it is the sixth most connected airport in the world.

The airport facilitates almost 50 million passengers and 478,000 aircraft movements a year, directly employ 49,000 people and enable \$42 billion of Ontario's GDP.

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 Briefing Note shares the progress on the Action Plan initiatives that are currently underway.

To create the 2018-2022 Noise Management Action Plan, the Greater Toronto Airports Authority (GTAA) worked with industry experts to identify international best practices. The GTAA also sought input from the community through a 36-member Residents Reference Panel, a series of public workshops, and a regional survey that was completed by over 2,500 residents.

The Action Plan will build on the existing Noise Management Program by enhancing these nine tools that help manage noise and ensure effective communication:

1. **Communications, Outreach and Noise Committees:** Evolving how the GTAA works with the community
2. **Noise Metrics and Reporting:** How noise information and data from noise monitors is shared with the community
3. **Quieter Fleet Incentive Program:** Encouraging airlines to use quieter aircraft or fly existing aircraft in a quieter manner
4. **Runway Usage:** Programmed use of runways to provide periods of relief from noise
5. **Land Use Planning:** Management of land use near the airport, including exploring potential noise insulation programs
6. **Night Flight Restrictions:** How aircraft noise is managed at night
7. **Noise Abatement Procedures:** Reducing noise on landing and take-off
8. **Noise Complaints:** Process around how complaints are submitted, handled, analyzed and reported upon
9. **Fly Quiet Program:** Annually report on airline performance across several metrics

Growing Responsibly: 2018-2022 Noise Management Action Plan is available at torontopearson.com/noise-publications.



Communications, Outreach and Noise Committees

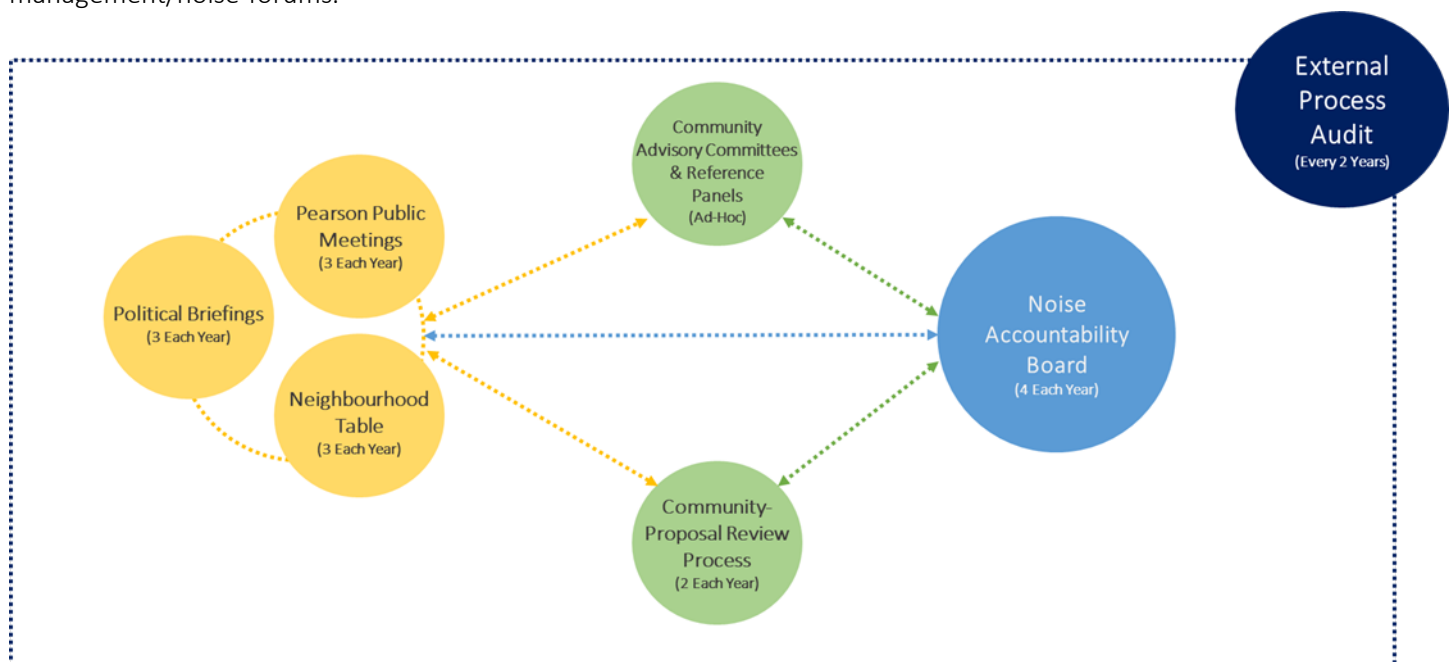
Noise Management Forums

The Commitment

As the airport grows, the way the GTAA listens and responds to the communities should grow too. As part of the Action Plan, the GTAA committed to reviewing the governance, membership and role of the Community Noise and Environment Advisory Committee (CENAC).

In early 2019, the GTAA evolved CENAC, which served the airport for more than 20 years, into the [Noise Management Forums](#). The Noise Management Forums offer a more inclusive approach to discussions with our neighbours, stakeholders and partners.

Learn more about the Noise Management Forums on our website at torontopearson.com/en/community/noise-management/noise-forums.



Update

- Held regular meetings with the Forums to share updates on the Action Plan
 - Noise Accountability Board: March 19, June 19, September 10 and November 19
 - Political Briefings: April 2, September 24 and December 3
 - Neighbourhood Table: April 3, September 25 and December 4
 - Pearson Public Meeting: April 4, September 26 and December 5
- Held ad-hoc Neighbourhood Table and Political Briefing meetings in February
- Held three workshops with Neighbourhood Table Sub-Committees to shape Action Plan initiatives such as Noise Reports and the InsightFull Web Portal
- Hosted tours for the Noise Accountability Board to provide greater insight into airport operations and impacts

Next Steps

- Continue engaging with Neighbourhood Table to deliver on the Noise Reports and InsightFull Web Portal
- Launch the new Community Proposal Review Process (CPRP)

- The process is a formalized way to have community-submitted noise management proposals reviewed by an independent panel of internationally-recognized aviation experts
- Continue to hold meetings for Noise Management Forums (scheduled and ad hoc as needed)
- Host airport tours for the Neighbourhood Table members in Spring 2020

Communications, Outreach and Noise Committees

InsightFull Web Portal

The Commitment

The GTAA will launch a new noise management website so residents can better understand airport operations and what is overflying their neighbourhood.

Update

- Updated existing Noise Management website with more information about aircraft noise, airport operations and our Noise Management Program
- Working with the Neighbourhood Table to develop InsightFull, a new interactive web portal that provides personalized information to residents about airport operations and impacts
- Met with a Neighbourhood Table sub-committee in May 2019 to gather their input on the structure and content for the web portal
- Developing prototype, including content, data widgets and videos

Next Steps

- Share prototype with the Neighbourhood Table sub-committee in early 2020 for their feedback
- Launch InsightFull web portal in Q1 of 2020

Noise Metrics and Reporting

Noise Reports

The Commitment

The GTAA has [25 Noise Monitoring Terminals \(NMTs\)](#) that capture aircraft and community noise data. The airport will create a standard noise report from this data that is easy to understand for the community.

Update

- Met with the Neighbourhood Table in May and July 2019 to discuss new noise reports
- At the first workshop, members were asked what they would like to see in the noise reports that would make them meaningful for both the larger community and those who have a stronger understanding of noise
- The GTAA developed a set of sample noise reports and presented them to the sub-committee in July for their feedback
- Reviewed sample reports using Toronto Pearson data with the entire Neighbourhood Table at the December Noise Forums
- For more information, please see the Pearson Public Meeting presentation for December 2019, which is available at torontopearson.com/nmf under meeting materials

Next Steps

- Finalize reports based on any additional input from Neighbourhood Table members
- Begin publishing regular noise reports in Q1 of 2020

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 by 2020.

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

- Advised airlines that operate at Toronto Pearson about our plans around a new A320 family retrofit program in September 2017
- Audited A320 family aircraft operating at the airport in April 2019. As part of this audit, worked with airlines that regularly operate these aircraft at Toronto Pearson to understand their plans for future use of these aircraft including retrofit implementation
- Provided update on compliance policy being developed to monitor airlines' retrofit progress, including:
 - Quarterly audits to monitor airlines' retrofit progress starting in 2020
 - Results from the audits will be shared with residents and elected officials through Noise Management Forums

A320 Family Aircraft at Toronto Pearson - Audit Results

Airlines have demonstrated their commitment to retrofitting or replacing the A320 family aircraft in their fleet. The audit showed that 94 per cent of the A320 family operations at Toronto Pearson are conducted by four major airlines: Air Canada, Air Canada Rouge, American Airlines and United Airlines.

Based on the audit results, the GTAA anticipates that by the end of the term of this Action Plan, 90 per cent of A320 family operations at Toronto Pearson will be conducted by retrofitted aircraft.

Airline	Total Flights Jan-Jul 2019	Percent of A320 Flights	Current Retrofit Status	Retrofit Completion Timeline
Air Canada/Rouge	39878	86.3%	41 of 101 (40.6%)	Remainder of aircraft that will remain in fleet after 2020 will be retrofitted by end of 2021
United Airlines	2122	4.6%	44 of 166 (25%)	Retrofits ongoing
American Airlines	1485	3.2%	189 of 398 (47%)	By end of 2022
Air Transat	1352	2.9%	12 of 16 (75%)	Follow-up ongoing
Interjet	732	1.6%	10 of 51 (20%)	Follow-up ongoing

Next Steps

- GTAA is finalizing an audit process that will include to monitor airlines' retrofit progress against what the airlines reported in initial audit request
- Audit results will be shared at future Noise Forums
- GTAA exploring "impact charge" for airlines that operate non-retrofitted A320 family aircraft after 2022

Runway Usage

The Six Ideas – A Quieter Operations Roadmap

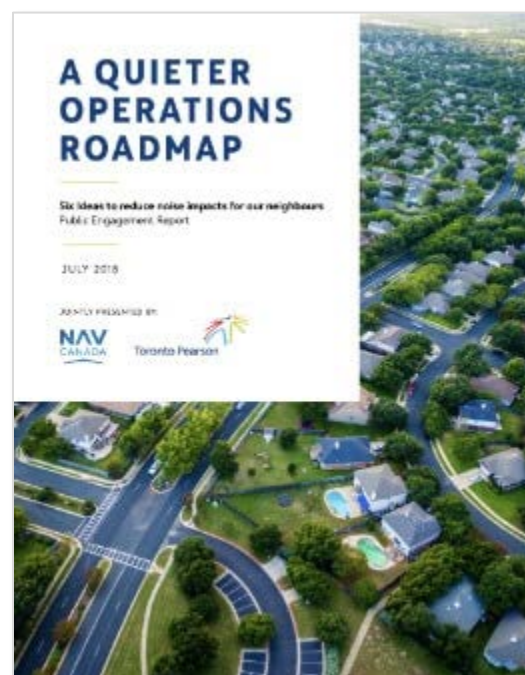
Background

Many international airports use runway alternation programs to provide residents with relief from aircraft noise by rotating runway usage during periods when fewer aircraft are arriving and departing. These rotations were scheduled in advance so that residents knew when to anticipate relief from aircraft noise. For more information on the Six Ideas, including the spring 2018 consultations, visit torontopearson.com/conversations.

The Six Ideas

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
Idea 6: Review of the Preferential Runway System	Trial 2020-2021



Idea 5 – Summer Weekend Runway Alternation Program

In 2018, the GTAA tested the Summer Weekend Runway Alternation for eight weekends. It also allowed communities to provide informed feedback on their experience during the test. Based on operational data and community feedback from the 2018 test, the GTAA ran a 16-week trial of this program from May 25 to September 8, 2019.

Update

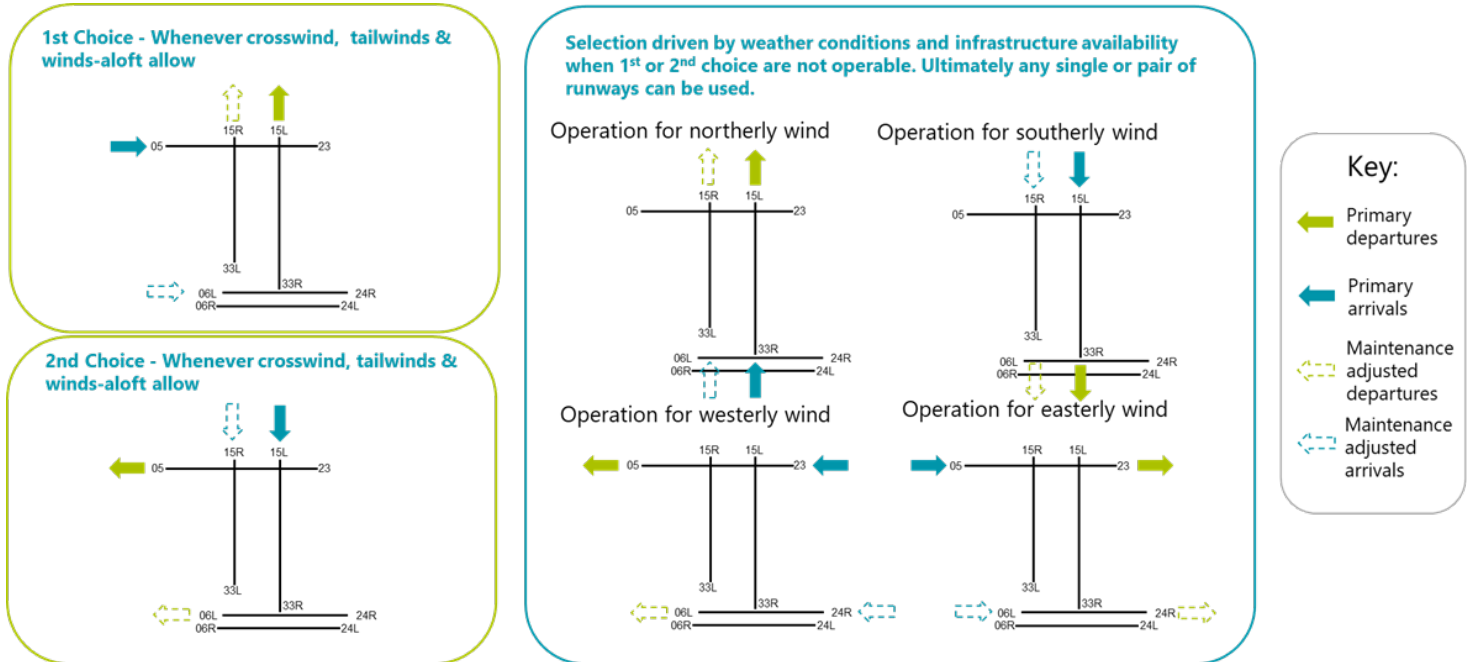
- Trial performance did not meet objective of providing consecutive, meaningful respite to the community
- Feedback received during and after the trial suggests a lack of community support for the program. Of the respondents that answered the question asking them about their experience during the trial, 64% said their experience was negative or that they did not notice any difference
- As such, the GTAA will not pursue implementation of the Summer Weekend Runway Alternation Program
- For more information, please see the Pearson Public Meeting presentation for December 2019, which is available at torontopearson.com/nmf under meeting materials

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



What's changed from the Spring 2018 consultation?

More of the regular runway maintenance is now being conducted in the overnight period when traffic levels are lowest. This allows the work to be completed with less disruption to the operation and increased ability to maintain capacity.

Because the increased nighttime maintenance work was not factored into the technical analysis of Idea 6, the GTAA conducted additional analysis and added new maintenance contingency runways to the system. The updated system now includes maintenance adjusted runways that will be used during maintenance work when winds are not a factor.

The anticipated impacts and benefits are still in line with what was communicated during the Spring 2018 consultation with communities under these runways.

Update

- The GTAA will begin a trial of the updated Preferential Runway System starting February 27, 2020
- Trial will last for one-year to test usage of the updated system across multiple weather conditions, during runway construction season, and winter operations
- Quarterly reports will be shared on usage of the updated Nighttime Preferential Runway system
- We anticipate that the proposed system will increase adherence and enable more consistent use of runways identified as the preferential runways
- Feedback survey will be open during trial for residents to provide their feedback
- For information on impacts and benefits, visit torontopearson.com/en/community/get-involved/community-conversations/quieter-operations-roadmap

Land Use Planning

School Air Conditioning Pilot Program

The Commitment

Investigate the feasibility of a pilot program to provide funding to nearby schools for air conditioning systems.

The air conditioning would enable classrooms to keep their windows shut during warm weather, minimizing potential disruption from aircraft noise.

How does the selection process work?

To be eligible for the program, schools must be situated within the Airport Operating Area (AOA). The AOA – which is based on Transport Canada’s 30 Noise Exposure Forecast (NEF) contour – is a recognized boundary by local municipalities and is included in their Official Plans to restrict development of sensitive land use from within this noise-sensitive area.

Learn more about the NEF in Transport Canada’s guideline TP 1247- Land use in the Vicinity of Aerodromes Part IV- Aircraft Noise

Update

- Identified 16 public schools located in the Airport Operating Area
- Developed a criteria matrix to prioritize schools, including air conditioning status, school type (elementary, middle or high school), student population, summer programming, and the school board’s ability to complete the installation work and take on future maintenance and operational costs
- Sent letters to potentially eligible school boards with the list of the identified schools to inform them of the program and solicit proposals in the spring 2019
- Received proposals from eight schools for consideration for this pilot program
- Assessment process was not finalized in time for the work to be completed in summer 2019

Next Steps

- We will share more details on next steps at the 2020 Noise Management Forums

Night Flight Restrictions

Review of Night Flight Restriction Program

The Commitment

The GTAA will explore changes to its existing Night Flight Restriction Program in relation to other international airports.

How We Currently Manage Night Flights

Toronto Pearson operates 24 hours a day, seven days a week. To manage operational impacts at night, the airport has a Night Flight Restriction Program and a Nighttime Preferential Runway System.

- The Night Flight Restriction Program limits the number of movements during the restricted hours (12:30 am to 6:29 am). This is referred to as the “night flight budget.” Toronto Pearson is the only airport in Canada to have a budget system.
- The Preferential Runway System is in place to between midnight and 6:30 a.m. During this time, the airport is configured to arrive and depart aircraft on specific runways to impact the fewest residential neighbourhoods.
- Additionally, NAV CANADA also implemented new nighttime arrival and departure flight paths in November 2018 as part of the Six Ideas. These new routes help avoid populated areas and impact fewer people.

Update

- Completed an operational analysis to better understand current night flight operations
- The review found that 40 per cent of passenger operations, and 67 per cent of cargo operations during nighttime hours are domestic flights. Of these, 29 per cent of domestic flights are to/from Western Canada
- 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.
- For more details, please see the Public Meeting presentation at torontopearson.com/nmf under meeting materials for April 2019

Next Steps

- 2018-2019 Night Flight Restriction Program update will be shared in Q1 2020
- An update on the review of the Night Flight Restriction Program will be shared at future Noise Management Forums

2020 NMAP Workplan at a Glance

Q1 2020

- Test for Idea 6: Review of the Preferential Runway System
- Launch InsightFull + Quarterly Noise Reports
- Launch Community-Proposal Review Process
- Quarterly audit of A320 retrofit status at the end of Q1

Q2 2020

- Test continues for Idea 6: Review of the Preferential Runway System
- School Air Conditioning Pilot Program Update
- External Process Audit – Terms of Reference and RFP
- Fly Quiet Reporting Program Development Metrics Selection
- Continue Review of the Night Flight Restriction Program

Accomplishments to Date

- ✓ Review of Community Noise Advisory Committee (CENAC) – Launched Noise Management Forums
- ✓ Publish updated Complaint Process – Published on the torontopearson.com website
- ✓ Began work on Quieter Fleet Incentive Program, starting with A320 Family Retrofit Program – Completed audit and working towards a Compliance Program
- ✓ Six Ideas:
 - ✓ Ideas 1-4 implemented
 - ✓ Idea 5 tested summer 2018, trialed summer 2019
 - ✓ Idea 6 trial to begin February 2020
- ✓ Publish standard noise reports – Development of Noise Reports underway
- ✓ New noise management website – Development of InsightFull Web-Portal underway

Community Engagement



Community Open Houses

In 2019, the GTAA hosted 10 Open Houses across the GTAA, which were attended by almost 400 residents.

During the Open Houses, residents can drop by and learn more about how the airport works, and discover how Toronto Pearson is planning today to continue connecting the region to opportunity tomorrow. Additional Open Houses will be scheduled in 2020. Stay tuned to visit torontopearson.com/en/community/get-involved/open-houses.

Noise Management Forums – Upcoming Meetings

Stay tuned to torontopearson.com/en/community/noise-management/noise-forums for Noise Management Forum meeting dates for 2020. Presentations, summaries and other relevant information from each of the Noise Forums is also available on this webpage.

Pearson Street Team

Toronto Pearson believes it's important to be a good neighbour and work with the community. Toronto Pearson's Summer Street Team attends community events all summer long to share information about how the airport operates and build relationships with surrounding communities.

In 2019, the team participated in over 65 community events and met nearly 6,000 of Toronto Pearson's neighbours.

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