

Minister of Transport



Ministre des Transports

Ottawa, Canada K1A 0N5

The Honourable Judy Sgro, P.C., M.P.
Chair
Standing Committee on Transport, Infrastructure and Communities
House of Commons
Ottawa ON K1A 0A6

Dear Colleague:

On behalf of the Government of Canada, I would like to thank the members of the Standing Committee on Transport, Infrastructure and Communities for its work in developing the report entitled “Assessing the Impact of Aircraft Noise in the Vicinity of Major Canadian Airports” and tabled in the House of Commons on March 19, 2019.

The Government commends the members of the Committee, and the witnesses who appeared before it, for their insight and commitment toward improving aircraft noise management in Canada.

It is important to recognize that aviation noise management is a shared responsibility. Transport Canada fulfills a regulatory role and manages a framework within which private entities operate. Ultimately, a balanced approach to aviation noise management requires collaboration among different levels of government as well as the air industry itself. This collaboration has deepened in recent years and continues to improve, but this does not mean we cannot strive for further progress.

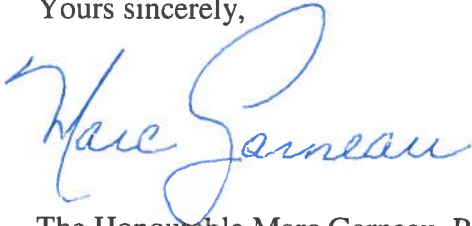
As rightfully noted in your report, in Canada we are guided by the International Civil Aviation Organization’s Balanced Approach to aircraft noise management. As a result, Canada will continue to approach noise management through the themes of reduction of noise at the source, land-use planning and management, noise abatement operational procedures, and operating restrictions.

The Government supports many of the Report’s recommendations, at least in principle, and will continue to engage various stakeholders to support a balanced approach to aviation noise management.

Canada

Please find enclosed detailed responses to your committee's recommendations as well as some background information on the National Airport System and Airport Authorities to provide context.

Yours sincerely,

A handwritten signature in blue ink that reads "Marc Garneau". The signature is fluid and cursive, with the first name "Marc" and last name "Garneau" clearly legible.

The Honourable Marc Garneau, P.C., M.P.
Minister of Transport

Enclosures

**DETAILED RESPONSES TO RECOMMENDATIONS CONTAINED IN THE TRAN COMMITTEE
REPORT**

Detailed comments on each recommendation are provided below and organized into four themes aimed to bring together similar recommendations.

Operational Oversight Mitigations

Recommendation 1 (industry consideration of noise impacts), 4 (use of continuous descent operations), 13 (international aircraft oversight), 15 (reducing noise at the source) and 16 (land-use planning) largely refer to operational oversight components of noise management. Many actions or elements of noise management referenced are currently underway or already in use. Transport Canada will continue to support noise management activities already underway and will continue encouraging the air industry to work with communities to identify and implement effective noise mitigation practices best suited to the local context.

Recommendation 1 (industry consideration of noise impacts)

The Government agrees that noise impacts are an important consideration for NAV CANADA, airport operators, and airlines. Industry members have already proven an ability to give due attention to noise impacts. A good example is the wide adoption of the *Airspace Change Communication and Consultation Protocol*, which was established in June 2015 by industry stakeholders under Transport Canada encouragement.

Canada's major air carriers continue to invest in new, quieter technology. NAV CANADA's primary concern is safety, but they routinely include noise impacts as part of their operational analysis and regularly work with airport operators to understand and mitigate noise impacts. NAV CANADA often uses noise modeling to better understand the impacts of changes and makes adjustments to designs where possible to reduce the number of people exposed to aircraft noise.

Airport operators have varying noise impact issues to manage depending upon their configuration and location. All airport authorities in the National Airport System are required to have noise management committees as part of their ground lease with Transport Canada. Ongoing dialogue with surrounding communities helps to improve transparency and accountability. Airport operators have an important engagement role given their local orientation and the local nature of noise impacts.

Transport Canada expects that members of the Canadian air industry will continue to pursue practical measures to mitigate noise impacts whenever possible. The Government will continue to encourage collaboration among industry stakeholders and the inclusion of noise impacts within industry decision making.

Recommendation 4 (use of continuous descent operations)

The Canadian Aviation Regulations include criteria regarding Continuous Descent Approaches (CDAs) that aim to ensure safety. CDAs provide opportunities for noise reduction during the landing phase by removing level flight segments during the approach. Level segments require the application of engine thrust and the use of flaps which produce noise, by reducing level flight segments, CDAs result in a lesser noise profile for arriving aircraft.

The development of CDAs are an operational matter for NAV CANADA to manage accordingly in consultation with the airlines and airports. NAV CANADA is already actively pursuing opportunities to deploy procedures that enable continuous descent approaches. Performance-Based Navigation (PBN), which relies on satellite positioning and modern flight management systems, provides the opportunity to reduce the industry's environmental footprint in terms of both noise and greenhouse gas emissions by increasing the use of CDAs. Transport Canada's PBN operations plan provides impetus for further deployment. Ultimately, given the positive benefits for both fuel burn and noise impacts, the use of CDAs is expected to continue expanding as new technologies are fully utilized.

Recommendation 13 (international aircraft oversight)

There is no differential treatment between foreign and domestic aircraft in Canadian airspace. All aircraft operating in Canadian airspace are subject to the *Canadian Aviation Regulations (CARs)* which set the rules that govern civil aviation in Canada. As a result, foreign aircraft operating in Canadian airspace must respect all Canadian operational noise requirements. Canada follows International Civil Aviation Organization (ICAO) guidelines regarding aircraft types and their noise profile.

Treating foreign air carriers differently than domestic carriers would also be contrary to Article 15 of the *Chicago Convention* and could violate Air Transportation Agreements allowing for overflights, thus representing a breach of Canada's international obligations.

Recommendation 15 (reducing noise at the source)

As indicated by the ICAO Balanced Approach to aviation noise management, the primary noise mitigation strategy is the reduction of noise at the source. Over time, aircraft have become quieter (current aircraft are 75% quieter than in the 1960s), and it is important for airlines to continue investing in this new technology. As recently as December 31, 2017, a new noise standard applicable to new aircraft designs came into effect in Canada.

It is extremely rare for noise reducing equipment to become available once an aircraft has already entered service, and the circumstances surrounding such a situation could vary significantly. As a result, the Government believes that such situations are best dealt with on an *ad hoc* basis and would likely largely be managed through corporate social responsibility

activities.

As recognized in the Committee Report, the Airbus A320 offers a recent, although rare, example of how noise reducing equipment might be dealt with. In March 2018, following encouragement from the Minister of Transport, Air Canada committed to retrofitting their aircraft to address noise impacts, and Transport Canada continues to engage Air Canada regarding their progress. Some airport operators are also exploring fly quiet programs that could include higher fees for noisy aircraft, such as an A320 without the retrofit.

Recommendation 16 (land-use planning)

Land-use planning is highlighted in the ICAO Balanced Approach to aviation noise management as a key component of mitigating noise impacts. The Government recognizes the important role of land-use planning and has published guidance (*TP 1247: Land Use In The Vicinity of Aerodromes*) to support planners and legislators at all levels of government in becoming familiar with issues related to land use in the vicinity of aerodromes. This guidance, last updated in 2013/14, provides the concept of compatible land-use planning, including considerations of aircraft noise.

Airport operators and Transport Canada often offer guidance to local planning authorities concerning developments in the vicinity of airports, but ultimately local authorities are responsible for the developments that are approved, and in some cases they may choose to ignore advice given.

The Government will continue to update guidance as necessary and work with airport operators and local authorities to encourage compatible land uses in the vicinity of airports.

Noise Management Metrics and Standards

Recommendation 7 (updating noise metrics), 8 (data transparency), 9 (World Health Organization guidelines), and 12 (cooperation with Health Authorities) refer to the metrics and standards that are employed for aircraft noise management. Transport Canada has been working toward replacing its tool for producing noise contours in order to make Canadian practices more consistent with practices in other jurisdictions, provide more advanced analysis capabilities, and facilitate better assessment of studies that look into links between aircraft noise and health outcomes. In addition, Transport Canada and Health Canada have begun considering a way forward to update government guidance related to noise impacts and health. Transport Canada also recognizes that there is an opportunity to work with industry partners to explore ways that better synthesize and amalgamate the information available in order to achieve better data transparency and accessibility.

Recommendation 7 (updating noise metrics)

The noise metrics used in Canada to produce noise contours are the Effective Perceived Noise Level (EPNdB) and the Noise Exposure Forecast (NEF). The EPNdB is an instantaneous noise metric that continues to be the reference metric used for the noise certification of aircraft as outlined by ICAO. The NEF is based on the EPNdB and represents a cumulative exposure to noise over a 24-hour period. NEFs are developed by airport operators using methodology provided by Transport Canada. When new NEFs are produced by airport operators, Transport Canada often verifies that the methodology was used correctly.

Noise contours are used for a variety of purposes. In Canada, they are usually used for land-use planning purposes. They forecast noise 5 to 15+ years into the future and are thus infrequently produced.

There are many noise metrics used for different purposes, and they differ primarily on how they account for the spectrum of frequencies within a sound. The EPNdB is one of the more complex in this regard and, because of this complexity, it requires technology not easily adaptable to portable devices. It is the A-weighted noise metric (dBA) that has become the most recognizable and used metric for measuring noise within a community setting. The dBA accounts for the spectrum of frequencies within a sound in a manner which parallels that of the human ear, and the technology required to do this can be easily adapted to portable devices.

The dBA equivalent to the NEF as a metric representing a cumulative exposure to noise over a 24-hour period are the Day-Night Noise Level (Ldn) and the Day-Evening-Night Noise Level (Lden). Both the NEF and Ldn include a noise penalty for noise for aircraft movements during the nighttime period, whereas the Lden includes both a nighttime noise penalty and an additional, but smaller, penalty for noise from aircraft during the evening period.

Transport Canada does recognize that the computation tool to calculate NEF to produce contours requires some enhancements. Transport Canada also recognizes the confusion that can sometimes arise from the use of the EPNdB during the discussion on noise contours.

As a result, Transport Canada has been working towards replacing its tool to produce noise contours with a new dBA based equivalent. This would make Canadian practices more consistent with those in other jurisdictions, provide more advanced functionalities to allow for more analysis capabilities, and also facilitate assessment of studies that look into links between aviation noise and health outcomes, which are largely conducted using dBA based tools. Although today noise contours are primarily used for land-use planning, this may provide opportunities for noise contours to be used for other purposes to better manage expectations in the vicinity of airports. The Government will continue working towards this important update, but cautions that a change in computational tool does not impact the noise in the vicinity of airports; it is only a different way to describe it.

Recommendation 8 (data transparency)

As with many issues, data is a crucial component of understanding problems and developing solutions or mitigation measures. Much of the data pertaining to noise management, such as complaint statistics and operational information, is collected and held by air industry actors such as airport operators and NAV CANADA. For instance, major airports such as Toronto Pearson and Vancouver International have noise monitoring operations and offer WebTrak, an online tool that allows the community to see real-time and historical flight and noise data. NAV CANADA also engages in noise modeling activities to inform procedure design to reduce noise impacts and as a tool for transparent community engagement.

The Government does not currently directly collect or manage data related to noise management given its mostly local nature. As noted for Recommendation 7, the Government does provide the methodology for Noise Exposure Forecasts and is working towards an update of this tool. In addition, the Government will work with industry partners to explore ways that better synthesize and amalgamate the information available to achieve better data transparency and accessibility.

Recommendation 9 (World Health Organization guidelines)

The Government of Canada has published two documents related to aircraft noise. In 2001, Health Canada published a comprehensive review of the scientific literature related to aircraft noise and health in a document entitled: *"Noise from Civilian Aircraft in the Vicinity of Airports – Implications for Human Health. I: Noise, Stress and Cardiovascular Disease"*. In 2002, Health Canada and Transport Canada produced a plain-language document entitled: *"Aircraft Noise in the Vicinity of Airports"*. This latter document has periodically received minor updates, the last of which was completed in 2010. Discussions are underway on potential updates to the Government information on the health impacts of noise exposure, which could be applicable to aircraft noise.

Studies on aviation noise and health outcomes are on-going in many parts of the world. The body of knowledge continues to expand, and new scientific reviews from the World Health Organisation and ICAO have been recently produced. These types of studies focus on the potential effects of noise disturbance on a receiver. Mitigation is invariably associated with the reduction of noise exposure through reduction of the noise from the source or the acoustic protection of the receiver, which are separate from these types of studies.

As the federal Government moves forward with potential updates, it will consider engagement with other levels of government.

Recommendation 12 (cooperation with Health Authorities)

As noted for Recommendation 9, Transport Canada and Health Canada are considering the path forward on updating government guidance. This could include engagement with different levels of government.

Regarding the noise mitigation practices, two of the most effective ways to reduce the impacts of noise is to reduce noise at the source and land-use planning as recognized in the ICAO Balanced Approach to aviation noise management.

As recently as December 31, 2017, a new noise standard applicable to new aircraft designs came into effect in Canada; however, these new technologies can take years before the effects are shown at airports. Although aircraft produced today are 75% quieter than in the 1960s, the number of aircraft movements continues to increase. Aircraft today are much quieter, and will likely continue to become quieter with the advances of new technologies.

As noted previously, Transport Canada's "*Land Use In The Vicinity of Aerodromes*" document provides other levels of government with detailed land-use planning guidelines for their use to avoid further encroachment of land-uses incompatible with airport operations.

Studies related to aviation noise and health outcomes, or on the relationship between aviation noise and annoyance, are complex and resource intensive. As a result, there is limited Canadian content. The Government is currently scoping out potential directions and opportunities for updating government guidance.

Local Operational Considerations

Recommendation 3 (runway rotation), 5 (Implementation of Helios recommendations), 6 (Calgary Airport approaches), and 14 (night flight policies) regard areas that are highly context dependent or focus primarily on a local concern. Starting in the early 1990s, a series of decisions were made by the government to help improve the air transport system. One of those was to remove itself from the day-to-day operations of the air navigation system and airports. As a result, both NAV CANADA and many airport operators are independent corporations that are better positioned to act nimbly and engage with local considerations. The Government is confident that NAV CANADA and airport operators will continue working together with local communities to identify balanced operational practices.

Recommendation 3 (runway rotation)

The Government recognizes runway rotation can be a useful noise management tool, however, the viability of runway rotation is context dependent. Runway selection is, first and foremost, driven by safety considerations which requires accounting for factors such as weather conditions and the location of other air traffic. It is the Government's position that local stakeholders and airport operators are best placed to determine whether such an

approach would be useful in a given case, so long as safety is maintained at all times.

Local factors will always determine the feasibility of using runway rotation to manage noise impacts. For instance, some airport operators may have limited ability to rotate the use of runways given their existing runway configuration and capacity demands. Additionally, any runway rotation scheme would only be successful if it has measurable impacts and broad support of the local surrounding communities. Runway rotation can benefit communities very close to the airport but can also significantly increase operational complexity and, in some cases, may not be practicable. Currently, both Calgary International and Toronto Pearson have investigated and trialed runway rotation schemes.

Recommendation 5 (implementation of Helios recommendations)

Both the Greater Toronto Airports Authority (GTAA) and NAV CANADA have implemented many of the recommendations of the 2017 Helios studies, "Independent Toronto Airspace Noise Review" and "Best Practices in Noise Management". The establishment of an Industry Noise Management Board (INMB), the development of a controller-pilot code of practice and new procedures to enable CDAs - following a rigorous consultation process - have been delivered. In addition, new nighttime arrival procedures have been implemented to reduce the impacts of aircraft noise when lower traffic frequency provides for more flexibility in the sequencing of aircraft. The deployment of an Arrival Manager (AMAN) to improve operational predictability and sequencing which will support increased utilization of new procedures, is currently in early deployment. The GTAA launched new noise management forums in the beginning of 2019 and is developing options for a new fly quiet program. Remaining recommendations continue to be pursued as feasible.

Both the GTAA and NAV CANADA have worked together to communicate their progress regarding the reports at subsequent noise management meetings as well as on the GTAA's website. The Government continues to be encouraged by the activities of NAV CANADA and the GTAA in response to these reports.

Recommendation 6 (Calgary Airport approaches)

The Government understands the important impact flight path designs can have on local communities and is confident that NAV CANADA and airport operators will continue working together to identify balanced operational practices.

Transport Canada's role regarding flight paths is to ensure safety standards are met. The department does not dictate specific operations in specific locations and intervenes primarily for safety reasons. NAV CANADA is responsible for flight path designs, which, in addition to being driven by safety and design criteria, include consideration for factors such as efficiency, capacity, and noise impacts.

Recommendation 14 (night flight policies)

Like with runway rotation schemes, the best balance for night flight operations is driven primarily by the specific local context. The Government encourages airport operators to work with their local stakeholders to assess if any adjustments should be made to existing night flight policies and submit to Transport Canada as necessary any proposed changes to procedures or restrictions.

The ICAO Balanced Approach to aviation noise management, to which Canada adheres, indicates that operational restrictions should generally be utilised only when other noise mitigation strategies (reduction of noise at the source, land-use planning, and noise abatement procedures) are not available or are ineffective. For most airports, there is nothing that would either preclude or require specific night flight policies. This allows airport operators to work with local communities and other airport users to identify an appropriate approach to night flights that suits their specific context. Some airports already have published noise abatement procedures to limit the quantity or type of nighttime operations in accordance with their environment.

Stakeholder Engagement

Recommendation 2 (guidelines for noise management committees), 10 (collaboration with independent advisory bodies), and 11 (consideration of an aircraft noise ombudsperson) refer to the means local stakeholders have available to voice their concerns around aircraft noise management. Recognizing that noise issues are best managed at the local level, airport operators are best positioned as the focal point. Airport authorities are required to have noise management committees as a condition of the long term leases they have with Transport Canada. The exact composition and functioning of these committees can vary. As a result, there is an opportunity for Transport Canada to identify and communicate some best practices that could help to achieve robust public engagement more consistently across the larger airports. Additionally, improving existing committees is expected to be more effective than creating new bodies. Transport Canada recognizes the importance of having a public forum for discussions concerning noise management and is committed to working with partners to develop some best practices.

Recommendation 2 (guidelines for noise management committees)

The Government views airport noise management committees as a vital element of managing aircraft noise. These committees, which are currently a requirement of the Government's long term lease agreements with airport authorities, bring together stakeholders and the public to exchange information and ideas concerning local noise management. Airport authorities may have differing approaches to their noise management committees, but it is important that there is a consistent level of transparency and participation. The Government will work with airport authorities and other stakeholders to

identify and disseminate best practices for noise management committees in order to improve and harmonize the experience for engaged stakeholders and the public.

Regarding noise impacts stemming from operational changes, the Government is confident in the *Airspace Change Communications and Consultation Protocol* which was developed by industry stakeholders in 2015 under Transport Canada encouragement. In addition to affirming that specific aircraft noise issues are best understood and managed at the local level, the protocol works to ensure accountability and transparency while creating a clear set of expectations regarding airspace changes. Since its establishment, the protocol has resulted in improved public communications regarding airspace changes and noise impacts.

Recommendation 10 (collaboration with independent advisory bodies)

Ongoing collaboration takes place through the noise management committees that currently exist as required by the long term lease agreements that airport authorities have with the Government. As noted under Recommendation 2, the Government will work with airport authorities and other stakeholders to identify and disseminate best practices for noise management committees to improve and harmonize the experience for engaged stakeholders and the public.

Recommendation 11 (consideration of an aircraft noise ombudsperson)

The Government agrees that it is very important for citizens to have an effective avenue to raise concerns with airport operators and NAV CANADA. The Government believes, however, that this is already provided through the noise management committees at major Canadian airports. In addition, the *Airspace Change Communication and Consultation Protocol*, which has been widely adhered to, endorses the importance of engaging with local communities for feedback and provides clear guidelines regarding consultation related to airspace changes.

Aircraft noise is an issue that might not always be fully resolved, but it must be managed with transparency. The Government will continue working with and encouraging industry partners to pursue effective forms of engagement with their local communities.

AIRPORT AUTHORITIES BACKGROUND

National Airport Policy (NAP)

The impetus for the NAP in 1994 was a decision that the Government should divest itself of airports and focus on its role as the regulator of the air transport system. To that end, the NAP was primarily focused on the categorization of Transport Canada-owned and operated airports, and their transfer to other operators.

The NAP categorized airports primarily on their level of scheduled passenger traffic. 130 of the Transport Canada-owned airports have been transferred to other operators. 18 airports, the majority of which were classed as remote airports, remain owned and operated by Transport Canada.

The NAP states that, in most cases, airports are supposed to be financially self-sufficient and operated by a local interest of one form or another, to ensure that the needs of the local community are best served by the airport. This is in contrast to the previous model, where the system was centrally controlled, and most airports did not meet costs through revenues. It was intended that local control would avoid *ad hoc* decision making and better serve not only local communities, but also the national system as a whole. In addition, the requirement for complete or partial financial self-sufficiency moves costs from taxpayers to the user of the air transport system.

There are four categories of airports under the NAP of 1994. It focused on airports that were, at the time, owned and/or operated by Transport Canada. They are:

1. National Airports System Airports (NAS)
2. Regional and Local Airports
3. Small Airports
4. Arctic/Remote Airports

NAS Airports

NAS airports are the largest airports, representing 95% of passenger traffic in Canada. Federal ownership of the NAS airports was retained in recognition of these airports' "essential role in domestic prosperity and international competitiveness" (e.g., in federal, provincial or territorial capitals), and to allow the federal government to be able to guarantee the long-term viability of these airports. The rationale of the creation of the NAS was that the 200,000 annual passenger threshold for the NAS sites represented a sufficiently large customer base for an airport to pursue full financial self-sufficiency.

The majority of the NAS airports were transferred to airport authorities. Airport authorities are private, not-for-profit, non-share capital corporations that lease their airports from the federal government. Airport authorities are governed by boards of representatives nominated by local, provincial and federal governments, as well as by local business groups and other stakeholders. NAS airports operate in accordance with principles of governance and public accountability enshrined their leases. With the transfer came all responsibility for operating the airport. Airport authorities operate the primary airports in Victoria, Vancouver, Prince George, Calgary,

Edmonton, Saskatoon, Regina, Winnipeg, Thunder Bay, London, Toronto (Toronto Pearson), Ottawa, Montreal (Mirabel and Trudeau), Quebec City, Fredericton, Saint John, Moncton, Charlottetown, Halifax, Gander, and St. John's.

Four NAS airports are not operated by airport authorities. The three airports in the Territorial Capitals were transferred to the Territorial Governments, and are now owned and operated directly by them. In addition, the airport in Kelowna is, and has been since 1959, owned in majority by the Government and in part by the municipality. Under unique terms which predated the NAP and NAS, the City of Kelowna leases the federally-owned portion of the Kelowna airport lands under a long-term lease but, unlike the airport authorities, the municipality pays only nominal rent. The Territorial and Kelowna airports are not subject to the *Airport Transfer (Miscellaneous Matters) Act*, the Public Accountability Principles, or any other provisions outside the standard safety and security regulation that applies to any airport or aerodrome.

Non-NAS Airports

Regional and Local Airports are the next tier in the NAP. These airports had to have scheduled traffic, but with fewer than 200,000 passengers per year. The majority of regional and local airports were transferred to the municipality they serve. There are 68 Regional and Local Airports.

Small airports are those that do not have scheduled passenger service. They are primarily used for recreational flying. Small airports were also transferred to local interests. There are 31 small airports under the NAP.

Arctic airports were transferred to the relevant Territorial Governments. Remote airports are those that represent the only reliable year round access to the community. Of the 13 remote airports in the NAP, 10 remain owned by Transport Canada.

The Small and Regional and Local airports were mostly transferred, for nominal consideration, to the relevant municipalities. Contribution agreements were agreed based on funding for a five year period (1995-2000), with the amount being reduced every year following 1995 to reflect the cost to Transport Canada of operating the airport (i.e., if the airport was transferred in 1995, the new operator received five years of funding; if transferred in 1998, the new operator received two years of funding). For airports transferred after 2000, this funding option was not available. In some cases special capital funding was also provided, but this was on a case-by-case basis.

The Small airports, as well as Regional and Local airports, were transferred subject to an operating agreement that required that the new owner continuously operate the airport, and maintain the Airport Certificate. This was to ensure that the new owner did not sell the airport for other purposes following transfer. In most cases, the term of the agreement was 10 years; however, in some cases, particularly where land was more valuable, the terms were significantly longer. The agreements also contained a provision that enable the government to purchase the airport if the owner determined it could no longer operate the airport. This

provision lasted for the term of the agreement, and required six months' notice to the government.

Airport Authorities Listed

For the purposes of any federal action or description, an 'airport authority' is a corporation designated by the Governor in Council pursuant to section 2 of the *Airport Transfer (Miscellaneous Matters) Act*, and which leases its primary airport from the federal government. There are 21 airport authorities (list below). Any other entity that runs an airport is an 'airport operator', regardless of what name they have given themselves.

Montreal

Quebec City

Calgary

Charlottetown

Edmonton

Fredericton

Gander

London

Moncton

Toronto (Pearson)

Halifax

Ottawa

Prince George

Regina

Saskatoon

Saint John

St. John's

Thunder Bay

Victoria

Vancouver

Winnipeg