Study of Ontario's Airports and Aerodromes

Final Report | June 7, 2022

Foreword

The Study of Ontario's Airports and Aerodromes was made possible through the financial support and leadership of the Airport Management Council of Ontario (AMCO). AMCO's President, Chris Wood; Vice President, Terry Bos; Chief Executive Officer, Laura McNeice; and Manager of Airport Affairs, Natalia Boudinov provided essential support in steering the direction of the project. The contributions of airport operators that provided valuable inputs through the survey outreach process was foundational to the analysis and recommendations provided herein. This Study was prepared by HM Aero Aviation Consulting.

Executive Summary

Introduction

The vibrancy of Ontario's aviation sector is supported by a network of approximately 200 publicly registered airports and aerodromes located throughout the province. Airports and aerodromes ("airports") are the facilities that enable the social and economic benefits of the aviation sector to be realized on a local or regional scale. The Airport Management Council of Ontario is the leading advocate for the airport industry in Ontario and in 2021 commissioned the Study of Ontario's Airports and Aerodromes with the following objectives:

1. Provide a primer on the network of airports located throughout Ontario;
2. Clearly articulate the quantitative and qualitative economic and social benefits of Ontario's airports;
3. Review past studies that have been completed regarding the priorities of these facilities;
4. Examine the external environment and contextual forces that are currently affecting airports in Ontario; and
5. Analyze the degree to which existing funding programs address the requirements of airports in Ontario and identify unmet needs that must be addressed to ensure long-term viability.

To support the research process, a survey was completed by 42 airport operators throughout Ontario. This sample of airports included 21 facilities in northern Ontario and 21 facilities in southern Ontario. Airport respondents were further divided according to their primary role into one of five categories: Community (16); National Airports System (NAS) (2); Northern & Remote (7); Regional Non-Passenger (4); and Regional Passenger (13).

Ontario's Airports, Federal / Provincial Context, and Previous Studies

Based on data published by the Government of Ontario, there are 213 publicly listed airports in Ontario, excluding heliports, seaplane bases, and private aerodromes not included in the Canada Flight Supplement. While a significant proportion of these facilities are concentrated in southern Ontario in proximity to major population centres, the network of airports spans the geographic extents of the province, from the Manitoba border to the west, Hudson's Bay to the north, Quebec border to the east, and United States border to the south. Among the survey respondents, 69% of airports incurred operating deficits on an annual basis prior to the COVID-19 pandemic, while 31% realized operating surpluses. Only 5% of respondent airports identified that they were fully financially viable prior to the pandemic, with 95% of respondents requiring operating and / or capital financial support in a typical year. 57% of respondents are certified airports that are subject to more significant regulatory standards to support scheduled passenger air services and / or due to the proximity to built-up areas.

Aviation is within the core jurisdiction of the federal level of government and is subject to the oversight of Transport Canada. Currently, Transport Canada's three primary roles with respect to Ontario's airports are to serve as the owner and landlord of four NAS facilities, to act as the regulator, and to provide funding for select projects. The 1994 National Airports Policy resulted in the federal government significantly reducing its role in owning and operating airports, with 25 airports in Ontario divested. Transport Canada has also increasingly relied on self-regulation by airport operators to ensure that these facilities meet their certified obligations.

The provincial government owns and operates 29 airports in northern Ontario that provide essential year-round access to remote First Nations communities. The Government of Ontario also levies a $0.067 per litre tax on aviation fuel ($0.027 per litre in northern Ontario) – however, a mechanism does not exist for these revenues to be reinvested in the aviation sector. In 2005, provincial revenues from the aviation fuel tax were $58.5M. Through the Provincial Policy Statement and numerous regional transportation planning documents, the importance of Ontario's airports has repeatedly been affirmed by the provincial government on account of their economic and social importance. However, this stated importance has not been met with a permanent source of airport funding.

The subject of this report has been studied on a number of occasions both nationally and provincially. Three studies have been completed at the national level, namely the Study of the Viability of Smaller Canadian Airports (2002), Regional and Small Airports Study (2004), and the Report of the Air Issues Task Force on Small Airport Viability (2006). Two studies have been completed focusing on priorities specific to Ontario: the Study of Municipal Airports in Ontario (2006) and Ontario Municipal Airports Data Collection Study (2011). Finally, the Government of Ontario commissioned a research project in 2021 regarding municipal airports, the results of which have not yet been released. Common themes from these past studies include the observed challenges regarding the financial viability of regional and community airports, the need for external capital funding, and the affirmation of the economic and social value of Ontario's airports.

Economic Value and Benefits

Ontario's airports are unique economic assets that serve as direct sources of on-site employment and business activity; enablers that assist the efficient and effective functioning of other business sectors; and as connectivity hubs supporting the flow of passengers and cargo. Examples of the economic dimensions of Ontario's airports include:

- **Passenger Air Services:** The movement of passengers by air for business and leisure purposes is a key element of Ontario's economy. Air transportation allows Ontarian businesses to operate and compete nationally and globally while providing access for external business development and tourism. Among the survey respondent airports, 38% support scheduled services, and an additional 30% support other forms of passenger transportation – in 2019, these airports supported the movement of 5,615,000 passengers at an increasing rate of 2.1% per year between 2016 and 2019.
- **Cargo Air Services:** Access to air cargo is of critical importance to the economy of Ontario, providing businesses with access to national and global markets and facilitating the transportation of necessary goods to northern & remote communities. The transportation of a cumulative total of 15,585,000 kg of air cargo was facilitated at 25 survey respondent airports in 2019.
- **Corporate Aviation:** Corporate aviation is important to the efficient operation of businesses and organizations and is regularly used in Ontario. All airport types surveyed support corporate aviation operations in a typical year, with approximately two thirds (64%) supporting corporate activity frequently on an annual basis.
- **Other Commercial Operators:** Flights in the other commercial category encompass services such as flight training, agricultural application, surveying, and aerial photography. Companies in this category provided specialized services to their customers, with 64% of survey respondents frequently supporting such operations on an annual basis.

- **On-Site Employment:** Airport operators and businesses based at Ontario's airports are important sources of employment. Among the 41 airport operators that submitted employment data, a cumulative total of 613 Full-Time Equivalent positions were supported, or an average of 15 positions per airport. When accounting for employees of businesses based at each airport, a total of 5,706 Full-Time Equivalent positions are based at 35 respondent airports, or an average of 163 per airport.
- **Economic Impact Estimates:** Through studies prepared to examine the direct, indirect, and induced economic impacts of individual airports, estimates of labour incomes and Gross Domestic Product contributions can be made. Parry Sound Municipal Airport, in the Community airport category, contributes an estimated total of $6,700,000 in labour earnings and $9,800,000 in Gross Domestic Product to the regional economy. Larger Regional Passenger and Regional Non-Passenger facilities such as North Bay, Peterborough, and Sault Ste. Marie generate total labour incomes of between $23,954,000 and $51,100,000 annually and add between $39,300,000 and $74,000,000 to the regional Gross Domestic Product.

Social Value and Benefits

The social value of Ontario's airports is expressed in terms of their benefits in supporting air services and other activities that enhance the quality of life of the province's residents and contribute to the functioning of essential public services. Examples of the dimensions of the social value of Ontario's airports include:

- **Air Ambulance Operations:** Ontario's airports and aerodromes are permanent bases of operations for Ornge's aviation assets and support interfacility patient transfers, organ and tissue transportation flights, and healthcare system capacity redistribution missions. 76% of surveyed airports and aerodromes frequently support air ambulance missions, while an additional 17% occasionally support such activities, and during the COVID-19 pandemic, 29% of surveyed airports and aerodromes accepted increased levels of air ambulance missions.
- **Search and Rescue:** Aviation assets are used by the Royal Canadian Air Force, Ontario Provincial Police, Canadian Coast Guard, Civil Air Search and Rescue Association, and other organizations to support search and rescue activities. Airports throughout Ontario are used as permanent search and rescue bases and to support mid-mission refuelling and operations, improving the ability of involved organizations to operate effectively near areas of interest.
- **Wildfire Suppression:** Aerial assets are a key element of the provincial approach to wildfire detection and management and contribute to the minimization of losses to life, property, and the natural environment. Ontario's airports support permanent and temporary wildfire suppression bases and assist in aerial evacuations of wildfire-threatened communities. Over 80% of airports in northern Ontario frequently or occasionally support wildfire suppression operations in a typical year, and wildfire frequency and intensity are expected to increase as a result of climate change in the future.
- **Law Enforcement:** Aerial assets are used by select local police forces, the Ontario Provincial Police, and Royal Canadian Mounted Police in support of law enforcement activities. 67% of respondent airports frequently or occasionally support law enforcement operations in a typical year.
- **Emergency Management:** Airports are key assets in supporting significant emergency response efforts and can serve as transportation and evacuation centres and bases for response operations. While significant emergencies are unpredictable, Ontario's airports and aerodromes are continually maintained and available to support response efforts when required. 50% of respondent airports in northern Ontario support emergency response activities in a typical year.

- **COVID-19 Pandemic Response:** Ontario's airports have served, and continue to serve, vital roles during the COVID-19 pandemic. Among surveyed airports, 26% participated in vaccination efforts, 31% supported the transportation of medical supplies, and 40% facilitated the movement of medical personnel.
- **Youth and Early Career Professional Development:** The development of new talent is imperative to ensure the vitality of the aviation and aerospace sector. Ontario's airports actively participate in introducing youth to the opportunities of the aviation sector, with approximately three quarters of respondent airports providing tours. Airport operators are also important sources of employment for early career aviation professionals, providing the first opportunity for entry into the sector.

External Environment

The external environment of Ontario's airports includes contextual forces that influence their activity levels, business environments, and financial performance. Four of the most significant forces that have and continue to affect Ontario's airports include the COVID-19 pandemic; regulatory changes at the federal level; municipal financial pressures; and decreasing public and political will.

Ontario's airports have weathered the COVID-19 pandemic and largely remained available for aviation operations throughout its duration. Activity decreased significantly at airports throughout Ontario – among the survey respondents, aircraft movements and passenger activity decreased by 30% and 81%, respectively, in 2020. Through the reduction of activity-based revenues, 68% of respondent airports experienced a worsened financial position because of the pandemic. Among the airports that suffered a decline in their performance, the average negative financial impact was $653,000. To reduce operating expenses, airports have had to implement measures that include staffing changes (temporary and permanent layoffs and hiring deferrals), reductions to airport service levels, and the deferral and cancellation of capital projects. Focussing on capital projects specifically, while these measures were essential to ensure the continued availability of Ontario's airports despite the decrease in revenues, asset lifecycle maintenance (i.e., rehabilitation and reconstruction) projects continue to be essential in ensuring the operational viability of the province's airports and aerodromes. Although the deferral of such projects has provided temporary financial reprieve to operators, their need will increase in the future as these assets continue to degrade.

Regulatory changes were repeatedly cited by airport operators as being an external challenge, as increased obligations are imposed by Transport Canada without accompanying financial support. In recent years, examples of increased regulatory requirements have included the mandating of Safety Management Systems in 2008/2009, the implementation of TP312 – Aerodrome Standards and Recommended Practices (5th Edition) in 2015, the Runway End Safety Area mandate in 2021/2022, the airfield Global Reporting Format in 2021, new hours of operation requirements in 2021, and revised Instrument Flight Procedure attestation requirements for registered aerodromes. With each new regulatory standard imposed, operators are responsible for evaluating implications for their airport and, where required, implementing the operating and / or capital actions required to ensure compliance at their own cost.

Municipal governments are extensively involved in the ownership and operation of Ontario's airports – among the airport survey respondents, 81% are owned by one or more municipality. Municipal governments are responsible for an extensive range of core public services (e.g., roadways, water and sewer infrastructure, recreation, emergency services, etc.) that may be of equal or greater importance to their airport. Municipalities are limited in their ability to alter their fiscal policies as they only have the powers that are conferred to them through the Municipal Act and face community-wide challenges in the maintenance and upkeep of their core assets. The Financial Accountability Office of Ontario in 2021, for example, estimated that the current provincial municipal infrastructure backlog is between $45B and $59B. These dynamics further challenge the degree to which municipal governments can prioritize their airports, and in recent years has resulted in communities divesting their airports to private interests. This issue is compounded by changing public and political will at the local level, which introduces uncertainty to airport priorities and funding.

Funding Requirements and Priorities

Airports are required to maintain a wide-ranging series of infrastructure assets to support aircraft operations. The degradation of infrastructure threatens the future of Ontario's airports. As with other assets, such as highways and roads, upkeep and renewal are required to ensure their proper functioning and to enable the continued realization of economic and social benefits. Community airport respondents generally provided lower infrastructure condition ratings versus other categories of airports. Depending on the category of infrastructure being considered, between 13% and 40% of Community respondents identified that their assets are in poor or very poor condition. Similarly, close to half (43%) or Northern & Remote respondents identified that their airfield lighting systems and primary runways are in poor or very poor condition – both asset classes are essential to continued operations. The infrastructure challenges experienced at Community and Northern & Remote airports can be attributed to factors that include their ineligibility for federal Airports Capital Assistance Program (ACAP) funding and limited ability to internally fund renewal projects.

Despite being ineligible for ongoing capital funding through ACAP, Regional Non-Passenger respondents generally reported the condition of their assets as being fair or better. Regional Passenger airports generally had favourable (fair to very good) asset condition ratings, with the notable exceptions of secondary runways that are subject to a lower prioritization through ACAP. Most of the surveyed Regional Passenger airports benefit from ongoing access to ACAP funding and 60% of respondents in this category realized pre-pandemic operating surpluses that could be reinvested into capital projects.

Between 2022 and 2025, a combined total of approximately $224,331,000 in capital rehabilitation, reconstruction, and replacement projects is planned at 34 of the survey respondent airports, or approximately $56,083,000 in annual projects. Regional Passenger respondents identified an average of $9,175,000 in capital projects as being required, with Regional Non-Passenger facilities averaging $5,365,000 per airport. Community and Northern & Remote airports have comparable levels of anticipated capital requirements, averaging $2,643,000 and $1,912,000 per respondent airport. Between 2026 and 2030, the estimated total for the 34 airports increases to $247,382,000 in planned capital projects, or an annual average of $49,476,000.

The financially intensive nature of airport capital projects is indicative of the challenges faced by operators in advancing these essential priorities without seeking external financial support. Further, the high costs per project limit the coverage that grant funding programs can provide – $38,000,000 in annual funding is budgeted for ACAP by the federal government. Using primary runway projects at Regional Passenger respondent airports as an example, the average cost of $5,390,000 per airport between 2022 and 2025 can also be expected to be incurred at other ACAP eligible airports nationally – accordingly, the finite amount of ACAP funding can only be distributed to a limited number of airport projects nationwide each year, and many of AMCO's member airports are ineligible for ACAP funding.

Based on the planned funding data submitted by airport survey respondents, ACAP eligible airports rely heavily on this program as the primary source of external funding intended to be used for their next planned primary runway, taxiway, apron, airfield lighting, and maintenance equipment project. Given increasing capital project costs, no sustained budget increases in over 20 years, and competition for funding across approximately 200 airports nationwide, ACAP is increasingly oversubscribed.

Airports ineligible for ACAP funding are more reliant on funding from their respective municipalities, as well as grants offered at the provincial and federal levels. Community, Northern & Remote, and Regional Non-Passenger respondent airports are especially impacted by the limited funding supports available to them – 50% of Community and Regional Non-Passenger respondents and 43% of Northern & Remote respondents could not identify how they intend to fund their next primary runway project, despite the need identified for such projects at airports in these categories.

Through the outreach survey, respondents were asked to identify whether accessing required capital funding resulted in a delay in the planned implementation of their most recent rehabilitation, reconstruction, or replacement projects. Capital project delays are of particular importance; implementing appropriately timed capital projects allows for a cost-effective rehabilitation strategy, such as a simple milling and paving operation to renew the pavement structure. As assets degrade further, the level of effort and cost in returning these assets to their pre-degradation condition increases – over time, a full-depth reconstruction may be required, for example. Among ACAP ineligible airports, recapitalization projects for assets of key importance frequently incurred delays exceeding 5 years, such as primary runways (33% of respondents), taxiways (40%), aprons (42%), and lighting systems (36%). While ACAP eligible airports have access to an ongoing source of federal funding for assets used to support scheduled passenger services, these facilities also commonly experience project delays exceeding 5 years due to funding challenges. Most notably, 80% of respondent airports identified delays exceeding 5 years for secondary runway projects, 43% for taxiway projects, and 29% for apron projects.

Cross-Jurisdictional Funding Review

A review was completed of 14 temporary and permanent federal and provincial airport-specific funding programs. Given the unavailability of airport funding programs at the provincial level, Ontario's airports are reliant on federal level funding support. ACAP is the only capital funding program that has been consistently offered by the federal government prior to the COVID-19 pandemic and is expected to return to being the only program after pandemic-related supports are closed. While ACAP is an important source of funding for regional airports, its annual funding allotment of $38M has been unchanged in over 20 years and approximately 200 eligible airports nationwide compete for this limited total. The competition for ACAP funding is further challenged by increasing capital project costs over time without a commensurate increase in the program's budget.

Through the Regional Air Transportation Initiative (RATI) and Airport Critical Infrastructure Program (ACIP), the federal government provided capital funding support on a one-time basis to a wide range of airport types. With RATI, the focus on anticipated project outcomes as opposed to definitive eligibility criteria has assisted in broadening the degree to which airports without scheduled passenger air services could participate. ACIP provides targeted support to ensure that capital projects at larger airports not eligible for ACAP can proceed.

At the provincial level, seven of the ten provinces have introduced one-time or recurrent financial support programs in recent years, with Ontario, New Brunswick, and Prince Edward Island being the exceptions. Recurrent capital support is currently provided by British Columbia, Alberta, and Saskatchewan; recurrent operational support is provided by Manitoba; and Quebec will return to providing an ongoing support program in the near future. In each of these jurisdictions, eligible facilities include airports without scheduled service that cannot benefit from ACAP and / or ACAP eligible airports where the proposed project is not funded through this federal program. Three provinces (British Columbia, Nova Scotia, and Newfoundland & Labrador) have also announced one-time funding programs to provide pandemic-specific relief.

Conclusions

Building on the analysis articulated through the Study, the following conclusions are made in terms of the importance of Ontario's airports and their funding challenges:

- Ontario's airports are economic assets within the communities and regions they serve as they support scheduled and charter passenger air services; air cargo; corporate aviation; and other commercial operations such as aerial surveying and flight training. In addition to the direct benefits of on-airport employment and activities, indirect and induced economic benefits are experienced;
- Airports of all sizes and types are critical to ensuring the continued provision of essential air services, including air ambulance operations, search and rescue, wildfire suppression, law enforcement, emergency management, and youth and early career development;
- Prior to the COVID-19 pandemic, 69% of respondent airports incurred an operating deficit while 31% realized an operating surplus. Only 5% of respondent airports indicated that they are fully financially viable, without the need for operating and capital funding support;
- The COVID-19 pandemic negatively impacted the financial performance of 68% of respondent airports and accentuated pre-existing challenges such as increasing regulatory obligations, variable public and political will, and the limited financial capacity of municipal airport owners;
- Capital rehabilitation, reconstruction, and replacement projects are essential to ensuring the continued availability of essential airfield and supporting infrastructure. Between 2022 and 2025, a combined total of approximately $224M in capital projects is planned by 34 airports, including $53M planned by 22 Community, Northern & Remote, and Regional Non-Passenger facilities that have less access to ongoing capital support programs;
- The unavailability of capital funding in Ontario is a challenge acutely experienced by airports that do not support scheduled passenger air services and therefore cannot benefit from ACAP support. These facilities provide other economic and social benefits to their communities through their support of commercial and public air services. 50% and 43% of Community and Northern & Remote airport respondents, respectively, are unable to identify a funding source for their next primary runway improvement project
- Given increasing capital project costs, no sustained budget increases in over 20 years, and competition for funding across approximately 200 airports nationwide, ACAP is increasingly oversubscribed;
- The degradation of infrastructure threatens the future of Ontario's airports; and
- Although provincial land use and transportation plans and policies have repeatedly affirmed the economic and social importance of Ontario's airports, no dedicated financial support is available to address the capital needs of these facilities since the cessation of the Municipal Airports Program in 1997-1998. In contrast, seven of the ten provinces have introduced financial support programs in recent years, except for Ontario, New Brunswick, and Prince Edward Island.

Recommendations

Through regional transportation plans prepared by the Government of Ontario and considering the information and analysis presented within this study, the social and economic importance of the province's airports has been recognized and affirmed. It is recommended that the Government of Ontario take on an increased leadership role in championing the provincial airport network by:

Recommendation #1 – Ontario Airport Capital Funding Program

It is recommended that the Government of Ontario implement a provincial funding program that addresses identified gaps in ACAP through three key priorities: 1) the rehabilitation and reconstruction of existing airside assets and supporting aeronautical infrastructure; 2) the procurement of replacement mobile equipment for maintenance and firefighting; and 3) initiatives to improve energy efficiency and / or decrease greenhouse gas emissions.

Eligible applicants for this program are recommended to include publicly available airports without scheduled passenger air services and publicly available airports that support scheduled passenger air services to a predetermined maximum passenger throughput level. It is recommended that project funding requests be evaluated on the basis of the social and economic benefits supported by the applicant airport.

Funding for a provincial airport capital funding program could be provided through the full or partial allocation of the provincial aviation fuel tax, reinvesting the revenues generated through the functioning of Ontario's aviation sector into the facilities that are integral to the viability of this industry.

Recommendation #2 – Restoration of Ontario Air Advisory Panel

The restoration of the Ontario Air Advisory Panel is recommended concurrent with the implementation of Recommendation #1. The intent of the panel would be to advise the MTO and Province of Ontario on issues and matters of importance to airport operators and to ensure that airports are kept aware of developments at the provincial level that may be of importance. Membership in the Air Advisory Panel could include representatives from the airport sector, municipalities, key aircraft operators, and the Government of Ontario.

At the federal level, the following recommendations are made to the Government of Canada for targeted supports to ensure the continued availability and safety of the country's airports:

Recommendation #3 – Airports Capital Assistance Program Budget Increase

This Study reaffirms the positions of industry associations across the country calling for a permanent increase in the annual budget of ACAP. ACAP is an essential program that has enabled critical safety-related capital projects to be completed at Ontario's regional airports that support scheduled passenger air services. As ACAP provides support to airports nationally, it is recommended that Transport Canada engages with industry stakeholders across the country to identify an appropriate revised funding allocation that more appropriately addresses the needs and costs associated with implementing safety-related projects in the 2020s.

Recommendation #4 – Regional Air Transportation Initiative Renewal

The RATI program has served as a unique opportunity for airports negatively impacted by the COVID-19 pandemic to pursue initiatives to restore regional connectivity. Although indications of recovery in the aviation sector are becoming evident in 2022, surveyed airports that experienced service decreases during the pandemic highlighted the continued need for support to assist air carriers in restoring operations. As the projects funded through the initial two-year term of RATI are implemented and evaluated for the degree to which they have achieved their expected outcomes, it is recommended that consideration be given to the renewal of the RATI program for additional terms if a clearly defined need is identified.

Table of Contents

Glossary of Acronyms

ACAP	Airports Capital Assistance Program	**MTO**	Ontario Ministry of Transportation
ACIP	Airport Critical Infrastructure Program	**NAP**	National Airports Policy
AMCO	Airport Management Council of Ontario	**NAS**	National Airports System
ARF	Airport Relief Fund	**NDMNRF**	Ministry of Northern Development, Mines, Natural Resources and Forestry
BCAAP	British Columbia Air Access Program	**OPP**	Ontario Provincial Police
CAP	Community Airport Program	**PADAR**	Assistance Program for Regional Air Services
CAPP	Community Airport Partnership Program	**PAQIAR**	Quebec Assistance Program for Regional Airport Infrastructure
CASARA	Civil Air Search and Rescue Association	**PETMAF**	Marine, Air and Rail Transportation Efficiency Improvement Assistance Program
CATSA	Canadian Air Transport Security Authority	**RATI**	Regional Air Transportation Initiative
CBSA	Canada Border Services Agency	**RCAC**	Regional Community Airports of Canada
CCAA	Canadian Council for Aviation & Aerospace	**RCAF**	Royal Canadian Air Force
CCG	Canadian Coast Guard	**RCMP**	Royal Canadian Mounted Police
FAA	Federal Aviation Administration	**RNTO**	Remote Northern Transportation Office
FTE	Full-Time Equivalent	**SAR**	Search and Rescue
GDP	Gross Domestic Product	**SMS**	Safety Management System
GGH	Greater Golden Horseshoe	**VFR**	Visual Flight Rules
MAAP	Manitoba Airport Assistance Program		

1 INTRODUCTION

1.1 Background

The vibrancy of Ontario's aviation sector is supported by a network of approximately 200 publicly registered airports and aerodromes located throughout the province. Airports and aerodromes, which are referred to throughout this report as "airports", are the facilities that enable the social and economic benefits of the aviation sector to be experienced on a local and regional scale. Recognizing the importance of this network of airports, the Airport Management Council of Ontario (AMCO) was formed in 1985 with the vision to:

> *"…lead Ontario's airports and aerodromes to be the safest and most efficient in the world."*

Among the objectives of AMCO is to be the leading advocate for the airport industry in Ontario. AMCO's aims are to represent the interests of the owners and / or operators of airports in Ontario and to promote the safe and efficient operation of these facilities.

1.2 Objectives

AMCO is uniquely attuned to the priorities of its members and emergent trends that have the potential to impact the strength of the sector. In 2021, AMCO's Board of Directors acted on the concerns being articulated by its members regarding the financial supports available to airports in Ontario by commissioning the following study with the assistance of HM Aero Aviation Consulting ("HM Aero"). The Study of Ontario's Airports and Aerodromes (the "Study") has been prepared to address the following objectives:

1. Provide a primer on the network of airports located throughout Ontario;
2. Clearly articulate the quantitative and qualitative economic and social benefits of Ontario's airports;
3. Review past studies that have been completed regarding the priorities of these facilities;
4. Examine the external environment and contextual forces that are currently affecting airports in Ontario; and
5. Analyze the degree to which existing funding programs address the requirements of airports in Ontario and identify unmet needs that must be addressed to ensure long-term viability.

Based on the direction and objectives established by AMCO, this Study is primarily intended to address the priorities and challenges of publicly available airports in Ontario that serve local or regional social and economic roles. This Study excludes the following categories of airports and aerodromes:

- Heliports, seaplane bases, seasonal, and unregistered aerodromes;
- Facilities that primarily serve purely recreational purposes;
- Airports owned and operated by the Government of Ontario; and
- Airports operated by the Department of National Defence.

While the two largest passenger processing airports in Ontario (Toronto Pearson International Airport and Ottawa International Airport) were contacted, these facilities elected not to participate. AMCO will continue to collaborate with these airport authorities and aligned advocacy organizations such as the Canadian Airports Council to advance the priorities of the province's largest airports – however, this Study is generally focussed on the needs of regional and local airports throughout Ontario.

1.3 Study Methodology

HM Aero completed primary and secondary research as part of this Study, including the review of publicly available literature and resources, interviews with select provinces that currently administer airport-specific funding programs (British Columbia, Alberta, and Saskatchewan), and the design and management of an outreach survey targeting airport operators in Ontario.

In cooperation with AMCO, HM Aero developed a digital research survey that was distributed to 80 airport operators in Ontario. The results of the survey are shown in Table 1.1. Out of the 80 invited airport owners, 42 (53%) completed the survey. The types of airports represented and their geographic distribution across the province assists in making conclusions about the broader network of airports throughout Ontario. For airports that declined to complete the survey (8%), the reasons cited included concerns regarding ineligibility for potential future provincial funding and confidentiality for privately owned airports.

Table 1.1 - Airport Operator Outreach Survey Response Data

Response Category	AMCO Member Airport Operators		Other Airport Operators		All Airport Operators	
Airport Operators Invited [1]	58	100%	22	100%	80	100%
Complete Surveys	39	67%	3	14%	42	53%
Incomplete Surveys	7	12%			7	9%
Declined to Respond [1]	6	10%			6	8%
Total Responses	**52**	**90%**	**3**	**14%**	**55**	**69%**

Notes

[1] The Government of Ontario's Remote Northern Transportation Office operates 29 airports but is classified as one operator for the purposes of this project. The Remote Northern Transportation Office did not participate in the survey process.

The survey questions, included in Appendix A, were designed to cover a range of topics including airport ownership and operation, aviation activity statistics, economic and social benefit metrics, COVID-19 response and impact, infrastructure condition, planned capital project values, and anticipated funding sources. The findings of these questions are integrated throughout the Study. To assist in data analysis and presenting conclusions that are differentiated by airport type, HM Aero categorized each of the survey respondents into one of five types based on their role and pre-pandemic activity levels in 2019 (Table 1.2):

1. Community (16);
2. National Airports System (NAS) (2);
3. Northern & Remote (7);
4. Regional Non-Passenger (4); and
5. Regional Passenger (13).

In addition to the role-based classifications for the survey respondent airports, select analyses also differentiate between facilities in northern and southern Ontario. As shown in Table 1.3, the 42 survey respondents were classified as being in northern Ontario (21) or southern Ontario (21) based on the geographical designated service area boundaries used by FedNor: Muskoka District Municipality, Nipissing District, Parry Sound District, Manitoulin District, Sudbury District, Greater Sudbury Census Division, Timiskaming District, Cochrane District, Algoma District, Thunder Bay District, Rainy River District, and Kenora District.

Table 1.2 - Survey Respondent Role Classifications

Study Classification	Explanation	Survey Respondents
Community	Airports that serve a local catchment area, do not support scheduled passenger flights, and that are used for general aviation, flight training, and smaller scale commercial activities.	Brantford Municipal Airport Brockville – 1000 Islands Tackaberry Regional Airport Chatham-Kent Municipal Airport Goderich Regional Airport Gore Bay-Manitoulin Airport Guelph Airpark Huronia Airport Iroquois Falls Airport Kawartha Lakes Municipal Airport Killarney Airport Parry Sound Area Municipal Airport St. Thomas Municipal Airport Stratford Municipal Airport Oshawa Executive Airport Niagara Central Dorothy Rungeling Airport Wingham / Richard LeVan Airport
National Airport System (NAS)	Airports owned by Transport Canada and operated by independent airport authorities as part of the NAS.	London International Airport Thunder Bay International Airport
Northern & Remote	Airports that serve northern and remote communities not owned or operated by the province.	Atikokan Municipal Airport Cochrane Airport Hearst (René Fontaine) Municipal Airport Kapuskasing Airport Manitouwadge Municipal Airport Moosonee Airport [1] Wawa Municipal Airport [1]
Regional Non-Passenger	Airports that serve a regional catchment area, do not support scheduled passenger flights, and that support higher levels of commercial aviation, flight training, industrial activity, and general aviation.	Geraldton (Greenstone Regional) Airport Lake Simcoe Regional Airport Pembroke and Area Airport Peterborough Airport
Regional Passenger	Non-NAS regional airports that supported scheduled passenger air services in 2019.	Billy Bishop Toronto City Airport Dryden Regional Airport Fort Frances Municipal Airport Greater Sudbury Airport Kenora Airport Kingston Norman Rogers Airport North Bay / Jack Garland Airport Red Lake Airport Region of Waterloo International Airport Sarnia Chris Hadfield Airport Sault Ste. Marie Airport Sioux Lookout Airport Windsor International Airport

Table 1.3 - Survey Respondent Airport Geographical Classifications

Northern Ontario	Southern Ontario
Atikokan Municipal Airport	Billy Bishop Toronto City Airport
Cochrane Airport	Brantford Municipal Airport
Dryden Regional Airport	Brockville – 1000 Islands Tackaberry Regional Airport
Fort Frances Municipal Airport	Chatham-Kent Municipal Airport
Geraldton (Greenstone Regional) Airport	Goderich Regional Airport
Gore Bay-Manitoulin Airport	Guelph Airpark
Greater Sudbury Airport	Huronia Airport
Hearst (René Fontaine) Municipal Airport	Kawartha Lakes Municipal Airport
Iroquois Falls Airport	Kingston Norman Rogers Airport
Kapuskasing Airport	Lake Simcoe Regional Airport
Kenora Airport	London International Airport
Killarney Airport	Niagara Central Dorothy Rungeling Airport
Manitouwadge Municipal Airport	Oshawa Executive Airport
Moosonee Airport	Pembroke and Area Airport
North Bay / Jack Garland Airport	Peterborough Airport
Parry Sound Area Municipal Airport	Region of Waterloo International Airport
Red Lake Airport	Sarnia Chris Hadfield Airport
Sault Ste. Marie Airport	Stratford Municipal Airport
Sioux Lookout Airport	St. Thomas Municipal Airport
Thunder Bay International Airport	Windsor International Airport
Wawa Municipal Airport	Wingham / Richard LeVan Airport

Wawa Municipal Airport

2 ONTARIO'S AIRPORTS AND AERODROMES

Section 2 provides an overview of Ontario's network of airports, including their number and distribution; ownership and operations; financial positions; and regulatory classifications.

2.1 Overview

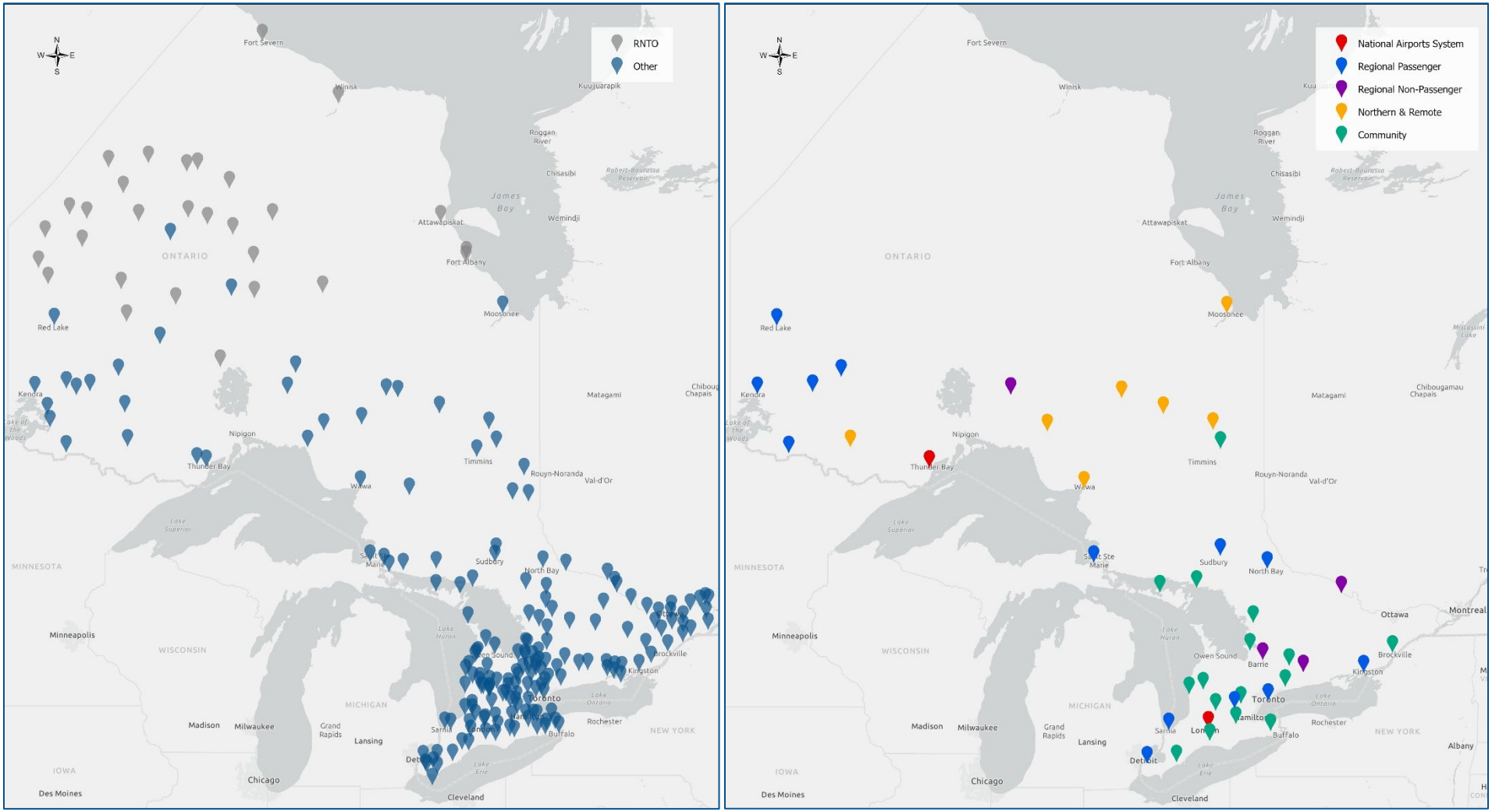
An "aerodrome" is defined as any area of land, water, frozen surface, or other surface that is used, designed, prepared, equipped, or set apart for the arrival, departure, movement, or servicing of aircraft. "Airports" are aerodromes that are certified to additional standards established by Transport Canada; while the terms "airport" and "aerodrome" are often used interchangeably, each facility has unique differences that are explored in this report. Aerodromes and airports (jointly referred to as airports in this Study) are the facilities that support aircraft operations and can be understood through their three primary elements:

1. Their infrastructure and capital assets, such as runways, taxiways, and aprons; mobile equipment; buildings; and supporting infrastructure;
2. The way in which they are operated and maintained to be available for aircraft operations; and
3. The aircraft operators and users that jointly contribute to the activities that occur at each facility.

Based on data published by the Government of Ontario, there are 213 publicly listed registered aerodromes and certified airports in Ontario, excluding heliports, seaplane bases, and private aerodromes not included in the Canada Flight Supplement. As shown in Figure 2.1, while a significant proportion of these facilities are concentrated in southern Ontario in proximity to major population centres, the network of airports spans the geographic extents of the province, from the Manitoba border to the west, Hudson's Bay to the north, Quebec border to the east, and United States border to the south.

Region of Waterloo International Airport

Figure 2.1 - Ontario's Airports (left) and Survey Respondents (right)



2.2 Ownership, Operations, and Financial Performance

2.2.1 Airport Ownership

Ontario's airports are owned by a wide range of entities, including the federal and provincial levels of government, municipalities, not-for-profit corporations, and private individuals or corporations (Table 2.1). The airport owner is most commonly the entity that is responsible for decision-making functions, allocating financial resources to its operations, and establishing its overall strategic direction. Within the network of Ontario's airports, several classifications can be made with respect to ownership:

- **Federal Ownership:** This category includes the four airports that are retained by the federal government through the NAS (Toronto Pearson International Airport, Ottawa International Airport, London International Airport, and Thunder Bay International Airport) and facilities operated by the Department of National defence (Canadian Forces Base Trenton and Canadian Forces Base Petawawa). Of the 42 survey respondents, two represented facilities are part of the NAS (London and Thunder Bay).
- **Provincial Ownership:** As described in Section 3.2, the Government of Ontario owns and operates 29 airports as part of the Remote Northern Transportation Office (RNTO).
- **Municipal Ownership:** Airports that are owned by a single lower-tier, single upper-tier, or multiple municipalities. The various models of municipal ownership were predominant among the 42 survey respondents, with 34 (81%) respondents falling within this category. 64% of all respondent airports were identified as being owned by a single lower-tier municipality.
- **Not-for-Profit Ownership:** 10% of the 42 survey respondents represent airports that are privately owned by a not-for-profit corporation. This category includes Billy Bishop Toronto City Airport (owned by the federal not-for-profit Toronto Ports Authority) and three facilities that are owned by not-for-profit airport societies, authorities, or development corporations (Kenora Airport, Greater Sudbury Airport, and Sault Ste. Marie Airport).
- **Private Ownership:** Airports that are owned privately by an individual or corporation. 5% of survey respondents represented airports in this category (Wingham Airport and Guelph Airpark).

Table 2.1 - Survey Respondents Ownership Classification

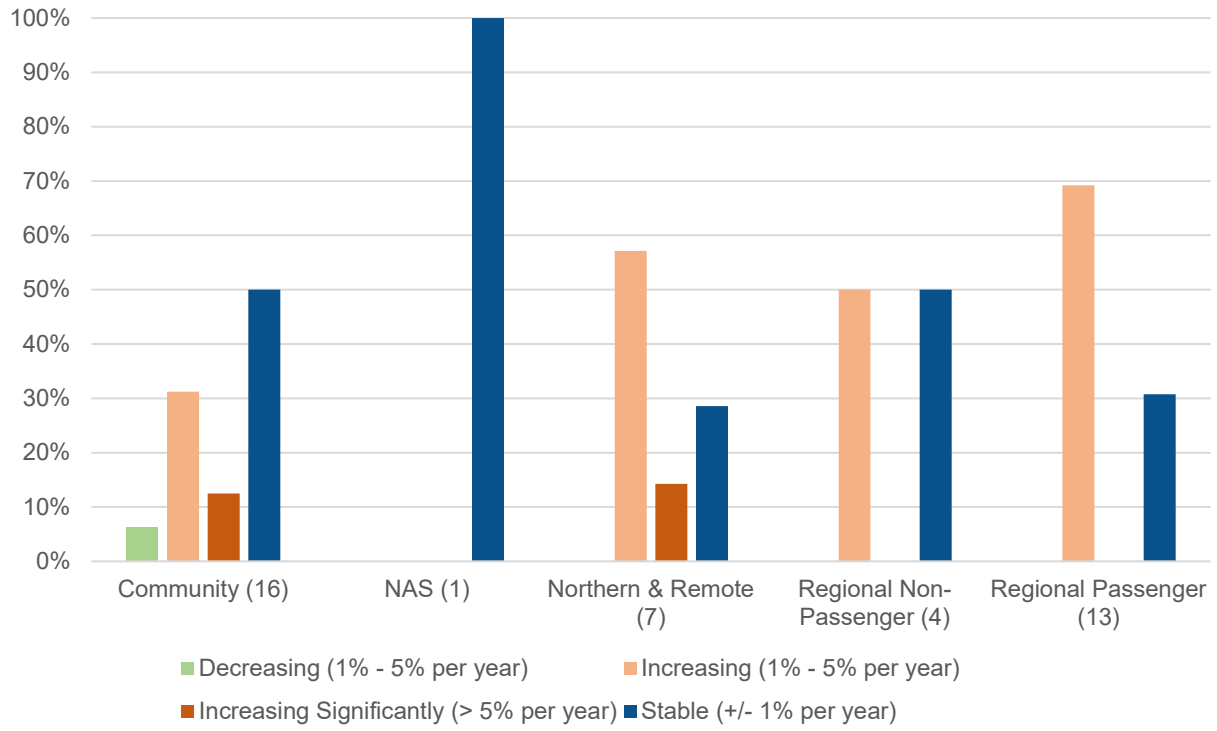
Study Category	Federally Owned	Municipally Owned			Privately Owned	
		Lower-Tier Municipality	Upper Tier Municipality	Two or More Municipalities	Not-for-Profit Corporation	Individual or Corporation
Community		10		4		2
NAS	2					
Northern & Remote		7				
Regional Non-Passenger		2		2		
Regional Passenger		8	1		4	
Total	**2**	**27**	**1**	**6**	**4**	**2**

2.2.2 Airport Operations and Expenses

The routine responsibilities associated with maintaining an operationally viable and safe airport vary widely based on the level of service provided at a given facility. At registered aerodromes that are operated at a limited level of service, routine tasks may be limited to periodic inspections, reactive asset maintenance based on identified deficiencies, and snow clearing as resources permit. Conversely, certified airports that are operated at higher levels of service to support scheduled passenger air services or other aviation activities on a 24/7 basis must be operated in accordance with their Transport Canada-approved plans and procedures – this can include fulsome routine inspections, wildlife management activities, winter maintenance using dedicated resources, the provision of aircraft rescue and firefighting services, and other services as required. Accordingly, operating expenditures will vary based on the level of service provided at each airport.

Airport survey respondents were asked to identify overall trends in their operating expenses prior to the COVID-19 pandemic, as shown in Figure 2.2. Overall, 41% of the respondent airports identified that their operating expenses were stable, while an additional 49% of respondents identified that their operating expenses were increasing between 1% and 5% per year. Only one respondent (Community airport category) identified that their operating expenses were decreasing prior to the COVID-19 pandemic, while 7% of respondents identified that their operating expenses were increasing significantly by greater than 5% annually prior to the COVID-19 pandemic.

Figure 2.2 - Respondent Airport Operating Expense Trends (Prior to COVID-19)



2.2.3 Revenue Generation and Financial Positions

Revenue generation is key to limiting operating deficits and improving the degree to which airports are financially viable or self-sustaining. Operating revenues are collected through a variety of sources depending on the activities that occur at each airport, including:

- Aeronautical fees, such as aircraft landing fees and parking / apron fees;
- Aircraft storage revenues from hangar rentals and outdoor tie-down fees;
- Long-term leases for development lots and terminal facilities;
- Aviation fuel sale surcharges;
- Passenger and cargo throughput fees, including terminal usage fees and passenger facility fees / airport improvement fees;
- Service cost recovery fees, such as after-hours snow removal; and
- Non-aeronautical revenue sources, such as vehicle parking fees, advertising, filming, and agricultural cropping.

The way operating revenues are collected and maximized is balanced against numerous considerations. One of the primary considerations is the price elasticity of different user groups, or their willingness to pay based on the services and benefits received at each airport. This challenge is commonly accentuated at airports that derive a significant proportion of their activities from cost-conscious users (e.g., recreational aircraft operators) with a limited willingness or ability to pay and that can relocate their activities to competitor airports with lower fee environments. This consideration also affects airports vying for additional commercial activity to grow their economic role through the attraction of scheduled or charter passenger air services, corporate activity, or other high-value user groups – in these instances, fees may be reduced or waived to incentivize new growth with the expectation that the economic benefits will justify this approach, or that long-term revenues will increase post-attraction. Given the high-cost nature of the aviation industry and the commonly limited margins, airports are challenged to find a balance between maximizing their operating revenues without discouraging the primary user groups that define their roles.

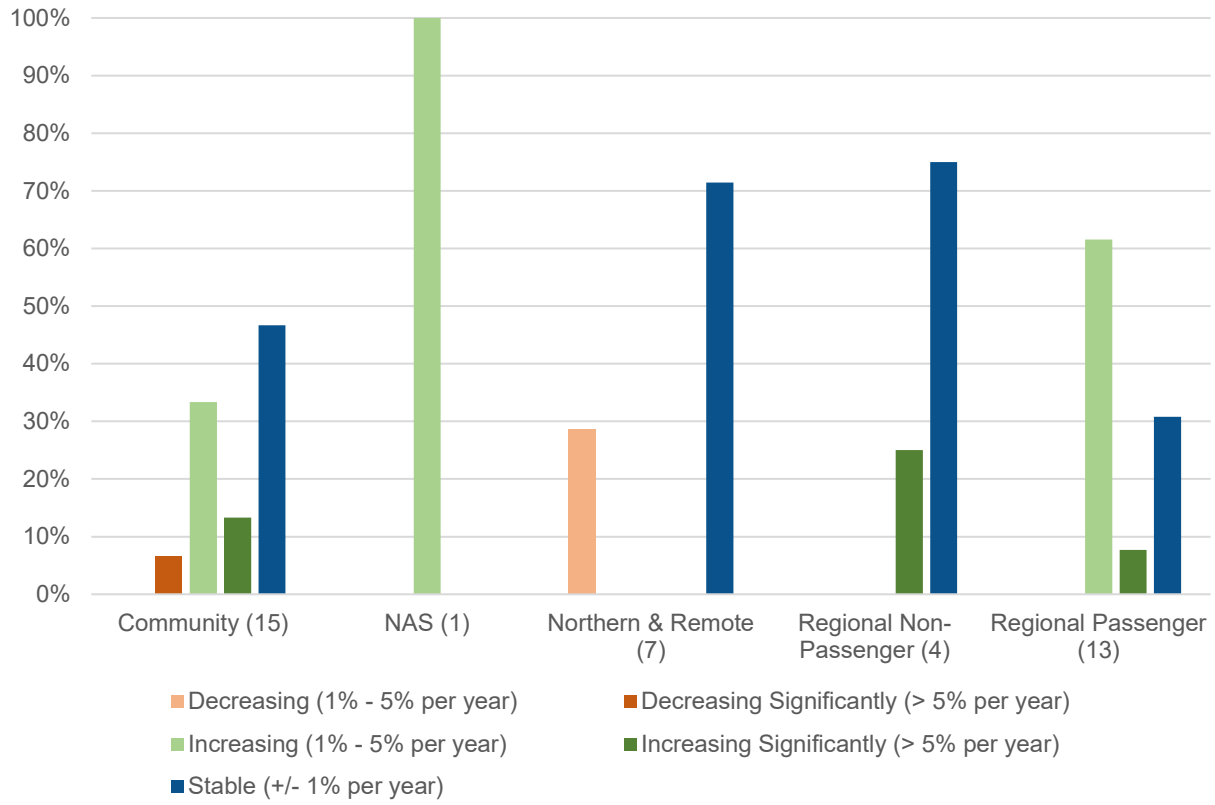
Brockville – 1000 Islands Tackaberry Regional Airport

As shown in Figure 2.3, the respondent airport survey data illustrates how operating revenue trends prior to the COVID-19 pandemic varied among the different respondent airport categories:

- Among all respondents, 48% identified that their operating revenues were stable with minimal change on an annual basis, including 71% of Northern & Remote airports and 75% of Regional Non-Passenger airports;
- 45% of respondent airports identified that their pre-pandemic operating revenues were increasing, including 46% of Community respondents, 100% of NAS respondents, and 70% of Regional Passenger respondents; and
- Only 2 of the 42 respondent airports identified that their operating revenues were decreasing prior to the COVID-19 pandemic.

Taken together, most of the respondent airports (83%) identified that their operating revenues were stable or increasing modestly by between 1% and 5% annually prior to the pandemic. This is comparable to the 90% of respondent airports that noted a trend of stability or modest annual increases in their pre-pandemic operating expenses, as discussed further below.

Figure 2.3 - Respondent Airport Operating Revenue Trends (Prior to COVID-19)



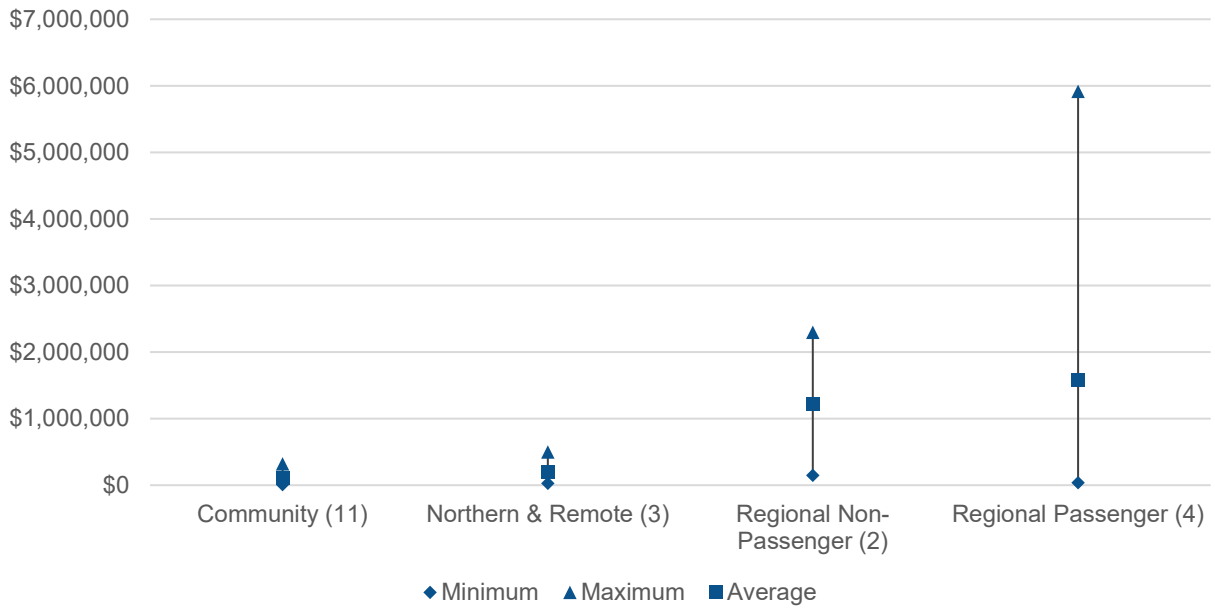
Comparing operating expenses and revenues, 29 of the 42 respondent airports provided information on their financial position in a typical year between 2016 and 2019, prior to the COVID-19 pandemic. In this period, 69% of respondents incurred an operating deficit while 31% realized an operating surplus. As shown in Table 2.2, the average operating deficit realized by the 20 respondent airports was $526,000, with a minimum of $10,000 and a maximum of $5,917,000. Several conclusions can be drawn from this dataset:

- Respondents in the Community and Northern & Remote categories realized the lowest operating deficits, with averages of $107,000 and $193,000 respectively. Operating deficits were the norm among respondents in these categories – 92% of Community respondents that supplied this information realized deficits, while 75% of Northern & Remote respondents experienced operating deficits in a typical year;
- All Regional Non-Passenger respondents that supplied financial performance data experienced an operating deficit in a typical year, averaging $1,225,000 and reaching a maximum of $2,300,000; and
- With respect to Regional Passenger airports, 40% of respondents realized an operating deficit in a typical year, with this average being $1,578,000. Regional Passenger airports had the highest average and maximum operating deficits among respondent airports (Figure 2.4).

Table 2.2 - Respondent Airports Pre-COVID-19 Typical Annual Deficit

Study Category	Respondents	Minimum Deficit	Maximum Deficit	Average Deficit
Community	11	$10,000	$320,000	$107,000
Northern & Remote	3	$30,000	$500,000	$193,018
Regional Non-Passenger	2	$150,000	$2,300,000	$1,225,000
Regional Passenger	4	$40,000	$5,916,613	$1,578,275
Total	**20**	**$10,000**	**$5,916,613**	**$525,958**

Figure 2.4 - Respondent Airports Pre-COVID-19 Typical Annual Deficit

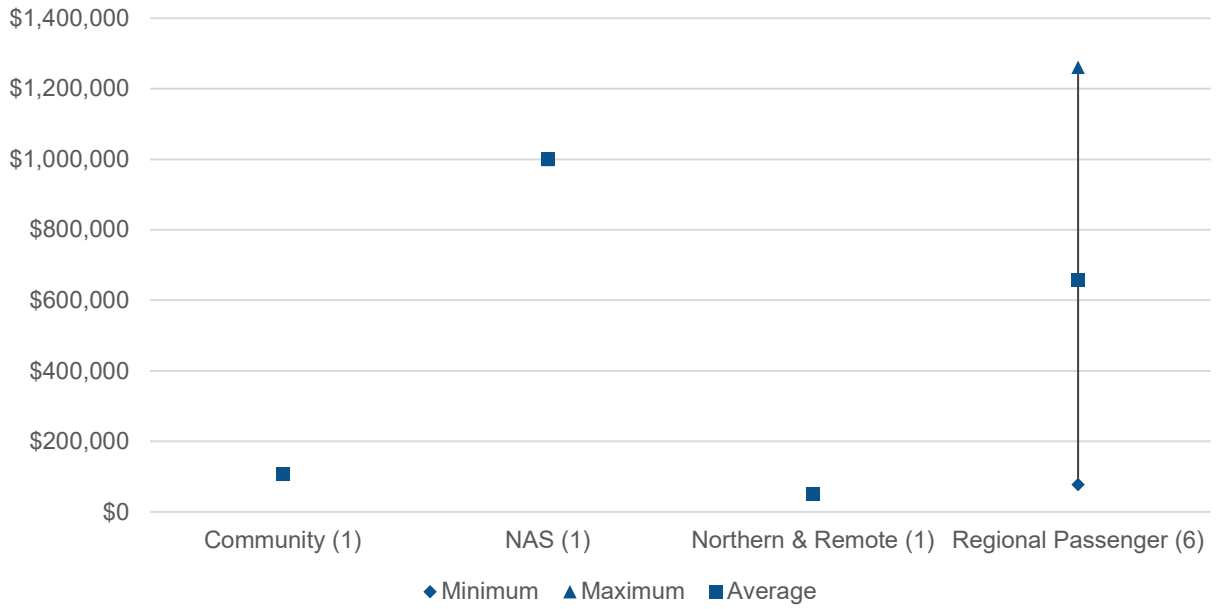


Among the 31% of respondent airports that realized an operating surplus in a typical pre-pandemic year, the average and maximum values were $567,000 and $1,261,000, respectively (Table 2.3). Operating surpluses were most common at airports with significant passenger handling roles in the Regional Passenger category, with 60% of respondents in this category experiencing surpluses in a typical pre-pandemic year (Figure 2.5).

Table 2.3 - Respondent Airports Pre-COVID-19 Typical Annual Surplus

Study Category	Respondents	Minimum Surplus	Maximum Surplus	Average Surplus
Community	1	$106,400	$106,400	$106,400
NAS	1	$1,000,000	$1,000,000	$1,000,000
Northern & Remote	1	$50,000	$50,000	$50,000
Regional Passenger	6	$77,300	$1,261,120	$657,903
Total	**9**	**$50,000**	**$1,261,120**	**$567,091**

Figure 2.5 - Respondent Airports Pre-COVID-19 Typical Annual Surplus



Parry Sound Area Municipal Airport

Respondent airports were asked through the survey to describe their pre-pandemic financial position through one of three categories (Table 2.4):

1. **Not Financially Self-Sustaining:** Aeronautical and non-aeronautical revenues were insufficient to cover operating costs and capital expenses. External funding was required to cover both an operating deficit and capital expenditures.
2. **Financially Self-Sustaining:** Aeronautical and non-aeronautical revenues were sufficient to cover operating costs, although capital expenses required external funding.
3. **Financially Viable:** Aeronautical and non-aeronautical revenues were sufficient to cover or exceed both capital expenses and operating costs.

Prior to the COVID-19 pandemic, 44% of respondent airports reported that they were not financially self-sustaining, requiring financial support or subsidization from external sources (e.g., the municipal, provincial, and federal levels of government). This condition was highest at Community (60%), Northern & Remote (57%), and Regional Non-Passenger (50%) airports. Approximately one quarter (23%) of Regional Passenger airports also reported being not financially self-sustaining.

For facilities that have sufficient revenues to cover their operating expenses but require external support for cost-intensive capital projects, 51% of respondent airports identified as being financially self-sustaining prior to the pandemic. This category includes both NAS respondents and 69% of Regional Passenger airports; approximately half of Regional Non-Passenger (50%) and Community (40%) airports, and a limited number of Northern & Remote respondents (29%). Only 2 of the 42 respondent airports reported that they were financially viable from an operating and capital perspective prior to the COVID-19 pandemic, or 5% of all respondents.

The need for external sources of funding to support capital projects prior to the pandemic and its associated financial challenges was widespread within the Study's research – 95% of all respondent airports (both financially self-sustaining and not financially self-sustaining) identified their financial position as being one that requires capital assistance to facilitate the implementation of high-cost infrastructure rehabilitation and mobile equipment acquisition projects. The financial impacts of COVID-19 to Ontario's airports are described further in Section 7.1.2.

Table 2.4 - Respondent Airports Pre-COVID-19 Financial Position

Study Category	Respondents	Not Financially Self-Sustaining [1]	Financially Self-Sustaining [2]	Financially Viable [3]
Community	15	60%	40%	
NAS	2		100%	
Northern & Remote	7	57%	29%	14%
Regional Non-Passenger	4	50%	50%	
Regional Passenger	13	23%	69%	8%
Total	**41**	**44%**	**51%**	**5%**

Notes

[1] External funding was required to cover both an operating deficit and capital expenditures

[2] Capital expenses required external funding

[3] Revenues were sufficient to cover or exceed both capital expenses and operating costs

2.3 Regulatory Classification

As noted previously, there are 213 facilities located throughout Ontario that can be classified from a regulatory standpoint as registered aerodromes or certified airports. Registered aerodromes are facilities that are publicly listed in the Canada Flight Supplement following a request being made to Transport Canada. Registered aerodromes are subject to limited infrastructure and operational regulatory requirements per the Canadian Aviation Regulations and are precluded from supporting scheduled passenger air services.

Airports are required to be certified based on three criteria, per Canadian Aviation Regulation 302.01:

1. The facility is located within the built-up area of a city or town;
2. The facility is used by an air operator for the purpose of a scheduled passenger service; or
3. If certification is deemed to be in the public interest by the Minister of Transport.

Unlike registered aerodromes, certified airports are subject to an extensive series of regulatory obligations imposed by Transport Canada. The initial and ongoing obligations associated with pursuing and holding certification generally result in additional costs and an increased level of effort being borne by airport operators. These obligations include, but are not limited to:

- Designing and maintaining airfield infrastructure and the obstacle environment in accordance with TP312 – Aerodrome Standards and Recommended Practices;
- Maintaining Safety Management Systems, including associated oversight processes;
- Operating their facilities in accordance with a Transport Canada-approved Airport Operations Manual and associated manuals / plans, such as an Emergency Response Plan, Wildlife Management Plan, and Winter Maintenance Plan;
- Undertaking regular quality assurance auditing processes; and
- Being subject to increased oversight by Transport Canada.

Among the 42 airport respondents, the majority (57%) were certified, with the remaining 43% of respondents representing registered aerodromes (Table 2.5). Among the 26 airports that do not support scheduled passenger services, only 8 (31%) are certified with the balance (69%) being operated as registered aerodromes. Therefore, certification is pursued on a limited basis by respondent airports that do not support scheduled passenger air services – among the airports that hold certification, doing so may have been based on their proximity to a built-up area, a requirement from the Minister of Transport, the historical or planned future role of supporting scheduled passenger services, or to assist in implementing consistent operational and safety standards.

Table 2.5 - Respondent Airport Regulatory Classifications

Study Category	Certified Airport		Registered Aerodrome	
	Respondents	Proportion	Respondents	Proportion
Community	5	31%	11	69%
NAS	2	100%		
Northern & Remote	1	14%	6	86%
Regional Non-Passenger	3	75%	1	25%
Regional Passenger	13	100%		
Total	**24**	**57%**	**18**	**43%**

3 FEDERAL AND PROVINCIAL CONTEXT

The context within which Ontario's airports operate can be further understood by examining the roles of the provincial and federal levels of government.

3.1 Federal Context

Aviation is within the core jurisdiction of the federal level of government and is under the oversight of the Minister of Transport and Transport Canada. With respect to Ontario's airports, the federal government serves the following three primary roles:

1. Airport owner / landlord;
2. Regulator; and
3. Funding source.

The federal government is also involved in other aspects of Ontario's airports, with examples including the operation of Canadian Forces Bases Trenton and Petawawa; enacting Airport Zoning Regulations and mandatory noise abatement procedures; and overseeing the Canadian Air Transport Security Authority (CATSA) and Canada Border Services Agency (CBSA).

3.1.1 National Airports Policy and Airport Ownership

While Transport Canada has historically fulfilled an extensive national role in airport ownership and operations, this responsibility decreased significantly with the implementation of the National Airports Policy (NAP) and National Airport System in the 1990s. Following the implementation of the NAP, Transport Canada currently owns two types of airports:

1. 29 smaller airports that serve select communities in British Columbia, Manitoba, Quebec, and Newfoundland. None of these facilities are located in Ontario; and
2. 23 airports designated as NAS facilities that continue to be owned by the federal government and operated by airport authorities through long-term lease agreements. In Ontario, four NAS airports are owned by the federal government: Toronto Pearson International Airport, Ottawa International Airport, London International Airport, and Thunder Bay International Airport.

With the 1994 NAP, Transport Canada shifted from serving as a regulator and widespread airport owner and operator to being the regulator, landlord of NAS airports, and owner and operator of 29 smaller airports. A key element of the NAP was the widespread divestiture of a range of Transport Canada's airport portfolio to local interests, including 25 airports in Ontario:

- Bonnechere;
- Carp;
- Dryden;
- Earlton;
- Emsdale;
- Fort Frances;
- Gananoque;
- Gore Bay;
- Hamilton;
- Kapuskasing;
- Kenora;
- Moosonee
- Muskoka;
- North Bay;
- Oshawa;
- Pembroke;
- Red Lake;
- Sarnia;
- Sault Ste. Marie;
- St. Catharines;
- Sudbury;
- Timmins;
- Toronto City;
- Wiarton; and
- Windsor.

Through the NAP divestiture process, these 25 airports were downloaded to local municipalities, airport development corporations, commissions, and private interests to be championed into the future. Except for one-time funding allocations provided at the time of transfer, Transport Canada does not provide specific ongoing financial support to non-NAS facilities divested as part of the NAP except for the Airports Capital Assistance Program (ACAP) for eligible airports – accordingly, all operating and non-grant funded capital expenses are borne by their respective owners and operators.

3.1.2 Regulatory Oversight

Transport Canada provides oversight and support to airport operators based on the regulatory environments applicable to registered aerodromes and certified airports, more significantly to the latter. Transport Canada develops the regulatory standards applicable to airport operators through the Canadian Aviation Regulations, TP312 – Aerodrome Standards and Recommended Practices, Advisory Circulars, and other resources. Transport Canada's oversight program includes surveillance activities (e.g., assessments, validations, inspections) and regulatory investigations and enforcement as required. While a shift has occurred in the past decades with increased responsibility for airport operators to "self-regulate" and ensure their own compliance with the regulatory environment, Transport Canada continues to be responsible for the oversight of the sector.

Commentary on the implications of increased regulatory obligations being imposed on Ontario's airports is provided in Section 7.2.

3.1.3 Airport Funding

The Airports Capital Assistance Program is administered by Transport Canada to provide capital funding for safety-related projects at certified airports serving between 1,000 and 525,000 passengers per year. During the COVID-19 pandemic, the federal government has also administered temporary funding programs through the Regional Air Transportation Initiative (RATI), Airport Critical Infrastructure Program (ACIP), and Airport Relief Fund (ARF). The federal government's role in funding airport projects is described further in Section 9.

3.2 Provincial Context

Aside from its ongoing involvement in the operation of the Remote Northern Transportation Office (RNTO) airport network, the Government of Ontario has a limited role in the majority of Ontario's airports. In recent history, this involvement has been limited to:

1. The collection of the aviation fuel tax;
2. The consideration of airports as part of multimodal transportation planning initiatives and the development of airport compatible land use planning policies; and
3. The establishment of non-dedicated grant funding programs that include airport projects as an eligible category (e.g., the Southwestern Ontario Development Fund).

The Government of Ontario has not provided an airport dedicated funding program since the drawdown of the Municipal Airports Program. The Municipal Airports Program provided capital and operating funding prior to its termination in 1997-1998 and was followed by a one-time payment through the Ontario Municipal Capital and Operating Restructuring Fund that was distributed to 49 municipal airports that would no longer benefit from provincial support. At the time of this report's preparation, the Government of Ontario does not provide airport-specific funding programs.

3.2.1 Airport Operations

Through the Ministry of Transportation's (MTO's) Thunder Bay-based RNTO, the Government of Ontario is responsible for the ownership and operation of 29 airports in northern Ontario:

1. Angling Lake / Wapekeka
2. Armstrong
3. Attawapiskat
4. Bearskin Lake
5. Big Trout Lake
6. Cat Lake
7. Deer Lake
8. Fort Albany
9. Fort Hope
10. Fort Severn
11. Kasabonika
12. Kashechewan
13. Keewaywin
14. Kingfisher Lake
15. Lansdowne House
16. Muskrat Dam
17. North Spirit Lake
18. Ogoki Post
19. Peawanuck
20. Pickle Lake
21. Pikangikum
22. Poplar Hill
23. Round Lake (Weagamow Lake)
24. Sachigo Lake
25. Sandy Lake
26. Slate Falls
27. Summer Beaver
28. Webequie
29. Wunnumin Lake

The facilities under the oversight of the RNTO support essential passenger, cargo, and emergency air transportation to remote First Nations communities, and most of these airports are the only reliable mode of transportation on a year-round basis. The annual costs associated with the operation of the RNTO airport network are the responsibility of the Government of Ontario, as well as capital projects not funded through federal programs.

3.2.2 Aviation Fuel Tax

The Government of Ontario levies taxes on the purchase or delivery of aviation fuel at a rate of $0.067 per litre (a reduced rate of $0.027 per litre applies in northern Ontario). Aviation fuel tax revenues are collected without a mechanism in place for the reinvestment of these revenues into the Ontario aviation sector. Annual revenues associated with the aviation fuel tax have not been made available in recent years; however, in 2005 the Government of Ontario collected approximately $58.5M through the aviation fuel tax[1] when the tax rate was $0.027 per litre across the province.

Kenora Airport

[1] Sypher. (September 2006). *Study of Municipal Airports in Ontario.*

3.2.3 Provincial Planning and Policy Context

A scan of recently released plans and policy documents has been undertaken to explore how Ontario's airports are addressed at the provincial level.

Provincial Policy Statement (2020)

The Provincial Policy Statement, 2020 articulates the matters deemed to be within Ontario's provincial interest. While the Provincial Policy Statement is used for the evaluation of land use planning decisions and does not apply directly to airports, the policy language surrounding airports is reviewed. Specifically, Policy 1.6.9.1 directs that

> *"Planning for land uses in the vicinity of airports […] shall be undertaken so that: a) their long-term operation and economic role is protected…"*

Airports are also defined as "Major Facilities" and "Major Goods Movement Facilities." Similar to the direction provided in Policy 1.6.9.1, Policy 1.6.8.2 directs that Major Goods Movement Facilities shall be protected for the long-term. The priority articulated through the Provincial Policy Statement for the protection of airports indicates that the long-term viability of airports is a matter of provincial interest insofar as land use planning is concerned.

Southwestern Ontario Transportation Plan (2020)

The Southwestern Ontario Transportation Plan (Connecting the Southwest: A Draft Transportation Plan for Southwestern Ontario) was released in January 2020. The Plan notes that the southwestern Ontario transportation network includes two international airports (London International Airport and Windsor International Airport) and 14 municipal airports.

The Plan states that regional and municipal airports are *"…economic generators and provide a critical connection to social, health, security services and the transportation network. For island communities, such as those on Pelee Island and Manitoulin Island, seasonal ferry service is often the only viable mode of travel."* The Plan further states that *"…municipal airports deliver vital public services including air ambulance and policing, as well as moving people and goods."*

Acknowledging the importance of municipal and regional airports, Action 43 of the Plan directs that an airport activity and infrastructure survey will be completed to assess the role of airports in supporting economic development, public service delivery, and to ensure the sustainability of local airports. The findings of the survey referenced in Action 43 have not been publicly released at the time of this Study's completion.

Northern Ontario Transportation Plan (2020)

The Northern Ontario Transportation Plan (Connecting the North: A Draft Transportation Plan for Northern Ontario) was released in December 2020 to *"…serve as a guide to help build a modern and sustainable transportation system for people in the North."*

With respect to the 29 remote airports owned and operated by the MTO through the RNTO, the Northern Ontario Transportation Plan recognizes that these facilities offer the only year-round connection for remote and First Nation communities in the Far North. The Northern Ontario Transportation Plan also recognizes that northern airports support emergency access, medical evacuation, and wildfire suppression flights, among other key services.

With respect to airports in northern Ontario not owned by the MTO, Action 40 established under Goal 6 – Reliable Travel Options for Remote and Far North Communities states the following:

> *Explore options to support municipal airports given the role they play in providing critical functions such as provincial aerial firefighting, air ambulance and policing, as well as to connect people and move goods throughout the North.*

In January 2022, the Northern Transportation Task Force was established pursuant to one of the actions established through the Northern Ontario Transportation Plan. As of May 2022, publicly available information has not been released pertaining to progress made on Action 40 regarding options to support municipal airports.

Greater Golden Horseshoe Transportation Plan (2022)

The Greater Golden Horseshoe Transportation Plan (Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe) was released in March 2022 to address key challenges in the Greater Golden Horseshoe (GGH). Airports are recognized as part of the GGH transportation system, including specific references to Toronto Pearson International Airport and Hamilton International Airport. Other airports shown in the graphics of the study include Niagara District Airport, Region of Waterloo International Airport, Billy Bishop Toronto City Airport, Oshawa Executive Airport, Lake Simcoe Regional Airport, and Peterborough Airport. Within the Plan, airports are recognized as assets for goods movement and for facilitating visitor and resident travel to and from the GGH.

A range of actions are identified with respect to airports, including:

> *"108: [Supporting] regional collaboration among and between airports to prioritize infrastructure and operational improvements that optimize use of the air passenger and cargo transportation networks.*
>
> *109: [Working] with the federal government and industry partners to advocate for municipal airport supports in providing critical services, connecting people and moving goods.*
>
> *110: [Conducting] an airport activity and infrastructure survey to update data on the role of Ontario municipal airports in supporting economic development and public service delivery. This will help inform the province's understanding of the current status of Ontario's aviation sector and will inform its future role in supporting the sector."*

Given the recent release of the 2022 GGH Transportation Plan, additional information is not available on steps to be taken to implement Actions 108, 109, and 110.

Southwestern Ontario Transportation Task Force Final Report (2022)

In March 2021, the Southwestern Ontario Transportation Task Force was formed pursuant to one of the recommendations of the 2020 Southwestern Ontario Transportation Plan. The Task Force was directed to ensure that Transportation Plan is informed by local priorities, to provide advice on implementation, and determine whether updates are required. In May 2022, the Task Force delivered its Final Report to Ontario's Minister of Transportation for consideration. This document is not an official provincial plan or policy but has been prepared pursuant to the direction provided in the Southwestern Ontario Transportation Plan.

The Southwestern Ontario Transportation Task Force's Final Report provides three overarching directions pertaining to airports:

> *4. Support[ing] the sustainability of municipal airports in their roles in interregional and international connectivity and in delivering emergency medical and rescue services, including:*
>
> > *a. Encourag[ing] collaboration between all governments to seek solutions affecting the financial sustainability of airports*
> >
> > *b. Launch[ing] campaigns to inform and educate communities about the value of their airport*

6. In collaboration with federal and municipal governments, the Task Force recommends MTO explore opportunities to support the sustainability of transportation businesses and sectors in Southwestern Ontario, including:

b. Identify[ing] new investment streams for airports, such as through targeted awareness campaigns, explore partnership opportunities and establish a regional working group

12. Support[ing] access to Southwestern Ontario destinations for tourists, residents and businesses using alternative modes, including:

a. Promot[ing] travel options and services offered by municipal airports

The air transportation subgroup prepared nine prioritized recommendations for consideration that are reproduced as follows:

1. *MTO to encourage the federal government to work with municipal airport operators to seek solutions to ongoing challenges affecting the sustainability of municipal airports.*
2. *MTO to encourage Southwestern Ontario municipalities and airports to launch local campaigns to inform and educate their communities about the value of their airport.*
3. *Municipalities and airport operators, in collaboration with MTO, to identify opportunities for new investment streams to improve the long-term sustainability of their facilities and services, such as through targeted tourism and promotional campaigns, establishing a regional aviation working group, exploring public-private partnerships and permitting non-air services on airport lands.*
4. *MTO to encourage municipalities and applicable ministries to work with the Airport Management Council of Ontario on promoting travel options and essential services (e.g., patient transfer, search and rescue) offered by municipal airports to improve public support for these facilities.*
5. *MTO to encourage applicable ministries and air service providers to explore ways of attracting commercial passenger and freight air traffic to airports in the region.*
6. *MTO to work with the Ministry of Finance on exploring revisions to the Gas Tax program to reduce the cost of aviation fuel.*
7. *MTO to encourage the federal government to review existing air transportation funding models to ensure adequate financial support for both airport and air service providers.*
8. *MTO to encourage airports to plan for and offer services in support of emerging technologies, such as electric vehicle charging infrastructure.*
9. *MTO to encourage municipalities and transit service providers to improve transit connectivity to local airports in support of improved access to employment opportunities and trip options for travellers.*

The Final Report of the Southwest Ontario Transportation Task Force therefore affirms the value assigned to airports in the region through the Southwestern Ontario Transportation Plan, recognizing their economic and social importance.

Eastern Ontario Transportation Plan

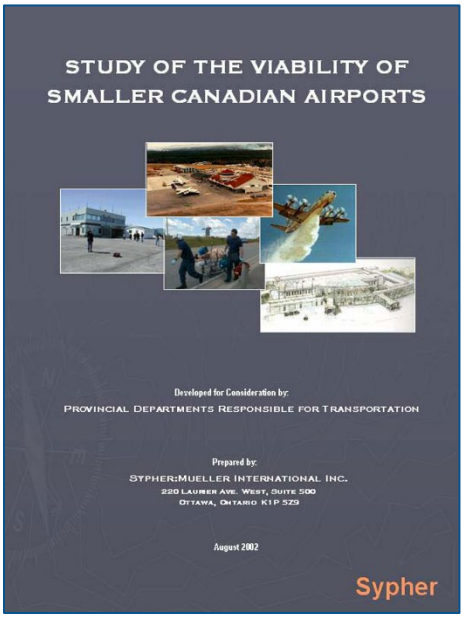
The Eastern Ontario Transportation Plan is under development at the time of this Study's preparation. Based on preliminary materials available as of May 2022 and the plans prepared for northern Ontario, southwestern Ontario, and the GGH, it is anticipated that this plan will include airports within its scope.

4 PAST STUDIES

A scan has been completed of past reports that have explored the positioning and common challenges being faced by Ontario's airports to contextualize this Study. These include:

1. Three studies completed at the national level, namely the Study of the Viability of Smaller Canadian Airports (2002), Regional and Small Airports Study (2004), and the Report of the Air Issues Task Force on Small Airport Viability (2006);
2. Two studies completed focusing on priorities specific to Ontario: the Study of Municipal Airports in Ontario (2006) and Ontario Municipal Airports Data Collection Study (2011); and
3. A research project launched by the Government of Ontario in 2021 regarding municipal airports.

4.1 Study of the Viability of Smaller Canadian Airports (2002)

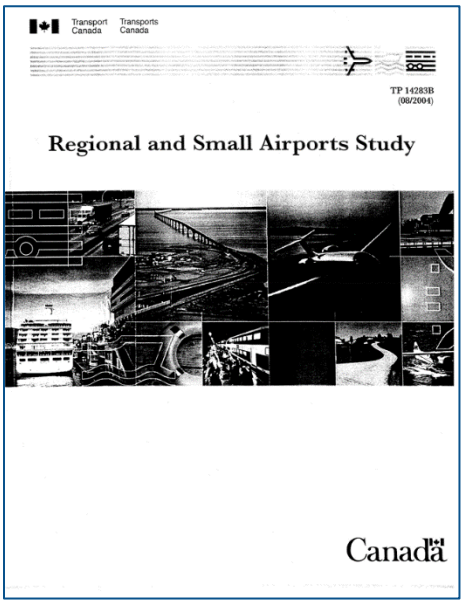


In 2002, consulting firm Sypher:Mueller International Inc. released the Study of the Viability of Smaller Canadian Airports (the "2002 Small Airport Study") with the purpose of identifying the operating and financial position of smaller airports in Canada through a sample of 26 airports serving less than 200,000 annual passengers. Ontario was represented in this sample by Kapuskasing Airport, Muskoka Airport, and Sault Ste. Marie Airport.

The 2002 Small Airport Study found that 63% of the sampled airports that provided financial data posted an operating loss in the reviewed year and that cost reductions were largely achieved to the greatest extent possible. Contextual challenges noted at that time included upcoming federal regulatory changes (e.g., aircraft rescue and firefighting changes, new security rules) that would increase operating costs and the expectation that significant activity increases would be unlikely. The 2002 Small Airport Study identified that only 15% of the reviewed facilities were financially viable (revenues covering operating and capital costs) and that 35% were self-sustaining (revenues covering operating but not capital costs).

The 2002 Small Airport Study reached the conclusion that many smaller Canadian airports would have a continued requirement for external operating and capital financing over the long term. Based on the reviewed conditions at Ontario's airports in 2022, this conclusion continues to apply 20 years later.

4.2 Regional and Small Airports Study (2004)



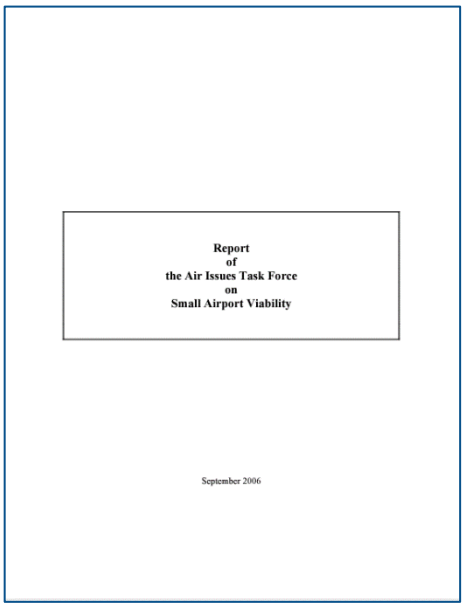
The Regional and Small Airports Study (the "2004 Transport Canada Study") was completed by Transport Canada to explore the financial situation of non-NAS regional and small airports that were divested by the federal government in the 1990s as part of the NAP. 22 airports in Ontario that were transferred as part of the NAP were reviewed through the 2004 Transport Canada Study.

While the aviation industry and the positioning of many of Ontario's airports has changed considerably from 2003-2004 when the 2004 Transport Canada Study was prepared, the report made numerous conclusions that continue to apply in 2022:

- Operating surpluses were more common at airports with significant passenger activity (i.e., over 30,000 annual passengers) and revenue-generating aircraft movements (over 13,000 movements). Airports that lack the revenue generation associated with scheduled passenger air services or high aircraft movement levels were observed to commonly incur operating deficits;
- The report suggested that for airports that have a negative financial outlook, rationalized infrastructure and increased user fees may be considered. The limited revenue generating measures available to many of the airports addressed in the 2004 Transport Canada Study are noted in Section 0;
- At ACAP eligible airports that generated moderate annual surpluses, these facilities were not able to fund significant safety-related capital projects without federal funding (i.e., they were self-sustaining but not financially viable); and
- The overarching view shared by surveyed airport operators was that external factors such as air services, regulatory creep, insufficient capital funding, and rising security, operations and maintenance costs were significant challenges.

Despite the foregoing, the 2004 Transport Canada Study concluded that the divestiture strategy of the NAP had a neutral or positive effect on the financial positioning of the reviewed regional and small airports and did not identify action items that can be assessed for progress.

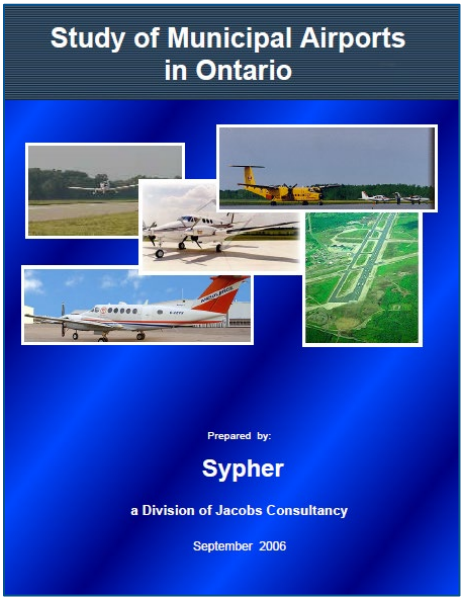
4.3 Report of the Air Issues Task Force on Small Airport Viability (2006)



The Council of Ministers Responsible for Transportation and Highway Safety is the primary intergovernmental forum for discussion and joint action on transportation matters in Canada. In 2006, the Council of Ministers released the Report of the Air Issues Task Force on Small Airport Viability (the "2006 Small Airport Report"), recognizing that the viability of small airports is a shared responsibility of importance. The 2006 Small Airport Report studied 362 facilities, including 95 in Ontario.

The 2006 Small Airport Report made a series of recommendations for future action to assist in ensuring the viability of small airports, including making small airports eligible for aviation infrastructure expansion and renewal programs; focussing on cost-reduction strategies and "right-sizing" operations; and assisting with commercially oriented airport planning. With respect to infrastructure support, the report called for small airports to be eligible under new or renewed capital funding programs that make provisions for aviation infrastructure without duplicating financial support from other grant funding programs. A key focus was also that existing infrastructure programs such as ACAP and the British Columbia Transportation Partnerships Program[2] should continue to be available.

4.4 Study of Municipal Airports in Ontario (2006)



The Study of Municipal Airports in Ontario (the "2006 Ontario Airports Study") was prepared by Sypher in association with Pryde, Scropp, McComb Inc. The project was funded by AMCO, the Government of Ontario, and FedNor / Industry Canada and was prepared with five purposes:

1. Identify the trends, issues, challenges, and unique issues facing municipal airports in Ontario;
2. Identify the socio-economic importance of municipal airports to the regional communities;
3. Identify the sustained viability of municipal airports in Ontario;
4. Determine the key short term and long term needs of municipal airports in Ontario; and
5. Identify possible solutions (private and public sector) to address the key challenges and issues affecting the sustained viability of municipal airports in Ontario

[2] The British Columbia Transportation Partnerships Program is the precursor to the current British Columbia Air Access Program profiled in Section 9.2.

The 2006 Ontario Airports Study was focused in its research on 85 municipally owned airports. In its analysis of the economic importance of these facilities, the study estimated that over 7,100 full-time direct jobs and $1.7B in total economic output were supported at these 85 airports. The study found that municipal airports serve numerous commercial and public needs while also facilitating essential service such as healthcare access, policing, and fire suppression.

When considering the issues being faced by Ontarian airports, the 2006 Ontario Airports Study raised the following as being the factors of greatest importance:

- Aging and deteriorating infrastructure;
- Lack of funding and challenges with financial viability, despite minimizing operating costs;
- Increased regulatory obligations; and
- Declining activity levels.

Among non-ACAP eligible reviewed airports (66% of the 85 airports), it was estimated that $5.5M in annual capital projects would need to be completed without federal funding. The 2006 Ontario Airports Study found that 74% of reviewed airports were not financially self-sustaining and that minimal operating and capital financial supports were available at the provincial level for these facilities. Accordingly, the 2006 Ontario Airports Study advanced recommendations that included operating and capital financial supports, reducing regulatory obligation increases, and increased advocacy efforts and the recognition of the value of these facilities.

4.5 Ontario Municipal Airports Data Collection Study (2011)

The Ontario Municipal Airports Data Collection Study (the "2011 Ontario Airports Study") was completed in 2011 by LeighFisher Canada Inc. on behalf of the MTO. Following the release of the 2006 Ontario Airports Study, the MTO established an Air Advisory Panel in 2007 that has since been discontinued. The 2011 Ontario Airports Study was prepared with the objective of collecting operating and financial information that could be used in the development of a business case to demonstrate the importance of municipal airports to government decision makers and to further support the need for investment in Ontario's municipal airports.

The 2011 Ontario Airports Study included a survey-based outreach program that reached 57 municipal airports for a response rate of 68%. Given the extensiveness of the 2011 Ontario Airports Study, a series of key findings are extracted and presented below:

- The study found that municipal airports support key public services, including wildfire suppression, resource management, aerial policing, military operations, and air ambulance flights;
- At the time of the report's preparation, only 23% of the 84 municipal airports in Ontario were ACAP eligible;
- While other funding programs at that time (e.g., Building Canada Fund, Infrastructure Stimulus Fund) included airport eligibility streams, these programs were either fully expended or coming to a close;

- Decertification was observed to be a trend to address the financial challenges of meeting Transport Canada's regulatory requirements. 60% of the surveyed registered aerodromes were formerly certified airports;
- 78% of respondent airports considered themselves to not be financially self-sustaining, in that they had insufficient revenues to cover operating and capital costs;
- Among respondent airports, the average operating loss excluding Airport Improvement Fee revenue exceeded $90,000 per year in 2010;
- 69% of respondent airports agreed that there was a need for an overarching air transportation policy at the provincial level; and
- With respect to other Canadian jurisdictions, Quebec was the only province with an official aviation policy document, while British Columbia, Alberta, Saskatchewan, and Manitoba had dedicated capital funding programs.

The provision of recommendations was not part of the scope of the 2011 Ontario Airports Study.

4.6 Ontario Municipal Airport Survey (2021)

In 2021, IBI Group was retained by the MTO to conduct a survey of municipal airports in Ontario, consistent with the recommendations of the Southwestern Ontario Transportation Plan as described in Section 0. The 19-page survey included 25 sections addressing matters such as:

- Respondent airport information;
- Airport type, role, and activity levels;
- Employment and economic benefits;
- Impacts from COVID-19;
- Infrastructure conditions and requirements; and
- Financial viability and performance.

It is the understanding of AMCO and HM Aero, as of May 2022, that the survey has been administered and responses have been received. However, the results of the 2021 Municipal Airport Survey have not been publicly released.

London International Airport

5 ECONOMIC VALUE AND BENEFITS

Ontario's airports are unique economic assets that serve as direct sources of on-site employment and business activity; enablers that assist the efficient and effective functioning of other business sectors; and as connectivity hubs supporting the flow of passengers and cargo. The economic value of Ontario's airports is explored herein in terms of supporting passenger and cargo air services, corporate aviation, and other aviation commercial operators and on-site employers.

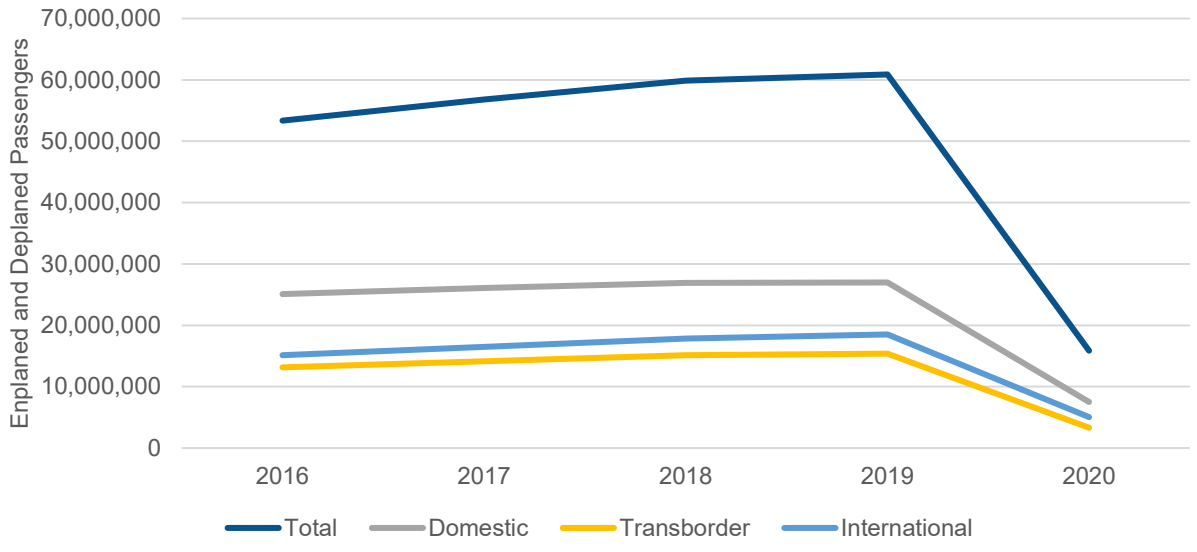
5.1 Passenger Air Services

5.1.1 Primer

Scheduled and charter passenger air services are a key driver of economic activity in Ontario. As shown in Figure 5.1, total passenger activity in Ontario was increasing by an average of 4.5% per year prior to the COVID-19 pandemic. The economic importance of the passenger air services facilitated by Ontario's airports includes supporting:

- Domestic and international travellers entering Ontario and engaging in the provincial tourism economy. Based on data published by Destination Ontario, the tourism sector contributed $34.8B to the provincial Gross Domestic Product (GDP) in 2017 and generated 401,000 jobs in the same period;
- Domestic, transborder, and international connectivity to support business operations, including the movement of staff and executives; customers; and trade missions; and
- Recreational travel for Ontario's residents (i.e., the visiting friends and relatives market).

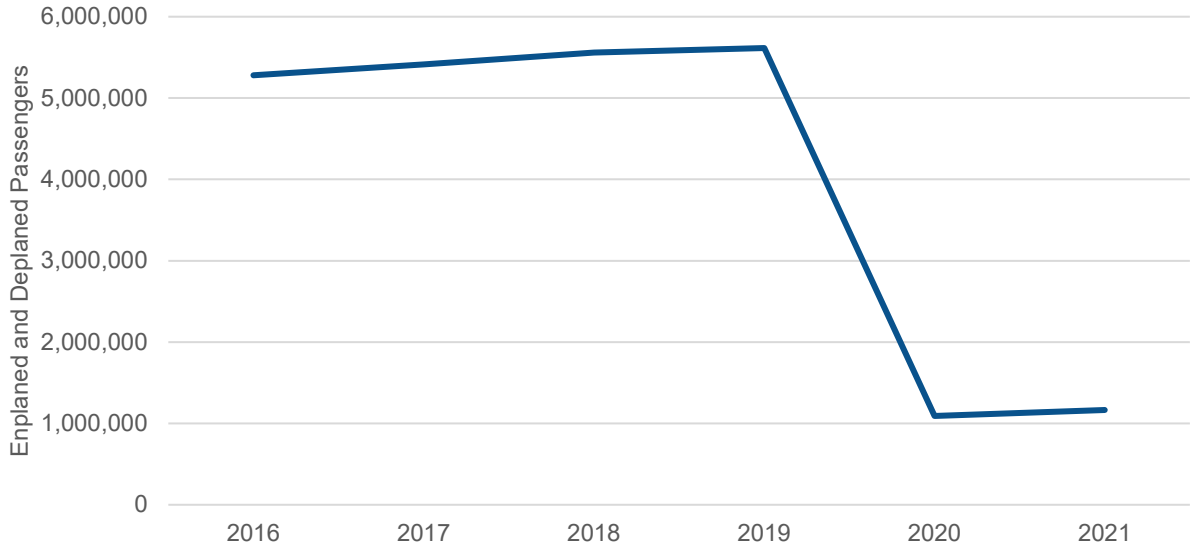
Figure 5.1 - Annual Enplaned and Deplaned Passengers in Ontario (Statistics Canada)



5.1.2 Airport Survey Data

Among the 42 survey respondent airports, 38% support scheduled services by passenger air carriers and an additional 30% reported passenger activity data by other operators (e.g., charter providers and corporate aircraft). As shown in Figure 5.2, total enplaned / deplaned passenger activity at the 28 respondent airports was increasing by an average of 2.1% annually between 2016 and 2019, from 5,281,000 passengers in 2016 to 5,615,000 passengers in 2019.

Figure 5.2 - Survey Respondent Airport Total Enplaned / Deplaned Passengers



Passenger activity among the respondent airports is primarily concentrated at the NAS and Regional Passenger airports, with these 15 facilities handling 99% of the total average annual activity submitted by the survey respondents. As shown in Table 5.1, the two NAS respondent airports (London and Thunder Bay) serve the greatest number of passengers per year, consistent with their original inclusion in the NAS. Regional Passenger respondent airports served an annual average of between 301,000 and 316,000 passengers between 2016 and 2019. Among the 14 airports reporting passenger activity levels in the Community, Regional Non-Passenger, and Northern & Remote categories, these facilities generally supported 5,000 or fewer annual passengers.

Table 5.1 - Survey Respondent Airports Average Annual Passenger Movements

Study Category	Respondents	2016	2017	2018	2019	2020	2021
Community	7	243	199	221	211	118	128
NAS	2	660,863	682,777	703,341	758,061	184,589	202,898
Northern & Remote	5	5,039	5,185	5,135	5,010	3,267	3,528
Regional Non-Passenger	2	850	937	996	1,055	384	352
Regional Passenger	13	301,317	308,017	316,255	312,003	53,558	56,214

5.1.3 Key Conclusions

1. The movement of passengers by air for business and leisure purposes is a key element of Ontario's economy. Air transportation allows Ontarian businesses to operate and compete nationally and globally while providing access for external business development and tourism.
2. While the capacity and volumes vary by airport size and role, all survey respondent airports have been involved in passenger air services to some extent.

Air carrier operations at Windsor International Airport

5.2 Cargo Air Services

5.2.1 Primer

Like passenger air services, air cargo services can be offered through scheduled and chartered operations utilizing dedicated all-cargo aircraft. Additionally, air cargo can be transported in the baggage hold ("belly") of passenger aircraft that is not occupied by passenger baggage. Supporting scheduled air cargo operations typically requires an airport to have dedicated cargo aprons, warehousing or processing facilities, and specialised mobile equipment. Conversely, chartered or ad hoc air cargo operations can be accommodated at most airports depending on the size of the aircraft, nature of the cargo, and frequency of operations.

The selection of air transportation for the movement of goods is dependent on the value of the cargo and the time sensitivity of its delivery. Typically having the highest cost when compared to ground transportation alternatives, air transportation may be avoided when a city or region has access to road, rail, or marine networks and the cargo is large or does not need to be transported quickly. However, some northern and remote communities are reliant on air cargo for all or part of the year for the shipment of all necessary goods.

Air cargo services provide the public access to high value items in a timely manner, allow Ontario's businesses access to global markets, and deliver critical goods to northern and remote communities.

5.2.2 Airport Survey Data

Consistent with the primer, scheduled cargo operations are most common at NAS, Regional Passenger, and Northern & Remote Airports, although one Community airport did indicate that they receive scheduled cargo flights more than 30 times annually. Conversely, 30 of the 42 surveyed airports (71%) identified that they never experience scheduled cargo flights.

Survey responses show that charter cargo operations are more common than scheduled cargo with 10 airports (24%) frequently supporting charter cargo operations and only 15 airports (36%) never supporting charter cargo flights.

Air cargo throughput volumes provided by survey respondents indicates that NAS and Regional Passenger airports process the most air cargo followed by Remote & Northern airports. It is important to note that while Regional Non-Passenger and Community airports process relatively low annual volumes of air cargo, the cargo they do process may be of great value and importance to the businesses and organizations that rely upon them, such as the movement of just-in-time cargo to support industrial processes.

Table 5.2 - Survey Respondent Airports Pre-Pandemic Air Cargo Operations

Study Category	Scheduled Cargo				Charter Cargo			
	Frequently (>30 flights / year)	Occasionally (10-30 flights / year)	Rarely (<10 flights / year)	Never	Frequently (>30 flights / year)	Occasionally (10-30 flights / year)	Rarely (<10 flights / year)	Never
Community	1			15	1		5	10
NAS	1			1	1	1		
Northern & Remote	1		1	4	2	1	3	1
Regional Non-Passenger				4	1		1	2
Regional Passenger	5		1	6	5	2	4	2
Total	**8**		**2**	**30**	**10**	**4**	**13**	**15**

Table 5.3 - Survey Respondent Airports Air Cargo Throughput (2019)

Study Category	Respondents	Total Throughput (kg)	Average Throughput per Airport (kg)
Community	10	1,500	94
NAS [1]	2	1,866,700	933,350
Northern & Remote	3	250,039	35,720
Regional Non-Passenger	2	20,700	5,175
Regional Passenger	8	13,445,756	1,034,289
Total	**25**	**15,584,695**	**623,388**

Notes

[1] The NAS survey response airports' cargo data was sourced from Statistics Canada. Table 23-10-0254-01 Air cargo traffic at Canadian airports, annual

5.2.3 Key Conclusions

1. Access to air cargo is of critical importance to the economy of Ontario, providing businesses with access to national and global markets and necessary goods to northern & remote communities; and
2. Scheduled air cargo operations are most common at NAS and Regional Passenger airports, although all airport types are at least somewhat involved in supporting air cargo operations.

5.3 Corporate Aviation

5.3.1 Primer

Corporate aviation, also known as business aviation, typically involves the transportation of executives or employees using company-owned aircraft. This allows personnel to travel quickly and efficiently without reliance on scheduled passenger air services, which are often associated with delays or cancellations. Corporate aviation activities are commonly conducted using smaller single and twin-engine turboprop aircraft and helicopters as well as larger multi-engine jet aircraft.

The use of corporate aircraft by companies allows executives to visit multiple plants, facilities, or regional offices in one day – a trip that could take multiple days using scheduled passenger services or ground transportation. The advent of fractional ownership in corporate aviation has allowed companies to invest in a portion of a corporate aircraft, similar to a time share, to reduce the high costs often associated with outright ownership.

5.3.2 Airport Survey Data

Survey respondents indicated that their facilities are generally frequently used for corporate aviation operations, with 27 of 42 (64%) stating that they handle more than 30 flights per year. Only 3 of the respondent airports (7%) claimed to never support corporate aviation. Importantly, 10 of 16 Community airports (63%) who responded to the survey frequently support flight operations in the corporate aviation category.

Table 5.4 - Survey Respondent Airports Pre-Pandemic Corporate Aviation Operations

Study Category	Frequently (>30 flights / year)	Occasionally (10-30 flights / year)	Rarely (<10 flights / year)	Never
Community	10		4	2
NAS	2			
Northern & Remote	2	2	2	1
Regional Non-Passenger	2	2		
Regional Passenger	11	1	1	
Total	**27**	**5**	**7**	**3**

5.3.3 Key Conclusions

1. Corporate aviation is important to the efficient operation of businesses and organizations and is regularly used in Ontario; and
2. All airport types surveyed support corporate aviation operations with most handling more than 30 corporate flights per year.

5.4 Other Commercial Operations

5.4.1 Primer

The Statistics Canada's other commercial category includes flights performed by Canadian Transportation Agency licensed aircraft operators that are not encompassed within the passenger and air cargo air carrier operations. These may include commercial operations such as flight schools, agricultural application, surveying, and photography.

5.4.2 Airport Survey Data

Most survey respondents (93%) indicated that they support other commercial operations, with 26 of 42 (64%) stating that they witness more than 30 flights per year (Table 5.5). Like corporate aviation, only 3 of the respondent airports (7%) claimed to never support other commercial activities. 9 of 16 Community airports (56%) responded that they frequently support other commercial operations.

Table 5.5 - Survey Respondent Airports Pre-Pandemic Other Commercial Operations

Study Category	Frequently (>30 flights / year)	Occasionally (10-30 flights / year)	Rarely (<10 flights / year)	Never
Community	9	3	1	3
NAS	2			
Northern & Remote	3	4		
Regional Non-Passenger	3	1		
Regional Passenger	9	4		
Total	**26**	**12**	**1**	**3**

5.4.3 Key Conclusion

1. The majority of the respondent airports frequently support other commercial aviation operations such as flight schools, agricultural application, surveying, and photography.

Flight training aircraft at Goderich Regional Airport

5.5 On-Site Employment and Economic Impact Estimates

5.5.1 Primer

Airports directly employ staff to manage and maintain their facilities. They may be employees of airport authorities, municipal departments, or be a contracted third party. Additionally, businesses located on airports are employers and may range from smaller 5-10 employee flight schools to very large maintenance, repair, and overhaul employing over 300 staff. Employment, when combined with other metrics including contribution to GDP, quantify the economic benefit of an airport.

Economic benefits can be categorized as direct, indirect, and induced:

1. **Direct**: These effects are generated immediately through aviation activity. There are no intermediate steps between aviation activity and the calculated benefits.
2. **Indirect**: Airport businesses make many off-airport expenditures. The methods of economic impact analysis distinguish between benefits occurring within the footprint of the airport and those outside of it. Indirect benefits measure the importance of the tenants' expenditures on goods and services that occur outside of the airport. For example, an airport tenant may purchase goods or services from companies outside of the airport or a Fixed Base Operator might purchase catering services from a firm in town. The catering firm will increase its employment and contribution to GDP accordingly. Although attributable to the airport, they do not occur on the airport site.
3. **Induced**: The employees of on-airport firms and off-airport suppliers receive wages and salaries which they spend in the community to purchase other goods and services. These expenditures support further employment, GDP, and labour income. The process continues indefinitely, with each further round being smaller than the one immediately before it. The total impact of every successive round can be expressed as a multiple of the initial direct stimulus. The induced impacts are frequently referred to as “multiplier effects.” The Statistics Canada input-output model provides multipliers for each province, using detailed information on business expenditures.

When combined, these effects represent the total economic benefit generated by an airport.

5.5.2 Airport Survey Data

Survey respondents provided the number of Full-Time Equivalent (FTE) positions employed by the facility owner, either directly or through a contracted service provider (Table 5.6). The average number of FTEs varies considerably by airport type. Larger NAS and Regional Passenger airports commonly have dedicated internal departments including operations, administration, marketing, maintenance, and human resources. By comparison, Regional Non-Passenger, Northern & Remote, and Community airports are often supported by centralized departments serving a larger municipality or region.

Table 5.6 - Survey Respondent Airports Employment by Airport Operator (2019)

Study Category	Respondents	Total Airport Operator Employees	Average Operator Employees per Airport
Community	16	56	4
NAS	2	81	41
Northern & Remote	7	17	2
Regional Non-Passenger	3	18	6
Regional Passenger	13	441	34
Total	**41**	**613**	**15**

Additionally, survey respondents were requested to indicate the number of FTE positions generated by airport tenants and businesses (Table 5.7). Like airport employees, NAS and Regional Passenger airports have the most airport tenant employees on average. This may be attributed to heavily personnel dependent passenger processing activities. Airlines and concessions operating in terminal buildings support the movement of passengers at NAS and Regional Passenger airports. While some Northern & Remote airports do support air passenger services, it is on a far smaller scale that NAS and Regional Passenger airports. Additionally, NAS and Regional Passenger airports are typically situated in larger urban centres, making them more attractive to larger aviation businesses in terms of both a large skilled labour force and access to complementary suppliers and vendors.

Table 5.7 - Survey Respondent Airports Employment by On-Site Tenants (2019)

Study Category	Respondents	Total Tenant Employees	Average Tenant Employees per Airport
Community	15	567	38
NAS	1	750	750
Northern & Remote	4	24	6
Regional Non-Passenger	3	550	183
Regional Passenger	12	3815	318
Total	**35**	**5,706**	**163**

5.5.3 Economic Assessment Data

To supplement survey responses, the project team reviewed publicly available economic assessment documents published by respondent airports. In addition to jobs, the assessments measure economic benefit through labour income as well as contribution to the GDP. The sample of airports presented in Table 5.8 represents a variety to facility types and sizes. These airports each generate between 104 to 799 total FTEs, $6.7 million to $51.51 million in total labour income, and $9.8 million and $74 million in total GDP contribution.

Table 5.8 - Airport Economic Impact Estimate Data

Airport	Jobs (FTE)		Labour Income		Contribution to GDP	
	Direct	Total	Direct	Total	Direct	Total
North Bay	424	734	$ 19,000,000	$ 35,000,000	$ 28,000,000	$ 57,000,000
Oshawa	215	438	Not Published	Not Published	$ 28,300,000	$ 57,800,000
Parry Sound	63	104	$ 4,200,000	$ 6,700,000	$ 5,500,000	$ 9,800,000
Peterborough	382	799	$ 33,300,000	$ 51,100,000	$ 36,500,000	$ 74,000,000
Sault Ste. Marie	233	430	$ 13,274,000	$ 23,954,000	$ 20,665,000	$ 39,300,000

5.5.4 Key Conclusions

1. Ontario airports are significant generators of highly skilled employment in the communities they serve. On average, survey respondent airports generate between 8 and 791 FTEs.
2. The economic value of Ontario airports extends beyond the movement of passengers and goods. Considering the direct, indirect, and induced effects of employment, labour income, and contribution to GDP, Ontario's airports produce significant economic benefit for the province.

6 SOCIAL VALUE AND BENEFITS

The social value of Ontario's airports is expressed in terms of their benefits in supporting air services and other activities that enhance the quality of life of the province's residents and contribute to the functioning of essential public services. Unlike economic benefits that can commonly be expressed through quantitative metrics (e.g., the number of jobs supported, the value added to the provincial GDP), the social value of Ontario's airports cannot be expressed in numerical values alone. For example, while the frequency with which a given airport supports air ambulance or wildfire suppression operations can be counted, such metrics do not communicate the value of expedient access to healthcare or the protection to life, property, and the natural environment through effective firefighting.

Profiled in the following sections are seven of the primary elements that define the social value of Ontario's airports, including a primer on each topic and data applying how each element is supported by surveyed facilities.

6.1 Air Ambulance Operations

6.1.1 Primer

In the context of this Study, air ambulance operations include all flights operated by fixed-wing and rotary-wing aircraft while fulfilling healthcare system roles. In Ontario, Ornge is the not-for-profit corporation that provides air ambulance services through its fleet of Leonardo AW-139 helicopters (12) and Pilatus PC-12 fixed-wing aircraft (8). Ornge missions are operated from its bases at airports in the following Ontarian communities: Kenora, Sioux Lookout, Thunder Bay, Moosonee, Timmins, Sudbury, Ottawa, London, and Toronto. Ornge also engages subcontracted air carriers through standing agreements to provide supplementary fixed-wing transportation services, with examples including Thunder Airlines, Air Bravo, and SkyCare Air Ambulance.

Table 6.1 - Ornge Air Ambulance Data, 2019/2020 and 2020/2021

Platform	Missions		Patients Transported	
	2019/2020	2020/2021	2019/2020	2020/2021
Fixed-Wing Operations	6,059	5,977	11,006	9,961
Rotary-Wing Operations	2,226	2,164	2,370	2,254
Source: Ornge. (September 29, 2021). *Annual Report (2020-2021).*				

Airports throughout Ontario are used by fixed-wing and rotary-wing platforms tasked in a variety of air ambulance missions, including:

- Interfacility patient transfers, whereby individuals are typically transported from community or regional healthcare centres to higher level of care facilities. In 2020/2021, 92% of Ornge's patient transports were interfacility transfers;
- Organs and tissue transportation flights operated on behalf of the Trillium Gift of Life Network; and
- Interfacility patient transfers between facilities with excess demand and residual capacity to balance overall hospital system capacity. Such operations became increasingly commonplace during the peaks of the COVID-19 pandemic.

While helipads are collocated with many of the hospitals and healthcare centres located throughout Ontario, airports continue to be essential in numerous cases, with examples including:

- Fixed-wing resources being dispatched according to patient care requirements, fleet availability, and other operational factors;
- Helipads that are not properly equipped to support rotary-wing operations (e.g., lacking Instrument Flight Procedures); and
- When refuelling is required.

6.1.2 Airport Survey Data

With respect to the 42 airports that completed the outreach survey:

- 76% of respondents stated that their facility frequently supports air ambulance operations. An additional 17% stated that their facility occasionally supports such operations, while 7% said that their facility rarely is used for air ambulance missions (Table 6.2);
- None of the respondents stated that their airport is never used for air ambulance operations;
- Air ambulance operations most frequently occur at Regional Passenger, Regional Non-Passenger, Northern and Remote, and NAS airports; and
- While Northern and Remote airports typically serve smaller catchment areas / communities, their importance for air ambulance operations is underscored by all respondents in this category stating that missions frequently occur in a typical year. When classified based on their geography, 90% of airports in northern Ontario identified that they frequently support air ambulance operations versus 62% of airports in southern Ontario (Table 6.3).

Table 6.2 - Survey Response Airports, Air Ambulance Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Community	7	44%	6	38%	3	19%		
NAS	2	100%						
Northern and Remote	7	100%						
Regional Non-Passenger	3	75%	1	25%				
Regional Passenger	13	100%						
Total	**32**	**76%**	**7**	**17%**	**3**	**7%**	**0**	**0%**

Table 6.3 - Survey Response Airports by Geography, Air Ambulance Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Northern Ontario	19	90%			2	10%		
Southern Ontario	13	62%	7	33%	1	5%		
Total	**32**	**76%**	**7**	**17%**	**3**	**7%**	**0**	**0%**

The pandemic also affected air ambulance operations at the survey respondent airports (Table 6.4):

- The majority of respondent facilities (54%) stated that air ambulance operations stayed at similar levels to their pre-pandemic reference year;
- Approximately one third (29%) of respondents stated that their level of air ambulance activity increased during the pandemic; and
- Among Regional Passenger airports, all survey respondents stated that their facilities frequently supported air ambulance operations prior to COVID-19. However, 62% of airports in this category also stated that such operations increased in frequency during the pandemic.

While air ambulance activity in select community and northern / remote airports decreased during the COVID-19 pandemic, the overall trend exhibited among the respondent airports was that the public health crisis resulted in stable or increased requirements for air ambulance transportation.

Table 6.4 - Survey Response Airports, Air Ambulance Operations (COVID-19 Impacts)

Study Category	Similar Levels		Decreased Levels		Increased Levels	
Community	8	53%	5	33%	2	13%
NAS	2	100%				
Northern and Remote	3	43%	2	29%	2	29%
Regional Non-Passenger	4	100%				
Regional Passenger	5	38%			8	62%
Total	**22**	**54%**	**7**	**17%**	**12**	**29%**

6.1.3 Key Conclusions

1. Rotary-wing and fixed-wing operations by Ornge and contracted air carriers are an important element of the functioning of Ontario's healthcare system;
2. Ontario's airports are permanent bases of operations for Ornge's aviation assets and also support interfacility patient transfers, organ and tissue transportation flights, and healthcare system capacity redistribution missions;
3. 76% of surveyed airports frequently support air ambulance missions, while an additional 17% occasionally support such activities; and
4. During the COVID-19 pandemic, 29% of surveyed airports accepted increased levels of air ambulance missions.

6.2 Search and Rescue

6.2.1 Primer

Search and Rescue (SAR) operations in Ontario include a multitude of federal, provincial, municipal, and private stakeholders that work to minimize the risk of injury or loss of life according to their respective mandates, working either independently or cooperatively. Based on the Government of Canada's National Search and Rescue Program, examples of the breakdown of responsibilities among different stakeholders are as follows:

- The Royal Canadian Air Force (RCAF) provides SAR for aeronautical incidents;
- The Canadian Coast Guard (CCG) is responsible for marine incidents;
- Parks Canada oversees SAR in national parks;
- Overland SAR is the responsibility of the provincial government, including the local police force of jurisdiction and the Ontario Provincial Police (OPP); and
- Volunteer organizations, such as the Civil Air Search and Rescue Association (CASARA) and Ontario Search and Rescue Volunteer Association, provide supplementary support.

Depending on the nature of the SAR mission, fixed-wing and rotary-wing aircraft are key tools used by the various groups described above to find and extract individuals in a time-effective manner. While the RCAF, CCG, and OPP may dispatch their aerial assets from their permanent bases in locations such as Trenton, Parry Sound, and Orillia, respectively, airports throughout the province are used for mid-mission refuelling and support. This enables aircraft and crews to operate effectively in the vicinity of SAR areas of interest. CASARA units also operate from airports throughout the province.

6.2.2 Airport Survey Data

Based on the data provided by the survey respondent airports, the following conclusions are made:

- SAR operations among respondent airports primarily occur on an occasional or rare basis (69% of respondent airports) – this is reflective of the infrequent yet high importance nature of these missions;
- SAR operations occur at all categories of airports throughout the province based on mission requirements; and
- The distribution of SAR activity encompasses airports in both northern Ontario and southern Ontario, with similar proportions of respondents identifying that their facility frequently or occasionally supports such operations in a typical year (Table 6.6).

Table 6.5 - Survey Response Airports, Search and Rescue Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Community	4	25%	5	31%	4	25%	3	19%
NAS	1	50%	1	50%				
Northern and Remote			2	29%	5	71%		
Regional Non-Passenger	1	25%	1	25%	1	25%	1	25%
Regional Passenger	3	23%	5	38%	5	38%		
Total	**9**	**21%**	**14**	**33%**	**15**	**36%**	**4**	**10%**

Table 6.6 - Survey Response Airports by Geography, Search and Rescue (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Northern Ontario	5	24%	5	24%	9	43%	2	10%
Southern Ontario	4	19%	9	43%	6	29%	2	10%
Total	**9**	**21%**	**14**	**33%**	**15**	**36%**	**4**	**10%**

6.2.3 Key Conclusions

1. Aviation assets are used by the RCAF, OPP, CCG, CASARA, and other organizations to support SAR activities according to each organization's mandate;
2. Airports throughout Ontario are used as permanent SAR bases and to support mid-mission refuelling and operations, improving the ability of SAR organizations to operate effectively near areas of interest; and
3. Airports of all types in both northern and southern Ontario are used to support SAR operations based on mission-specific requirements.

6.3 Wildfire Suppression

6.3.1 Primer

The management of wildland fires is the responsibility of the Government of Ontario's Ministry of Northern Development, Mines, Natural Resources, and Forestry (NDMNRF). The province's Wildland Fire Management Strategy establishes three overarching goals:

1. Prevent loss of human life and injury;
2. Prevent and mitigate losses, economic disruption, and social disruption;
3. Promote the understanding of the ecological role of fire and use fire to benefit resource management.

NDMNRF utilizes a fleet of aviation assets and personnel to conduct wildfire detection and response efforts to extinguish or manage fires and to protect values at risk. The NDMNRF's aviation assets include a fleet of Canadair CL-415s (9) that are used in wildfire attacks; De Havilland Canada DHC-2T Turbo Beavers (5) and DHC-6 Twin Otters (6) that are used for the transportation of crews and supplies; and Eurocopter helicopters (8) that are used for wildfire suppression and transportation. Private air carriers and resources from other provinces are also deployed by the NDMNRF to provide wildfire-related services when necessary. Wildfire suppression aircraft are operated from permanent bases at airports such as Geraldton, Dryden, and Thunder Bay, as well as temporary bases at other airports based on operational priorities.

Ontario's airports are also used on an as-required basis to support community aerial evacuations in response to wildfire threats. Using the 2021 wildfire season as an example, Dryden Regional Airport served as a transportation hub for individuals evacuating from the fire-threatened Deer Lake First Nation before being transported onwards to Ottawa and Cornwall.

As a result of climate change, it is expected that the severity and frequency of wildfire activity will increase in the coming years in Ontario. Research completed by the Great Lakes Forestry Centre in 2005[3] modelled that the mean summertime temperature in Ontario will increase by between 1.0°C and 1.5°C by 2040 and by between 4.0°C and 5.0°C by 2090. As a result of these conditions, the Great Lakes Forestry Centre's research estimated that there will be a 15% increase by 2040 in the total number of wildfires. These changes are consistent with historical increases in fire activity and will further emphasize the importance of effective and timely aerial wildfire suppression operations in Ontario to reduce losses to life, property, and the natural environment.

6.3.2 Airport Survey Data

Consistent with the primer on wildfire operations provided above, activity in this category is more prevalent at airports in northern Ontario versus southern Ontario. As shown in Table 6.8, 71% of respondent airports in northern Ontario frequently support wildfire suppression operations in a typical year.

Table 6.7 - Survey Response Airports, Wildfire Suppression Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Community	2	13%			4	25%	10	63%
NAS	1	50%					1	50%
Northern and Remote	5	71%	1	14%			1	14%
Regional Non-Passenger	2	50%			1	25%	1	25%
Regional Passenger	7	54%	1	8%	1	8%	4	31%
Total	**17**	**40%**	**2**	**5%**	**6**	**14%**	**17**	**40%**

Table 6.8 - Survey Response Airports by Geography, Wildfire Suppression Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Northern Ontario	15	71%	2	10%	2	10%	2	10%
Southern Ontario	2	10%			4	19%	15	71%
Total	**17**	**40%**	**2**	**5%**	**6**	**14%**	**17**	**40%**

[3] Wotton, M.; Logan, K.; McAlpine, R. (2005). *Climate change and the future fire environment in Ontario: Fire occurrence and fire management impacts in Ontario under a changing climate.*

6.3.3 Key Conclusions

1. Aerial assets are a key element of the NDMNRF's approach to wildfire detection and management and contribute to the minimization of losses to life, property, and the natural environment;
2. Wildfire frequency and intensity is expected to increase as a result of climate change in the future, further solidifying the importance of aerial wildfire suppression capabilities;
3. Ontario's airports support permanent and temporary wildfire suppression bases as aerial assets are deployed to attack emerging conditions and facilitate aerial evacuations for wildfire-threatened communities; and
4. Over 80% of airports in northern Ontario frequently or occasionally support wildfire suppression operations in a typical year.

NDMNRF wildfire suppression CL-415s parked at Kenora Airport

6.4 Law Enforcement

6.4.1 Primer

Fixed-wing and rotary-wing assets are utilized by a range of law enforcement agencies across Ontario in support of the various mandates of each organization, including traffic enforcement, searches for missing or wanted persons, pursuits, surveillance and scene awareness, and other roles. Examples of local police forces in Ontario that maintain air support units include:

- Durham Regional Police Service – Bell 207 JetRanger;
- York Regional Police Service – Airbus EC-120B; and
- Ottawa Police Service – Cessna 207.

The OPP maintains a fleet of two EC135 helicopters, a Pilatus PC-12, and a Cessna 206 through its Aviation Services division. These aircraft are used for numerous operational purposes throughout the province, including traffic enforcement, overland searches, tactical operations, surveillance, and to transport OPP personnel and prisoners between communities. The Royal Canadian Mounted Police (RCMP) similarly utilizes its Air Services Branch to provide operational support across Canada, including in Ontario.

6.4.2 Airport Survey Data

Among the 42 respondent airports, 67% identified that they frequently or occasionally support law enforcement operations in a typical year, while 33% of respondent facilities rarely or never handle such operations (Table 6.9). As shown in Table 6.10, respondent airports in both northern Ontario and southern Ontario support law enforcement operations. The frequency of such operations is higher among respondent airports in southern Ontario (76% frequently or occasionally support these flights) versus northern Ontario (57%). However, a significant proportion of airports in northern Ontario (43%) host law enforcement operations on a limited basis, which may be attributable to the reduced need for the deployment of aerial assets in these areas.

Table 6.9 - Survey Response Airports, Law Enforcement Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Community	5	31%	5	31%	3	19%	3	19%
NAS	2	100%						
Northern and Remote	1	14%	2	29%	4	57%		
Regional Non-Passenger	2	50%			2	50%		
Regional Passenger	5	38%	6	46%	2	15%		
Total	**15**	**36%**	**13**	**31%**	**11**	**26%**	**3**	**7%**

Table 6.10 - Survey Response Airports by Geography, Law Enforcement Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Northern Ontario	7	33%	5	24%	9	43%		
Southern Ontario	8	38%	8	38%	2	10%	3	14%
Total	**15**	**36%**	**13**	**31%**	**11**	**26%**	**3**	**7%**

6.4.3 Key Conclusions

1. Aerial assets are used by select local police forces, the OPP, and RCMP in support of law enforcement activities;
2. 67% of respondent airports occasionally or frequently support law enforcement operations in a typical year; and
3. Aerial assets are used by law enforcement agencies in both southern Ontario and northern Ontario.

6.5 Emergency Management

6.5.1 Primer

Emergency management is a broad term that encompasses the response to a wide range of natural and human-caused incidents and disasters. Examples of different types of emergencies that may warrant a significant response include earthquakes, floods, wildfires (Section 6.3), landslides, tornadoes, winter storms, pandemics (Section 6.6), and incidents pertaining to oil, gas, and nuclear facilities. Emergency Management Ontario is the provincial agency responsible for ensuring the implementation of emergency management programs in the province, while the Provincial Emergency Operations Centre coordinates the provincial response to major emergencies. Municipal governments are also responsible for preparing emergency management programs.

Given the diverse range of emergencies that have the potential to occur in Ontario, response efforts will vary depending on the nature of the applicable situation. Ontario's network of airports is available to support emergency management efforts. While their function will depend on the nature of the given emergency, examples of emergency management roles supported by airports include:

- Serving as originating and receiving community and medical evacuation centres;
- Facilitating the arrival of emergency response personnel, supplies, and specialized cargo;
- Acting as a base of operations for airborne response resources, such as military and police fixed-wing and rotary-wing aircraft; and
- Providing specialized infrastructure (e.g., hangars, backup generation systems, communication networks) that can be leveraged to support response efforts.

The role of airports as emergency management assets was exemplified in 2021 with Dryden Regional Airport serving as a transportation hub and evacuation centre during the Deer Lake First Nation wildfire event.

RCAF CC-130 Hercules operating at Dryden Regional Airport (Credit: The Loomex Group)

6.5.2 Airport Survey Data

Unlike other social roles of airports that occur on a more regular basis (e.g., air ambulance, wildfire suppression, and law enforcement missions), high-severity emergencies that warrant the use of aviation resources are less frequent in nature. While such emergency events are by nature unpredictable, airports remain available on an as-required basis to support response efforts. 68% of respondent airports rarely or do not support emergency management operations in a typical year, while 32% of respondents frequently or occasionally support such activities (Table 6.11). The prevalence of emergency management operations is higher at respondent airports in northern Ontario, with 50% of respondents frequently or occasionally handling such activities versus 15% of respondent airports in southern Ontario (Table 6.12).

Table 6.11 - Survey Response Airports, Emergency Management Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Community			1	7%	1	7%	13	87%
NAS	1	50%			1	50%		
Northern and Remote	1	14%	2	29%	3	43%	1	14%
Regional Non-Passenger	1	25%	2	50%			1	25%
Regional Passenger	2	15%	3	23%	4	31%	4	31%
Total	**5**	**12%**	**8**	**20%**	**9**	**22%**	**19**	**46%**

Table 6.12 - Survey Response Airports by Geography, Emergency Management Operations (Typical Year)

Study Category	Frequently (> 30 annual flights)		Occasionally (10-30 annual flights)		Rarely (< 10 annual flights)		Never	
Northern Ontario	4	20%	6	30%	6	30%	4	20%
Southern Ontario	1	5%	2	10%	3	14%	15	71%
Total	**5**	**12%**	**8**	**20%**	**9**	**22%**	**19**	**46%**

6.5.3 Key Conclusions

1. Airports are key assets in supporting significant emergency response efforts and can serve as transportation and evacuation centres and bases for response operations.
2. While significant emergencies are unpredictable, Ontario's airports are continually maintained and available to support response efforts when required.
3. Airports in northern Ontario more frequently support emergency management operations, with 50% of respondent airports handling emergency response activities in a typical year.

6.6 COVID-19 Pandemic Response

6.6.1 Primer

In response to the COVID-19 pandemic that began in late 2019, the Government of Ontario declared a provincial emergency on March 17, 2020. The COVID-19 pandemic has had significant and widespread impacts across the province, including but not limited to widespread transmission throughout the population, health complications and deaths, capacity and care stresses to the healthcare system, and negative economic impacts. The impacts of the COVID-19 pandemic to Ontario's airports are explored in Section 7.1.

Throughout the pandemic, air transportation and airports have been used to support the multifaceted response efforts required to protect public health. Examples have included:

- The transportation of medical supplies and Personal Protective Equipment between healthcare centres. Volunteer pilots with Hope Air, for example, transported supplies from the Greater Toronto Area to remote communities such as Kapuskasing and Manitoulin;
- Interfacility patient transfers from overloaded hospitals to healthcare centres with residual capacity to balance the overall system. In April 2021, Ornge was tasked with transferring patients between hospitals located throughout the province, including 65 patients and 53 patients by fixed-wing and rotary-wing assets, respectively[4]. Airports were used as originating and receiving transportation points for fixed-wing and select rotary-wing missions;
- Air cargo hubs, such as Toronto Pearson International Airport and Hamilton International Airport, being used for the receipt of vaccination shipments from international suppliers; and
- Airports used as part of Operation Remote Immunity; an initiative spearheaded by Ornge to assist vaccination efforts in 31 fly-in First Nations communities in northern Ontario.

As will be explored in Section 7.1, the COVID-19 pandemic has had significant negative impacts to many airports in Ontario, as activity and revenues have declined because of public health measures. Despite these challenges, airport operators have continued to ensure the availability of their facilities to support effective pandemic responses, as well as for the other roles served as described throughout this Study.

6.6.2 Airport Survey Data

Respondent airports were asked to identify whether their facility supported one or more of the following pandemic-related measures:

- The transportation of supplies and medical personnel to support vaccination efforts;
- Intercommunity transport flights for medical staff being deployed to under resourced communities;
- The shipment of Personal Protective Equipment, medical supplies, and other pandemic-related cargo.

As shown in Table 6.13, 26% of respondent airports were used to support vaccine campaign efforts, 31% were used for the transportation of medical supplies, and 40% facilitated the movement of medical personnel. Consistent with initiatives such as Operation Remote Immunity, a slightly higher proportion of airports in northern Ontario were used for such activities versus facilities in southern Ontario (Table 6.14).

[4] Global News. (2021, May 6). *Ornge transferred 1,125 COVID-19 patients in ICUs across Ontario in April.*

Table 6.13 - Survey Response Airports, Air Ambulance Operations (COVID-19 Impacts)

Study Category	Vaccine Distribution and Immunization Efforts		Medical Staff Transport Flights		Supply Transport Flights	
Community	2	13%	2	13%	3	19%
NAS	2	100%	2	100%	2	100%
Northern and Remote	1	14%	1	14%	1	14%
Regional Non-Passenger			3	75%	1	25%
Regional Passenger	6	46%	9	69%	6	46%
Total	**11**	**26%**	**17**	**40%**	**13**	**31%**

Table 6.14 - Survey Response Airports, Air Ambulance Operations (COVID-19 Impacts)

Study Category	Vaccine Distribution and Immunization Efforts		Medical Staff Transport Flights		Supply Transport Flights	
Northern Ontario	6	29%	9	43%	7	33%
Southern Ontario	5	24%	8	38%	6	29%
Total	**11**	**26%**	**17**	**40%**	**13**	**31%**

6.6.3 Key Conclusions

1. Ontario's airports have served, and continue to serve, vital roles during the COVID-19 pandemic;
2. Despite significant decreases in activity and revenue, airports have remained operational to support essential public services throughout the pandemic; and
3. Among surveyed airports, 26% participated in vaccination efforts, 31% supported the transportation of medical supplies, and 40% facilitated the movement of medical personnel.

Ornge Pilatus PC-12 (Credit: Ornge)

6.7 Youth and Early Career Professional Development

6.7.1 Primer

While the COVID-19 pandemic has had short-term negative impacts to the aviation workforce, the aviation and aerospace sector remains a significant source of employment and represents a key career opportunity. In March 2018, the Canadian Council for Aviation and Aerospace (CCAA) published its Labour Market Information Report – Aviation and Aerospace Industries to gain a comprehensive understanding of the labour requirements of the aviation and aerospace sectors in Canada. The CCAA 2018 study found that growth in the aviation sector is being compounded by an aging workforce and retirements, necessitating significant training and hiring requirements. The report identified a forecast need for 55,000 new aviation and aerospace workers nationwide, including 14,500 new employees in Ontario, by 2025.

While significant attention in aviation career opportunities is provided to flight crew and maintenance personnel, airport-specific disciplines also require an ongoing source of new talent, with examples including:

- Airport management;
- Operations specialists;
- Skilled trades (e.g., electricians, plumbers, heavy equipment operators);
- Air traffic controllers and flight service specialists;
- Regulatory specialists; and
- Consultants (e.g., engineering, planning).

The CCAA 2018 study forecast an 8.7% increase in employment in the supporting activities category by 2025, which includes airport-related disciplines.

Although the short-term redundancies and reduced hiring in the aviation sector that occurred during COVID-19 has temporarily skewed findings of pre-pandemic labour analyses, the need for skilled talent to enter the aviation workforce in the coming years remains. As the aviation and aerospace sector competes for the attraction of talented employees, it is imperative that the career opportunities of the aviation industry be communicated to youth to stimulate interest and that introductory work opportunities (i.e., internships and co-op placements) be provided to allow young professionals to break into the sector. Accessible education and experience-building opportunities will also be key in addressing the underrepresentation of women and other groups in the sector.

6.7.2 Airport Survey Data

Airports are often the most accessible opportunity through which youth and students can be exposed first-hand to the potential of the aviation sector. Given the distribution of these facilities throughout the province, airport tours, internships, and co-op placements are a valuable tool through which to support individuals considering future employment in the aviation sector.

A significant proportion of the 42 respondent airports support youth and career development at all levels. Approximately three quarters of respondent airports provide tours for youth groups (73%) and elementary, middle, and / or high school students (76%) (

Table 6.15). Additionally, approximately half of respondent airport operators provide opportunities for applied learning through their participation in secondary and post-secondary education co-op placements and internships. Post-secondary co-op placements and internships are an especially important pathway for the entry of new talent to the airport management and operations sector.

Table 6.15 - Survey Response Airports, Youth and Early Career Professional Development Opportunities (Typical Year)

School Tours – Elementary, Middle, and / or High School	Youth Group Tours (e.g., Air Cadets, Scouts, etc.)	High School Co-op Education Placements / Internships	Post-Secondary Co-op Education Placements / Internships
76%	73%	49%	51%

6.7.3 Key Conclusions

1. While the COVID-19 pandemic has resulted in short-term disruptions to employment in the aviation sector, there is a significant forecast requirement for new talent. This represents a key career opportunity for youth;
2. The development of new talent is imperative to ensure the competitiveness and vitality of the aviation and aerospace sector;
3. Ontario's airports actively participate in exposing youth to the opportunities of the aviation sector, with approximately three quarters of respondent airports providing tours; and
4. Airport operators are important sources of employment for early career aviation professionals, providing the first opportunity for entry into the sector. Approximately half of surveyed airport operators provide secondary and post-secondary co-op and intern education positions.

Sault Ste. Marie Airport

7 EXTERNAL ENVIRONMENT

The external environment of Ontario's airports includes contextual forces that influence their activity levels, business environments, and financial performance. Given the number and diversity of airports located throughout Ontario, all external factors cannot be enumerated given the variations that exist. However, Section 7 profiles four of the most significant forces that have and continue to affect Ontario's airports:

1. The COVID-19 pandemic;
2. Regulatory changes at the federal level;
3. Municipal financial pressures; and
4. Decreasing public and political will.

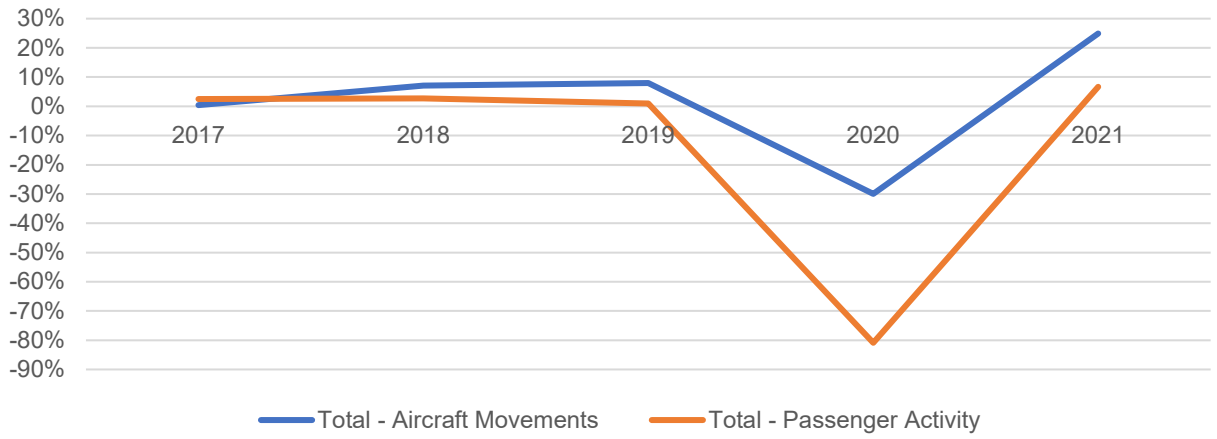
7.1 COVID-19 Pandemic

The COVID-19 pandemic declared by the World Health Organization on March 11, 2020 has had significant public health, economic, and societal impacts throughout Canada and continues to do so at the time of this Study's preparation in 2022. Ontario's airports have weathered the COVID-19 pandemic and largely have remained available for aviation operations throughout its duration – however, the public health crisis has had widespread and significant impacts that are discussed herein.

7.1.1 Airport Activity Levels

Throughout the various waves of the pandemic, public health measures have been implemented by the local, provincial, and federal levels of government with the intent of reducing virus transmission levels. This has included a myriad of restrictions and recommendations regarding intra-provincial, interprovincial, and international travel that have resulted in corresponding impacts to airport activity levels. As shown in Figure 7.1, total aircraft movements at all respondent airports were increasing by an average of 5% year-over-year between 2016 and 2019. In 2020, movements decreased by 30% from 2019 before increasing by 25% in 2021 from 2020 levels. Passenger activity levels exhibited a more significant impact – across all respondent airports that provided this data, enplaned / deplaned passenger levels were increasing by 2% annually prior to the pandemic. In 2020, passenger levels decreased by 81% versus 2019. Unlike the more rapid increase in aircraft movements in 2021, passenger levels only increased by 7% in 2021.

Figure 7.1 - Year-Over-Year Percent Change in Activity Among Survey Respondents



7.1.2 Financial Impacts

Through the comparison of operating surplus and deficit data provided by 28 of the survey respondent airports, the financial impacts of the COVID-19 pandemic can be evaluated. As shown in Table 7.1:

- 19% of the respondent airports experienced an improvement in their operating financial position during the pandemic, including 40% of Community airport respondents that derive a limited proportion of their revenues from passenger air carrier activities and may have experienced growth;
- 15% of respondents identified minimal changes in their financial position, including 100% of Regional Non-Passenger airports; similar to Community respondents, limited revenues were derived pre-pandemic from activities most impacted by public health restrictions; and
- 68% of respondent airports experienced a worsened financial position.

Table 7.1 - Survey Respondent Airport COVID-19 Operating Financial Position Impacts

Study Category	Respondents	Improved Position		No Change	Worsened Position		
		Deficit to Improved Deficit	Deficit to Surplus		Deficit to Worsened Deficit	Surplus to Deficit	Surplus to Reduced Surplus
Community	10	30%	10%	10%	50%		
NAS	1					100%	
Northern & Remote	4			25%	75%		
Regional Non-Passenger	2			100%			
Regional Passenger	10	10%			30%	50%	10%
Total	**27**	**15%**	**4%**	**15%**	**41%**	**22%**	**4%**

As shown in Table 7.2, the average decrease in financial position was approximately $653,000 among the 68% of respondent airports that incurred an increased deficit, surplus to deficit, or reduced surplus. The negative impacts were most acutely experienced at NAS and Regional Passenger respondents that derived a significant amount of revenue pre-pandemic from passenger activity, averaging impacts of $4,000,000 and $780,000 in these respective categories.

Table 7.2 - Survey Respondent Airports Pre to Post-Pandemic Negative Financial Impacts

Study Category	Respondents	Average Financial Impact	Maximum Financial Impact	Minimum Financial Impact
Community	5	-$80,285	-$180,324	-$15,000
NAS	1	-$4,000,000	-$4,000,000	-$4,000,000
Northern & Remote	3	-$108,295	-$160,000	-$64,884
Regional Passenger	9	-$780,057	-$2,216,598	-$18,617
Total	**18**	**-$652,601**	**-$4,000,000**	**-$15,000**

7.1.3 Expense Reduction Measures and Implications

As a result of the financial impacts described above, airport operators have had to implement a range of staffing, level of service, and infrastructure project decisions to reduce their expenses while ensuring the continued operational availability of their facilities.

Staffing Impacts

Temporary and permanent layoffs were most prevalent at facilities that derive a significant proportion of their revenues from passenger handling activities and that experienced a corresponding decrease in operating revenues. Based on the survey data, 50% of NAS respondents and 54% of Regional Passenger respondents had to temporarily layoff one or more staff positions (Table 7.3). With respect to permanent layoffs, 50% of NAS respondents and 46% of Regional Passenger respondents made such changes.

Table 7.3 - Pandemic-Induced Staffing Impacts

Study Category	Respondents	Temporary Layoffs of Existing Positions	Permanent Layoffs of Existing Positions	Deferred Hiring of Planned or Vacant Positions	Cancelled Hiring of Planned or Vacant Positions
Community	16	19%	6%	13%	6%
NAS	2	50%	50%	100%	50%
Northern and Remote	7		14%		
Regional Non-Passenger	4	25%			
Regional Passenger	13	54%	46%	54%	31%
Total	**42**	**29%**	**21%**	**26%**	**14%**

Hiring decisions were also made for positions that were planned or vacant at the beginning of the pandemic. As with temporary or permanent layoffs of existing positions, airports that derive a significant proportion of their revenues from passenger handling were disproportionately impacted. 100% and 54% of NAS and Regional Passenger respondents, respectively, deferred the hiring of planned or vacant positions, while 50% and 31% of NAS and Regional Passenger respondents chose to cancel their hiring for one or more planned or vacant positions.

While support programs such as the Canada Emergency Wage Subsidy were leveraged by certain operators to preserve their staffing levels, permanent layoffs of existing positions and cancelled hiring for planned or vacant positions will influence the level of service that operators can provide in the coming years until their financial positions recover.

Level of Service and Capital Project Impacts

In addition to staffing changes, Table 7.4 shows that 43% of respondent airports implemented changes to the levels of service provided at their facilities, with examples including decreased winter maintenance, modifications to hours of operation, or other similar measures. Similar to the discussion provided on staffing reductions, airports with significant pre-pandemic passenger processing roles were disproportionately impacted, with 100% of NAS airport respondents and 77% of Regional Passenger respondents having implemented level of service reductions. Despite the need to reduce their service levels to minimize operating expenses, Ontario's airports have continued to be available throughout the pandemic to support essential air services.

Table 7.4 - Pandemic-Induced Level of Service and Capital Project Impacts

Study Category	Respondents	Change to Level of Service	Deferral of Capital Project(s)	Cancellation of Capital Project(s)
Community	16	31%	38%	13%
NAS	2	100%	100%	50%
Northern and Remote	7	14%	14%	29%
Regional Non-Passenger	4		25%	25%
Regional Passenger	13	77%	77%	23%
Total	**42**	**43%**	**48%**	**21%**

Numerous airports also chose to defer or cancel planned capital projects. Project deferral or cancellation decisions were generally the result of airport financial reserves being depleted to sustain daily operations, or where the justification for the planned project (e.g., a terminal expansion to accommodate increasing passenger levels) was no longer applicable. Unlike staffing decisions that were generally confined to passenger-oriented airports, capital project deferrals and cancellations were more widespread:

- NAS and Regional Passenger respondents were the most significant impacted, with 100% and 77% of respondents deferring one or more projects, respectively, and 50% and 23% permanently cancelling one or more projects; and
- A significant proportion of Community (38%) and Regional Non-Passenger (25%) respondents temporarily deferred one or more capital projects. Considering project cancellations, 13% and 25% of Community and Regional Non-Passenger respondents, respectively, implemented such measures.

While the deferred timing of demand-driven projects, such as terminal building upgrades, may be appropriate to align with post-pandemic activity trends and forecasts, asset lifecycle maintenance (i.e., rehabilitation and reconstruction) projects continue to be essential in ensuring the operational viability of the province's airports. While the deferral of such projects has provided temporary financial reprieve to operators, their need will increase in the future as these assets continue to degrade.

7.2 Regulatory Changes

Among the 35 respondent airports that submitted comments regarding external factors, 14 (40%) identified the costs of meeting new or increased regulatory obligations as being a challenge. Certified airports and registered aerodromes must be operated in compliance with their applicable regulatory environments that are subject to change at the discretion of Transport Canada. While the federal government engages with industry stakeholders through the Canadian Aviation Regulation Advisory Council and Notice of Proposed Amendment processes and must assess the impacts of contemplated changes, a recurring concern noted among respondent airports is that the costs of adapting to new or increased regulatory obligations can be significant, yet such regulatory changes are not accompanied by funding support.

Examples of recent regulatory changes that have impacted Ontario's airports include, but are not limited to:

- **Safety Management Systems:** Through a two-phase approach in 2008 and 2009, Transport Canada instituted the requirement for airports to adopt Safety Management Systems (SMS) as a proactive tool to anticipate and address safety issues, and to investigate root causes under the aim of continuous improvement. Following Transport Canada's implementation of SMS requirements, certified airport operators have been responsible for developing their safety policies and SMS processes, training staff, implementing their SMS daily, and undertaking regular audits and corrective actions.
- **TP312 5th Edition:** TP312 – Aerodrome Standards and Recommended Practices (5th Edition) was released in 2015. TP312 5th Edition included a significant shift in the design criteria for airfield infrastructure and the surrounding obstacle environment. Although existing infrastructure assets are grandfathered based on their previous certification, certified airport operators have had to complete manual updates, gap analyses, and other tasks following the release of TP312 5th Edition at their own cost.
- **Runway End Safety Areas:** In March 2020, proposed amendments to the Canadian Aviation Regulations were published regarding the preparation of Runway End Safety Areas in response to safety concerns and international standards. Revised amendments were implemented in January 2022 that apply to airports that serve at least 325,000 enplaned / deplaned annual passengers for two consecutive years, with a three-year compliance period established. For airports that are required to comply with the Runway End Safety Area mandate, steps may include completing capital works to prepare the appropriate Areas and bearing the associated costs and / or reducing their declared runway takeoff and landing distances, with associated operational impacts.
- **Impact Assessment Act:** On August 28, 2019, the Canadian Environmental Assessment Act, 2012 was repealed and the Impact Assessment Act subsequently came into force. The Impact Assessment Act takes a more expansive approach to the airport projects that require assessment versus the Canadian Environmental Assessment Act and introduces a revised multistep process. The Region of Waterloo International Airport was the first non-federal airport in Ontario to proceed through the initial phase of the impact assessment process for its planned Runway 14-32 extension, with a subsequent determination that a fulsome impact assessment was not required.
- **Global Reporting Format:** The International Civil Aviation Organization's revised methodology for runway condition assessment and reporting (Global Reporting Format) was implemented in Canada in August 2021. The implementation of the Global Reporting Format has necessitated that airport operators revise their Winter Maintenance Plans and Standard Operating Procedures and train their staff on the revised processes.
- **Aerodrome Attestation Requirements:** In 2018, Transport Canada released Advisory Circular No. 301-001 Issue No. 2, outlining the attestation requirements for registered aerodrome operators that support Instrument Flight Procedures. Multiple registered aerodrome operators have raised concerns with Transport Canada regarding the challenges associated with assessing their obstacle environments and completing the attestation, as well as the operational implications to their Instrument Flight Procedures if the minimum obstacle environment cannot be met. The Advisory Circular has been amended to Issue No. 5 in response to industry concerns with a new attestation deadline of March 2023.

- **Airport Hours of Operation:** On January 5, 2021, Advisory Circular No. 302-031 – Publication Enhancements to Airport Information became effective. For operators of certified airports, the Advisory Circular issued guidance on elements of a facility's certification that require on-site staffing, such as runway condition reporting and wildlife management. Airport operators were required to review and submit to NAV CANADA their operating hours, including at minimum the operating hours for scheduled passenger air services. For select airport operators that support scheduled passenger air services, the direction provided in the Advisory Circular has required that staffing levels be reviewed and adjusted where required to ensure that their certified obligations are met.
- **Official Languages Act:** The Official Languages Act stipulates that federal airports and airport authorities that serve at least 1,000,000 annual enplaned and deplaned passengers are subject to bilingual communication requirements.

7.3 Municipal Financial Priorities and Pressures

As noted previously, municipal governments are extensively involved in the ownership and operation of Ontario's airports, including lower-tier governments (e.g., Towns, Townships, and Cities), upper-tier governments (e.g., Counties, Regional Municipalities), and partnerships between two or more municipalities. Among the 42 survey respondent airports, 81% are subject to some form of municipal ownership, with 64% of all respondent airports being owned by a single lower-tier municipality.

A unique element of the predominant model of ownership of Ontario's airports is that while these facilities serve provincial and national transportation needs, their ownership and funding is commonly the responsibility of local governments. This is partially a result of municipal governments proactively developing their own airports historically, but commonly is the product of these assets being downloaded to municipalities from the federal and provincial levels of government.

While the ownership of airports by the municipality or municipalities that most directly benefit from their operation can be advantageous given the priority that these entities may assign to their airport, municipal governments are responsible for an extensive range of core public services (e.g., roadways, water and sewer infrastructure, recreation, emergency services, etc.) that may be of equal or greater importance to their airport. Municipalities are limited in their ability to alter their fiscal policies as they only have the powers that are conferred to them through the Municipal Act – this balancing act is recognized by the Ontario Chamber of Commerce[5]:

> *"Long before COVID-19, municipalities' responsibilities and demand for spending had been increasing, but revenue streams remained stagnant."*

Further, just as airports face accumulated backlogs on capital rehabilitation / reconstruction projects (infrastructure deficits), municipalities face similar challenges in the maintenance and upkeep of their core assets. The Financial Accountability Office of Ontario in 2021[6] noted that the 444 municipalities in Ontario own and manage more public infrastructure than the provincial and federal governments combined, yet the report estimated that 45% of municipal assets with condition data available were not in a state of good repair and that the current municipal infrastructure backlog is between $45B and $59B.

[5] Ontario Chamber of Commerce. *Better Budgets: Bolstering the Fiscal Resilience of Ontario's Municipalities*.
[6] Financial Accountability Office of Ontario. (2021). *A Review of Ontario's Municipal Infrastructure and an Assessment of the State of Repair*.

Accordingly, the degree to which municipal governments can prioritize the operating and capital costs associated with their airports is limited by their ability to generate revenues and competing priorities of equal or greater importance. The priority assigned to municipally owned airports is also subject to change with local election cycles – as new terms of council are established, there is the potential that the value assigned to initiatives related to the airport under the municipality's control may be increased or decreased, with the latter scenario introducing further instability in this model of ownership.

As a result of the capital and operating costs associated with maintaining an airport, numerous municipalities in Ontario have divested their facilities to private purchasers. Examples of former municipal airports that have been divested in the past decade include Carp Airport (2011), Orillia Rama Regional Airport (2016), Collingwood Regional Airport (2019), Wingham / Richard W. LeVan Aerodrome (2021), Wiarton Keppel International Airport (2021), and Owen Sound Airport (2021).

7.4 Public and Political Will

A recurring theme identified by respondent airports is the challenge posed by decreased public and political will surrounding the prioritization of airport operations and growth. This challenge was observed to be more prominent among airports without scheduled passenger air services – of the 22 respondent airports in this category that submitted comments regarding the external challenges that they face, 12 (55%) identified diminished public and / or political will at the local level as being a hinderance on their success.

Municipally owned airports are highly dependent on the support of residents and the associated translation of this support to the decision-makers at council for their priorities to be advanced. Given the four-year election cycle of Ontario's municipalities, airport support is often required to be secured or reaffirmed with each new term of council to ensure that associated operating and capital cost requests are approved through annual budgets. In the experience of HM Aero and through consultations with the respondent airports, public and political will is increasingly being impacted by:

- The financial challenges described previously in Section 7.3 that may result in airport operating and capital funding being weighed against other municipal services and facilities or the desire for tax rate increases to be minimized;
- Resident discontent with the externalities of airport operations, including noise and air quality impacts. The pressures associated with accommodating Ontario's expanding population has also resulted in residential encroachment near airports, increasing the number of individuals exposed to these externalities; and
- An unclear understanding of the economic and social value of airports that do not support scheduled passenger air services. Among the 12 airports that identified that public and / or political will is a challenge, none of these facilities support scheduled passenger services. Although airports without scheduled passenger services support numerous benefits within their catchment areas as described in Sections 5 and 6, these values may not be fully understood by residents and decision-makers or clouded by misconceptions about their roles.

As noted in Section 7.3, several airports (e.g., Owen Sound, Wiarton, Wingham, Collingwood, Orillia) have been divested from municipal ownership in recent years to private interests. While each of these facilities continues to be available for aviation purposes, the susceptibility of municipally owned airports to changes in public and political will is evident.

8 FUNDING REQUIREMENTS AND PRIORITIES

Section 8 provides an overview of the existing infrastructure conditions at respondent airports, planned capital projects, intended sources of funding to be used, and the degree to which the reliance on external funding has delayed project implementation. The primary area of focus is funding requirements to facilitate capital rehabilitation, reconstruction, and replacement projects, as opposed to operating funds – as noted in Section 2.2.3, 95% of respondent airports identified their financial position as being one that requires assistance to facilitate high-cost capital projects.

8.1 Infrastructure Conditions

Through the outreach survey, airport operators provided representative condition ratings for 14 classes of infrastructure assets, as applicable to their respective facility:

1. Primary runway;
2. Secondary runway(s);
3. Taxiway(s);
4. Apron(s);
5. Airside access road(s);
6. Airfield lighting and electrical systems;
7. Perimeter fencing and access controls;
8. Drainage infrastructure;
9. Terminal building;
10. Maintenance garage;
11. Airport maintenance equipment;
12. Rescue and firefighting equipment;
13. Groundside access roads; and
14. Groundside parking lots.

Definitions for each of the five condition ratings used are provided in Appendix B.

From this list of 14 assets, detailed explanations are provided herein for six categories of infrastructure: primary runways, secondary runways, taxiways, aprons, airfield lighting and electrical systems, and airport maintenance equipment. These six asset classes are used to provide a high-level overview of infrastructure condition trends across the five categories of airports. The exclusion of the remaining categories of infrastructure does not diminish their importance for safe and effective airport operations, nor does it negate their rehabilitation, reconstruction, or replacement requirements.

An airport's primary runway is used to support the majority of aircraft arrivals and departures – accordingly, maintaining these assets in a state of safe and good repair is of the utmost importance. The majority (55%) of respondent airports identified that their primary runway is in very good or good condition, with a further 29% noting that this facility is in a fair condition (Table 8.1). Approximately half (43%) of Northern & Remote respondents identified that their primary runway is in poor or very poor condition, signalling that rehabilitation or reconstruction efforts are required.

Table 8.1 - Survey Respondent Primary Runway Condition Data

Study Category	Respondents	Very Good	Good	Fair	Poor	Very Poor
Community	16	19%	38%	31%	6%	6%
NAS	2			50%	50%	
Northern & Remote	7	29%		29%	29%	14%
Regional Non-Passenger	4	25%	25%	50%		
Regional Passenger	13	8%	69%	15%	8%	
Total	**42**	**17%**	**38%**	**29%**	**12%**	**5%**

Secondary runways support operations when weather conditions or operational priorities do not favour the use of the primary runway – 57% of the 42 respondent airports maintain a secondary runway (Table 8.2). An increased proportion of respondents reported that their secondary runway is in poor or very poor condition (34% for secondary runways vs. 17% for primary runways). Notably, 40% of Community respondents and 100% of Northern & Remote respondents identified their secondary runway as being in poor or very poor condition. At Regional Passenger airports, primary runways are maintained in a good or very good condition at an increased level (77%) versus secondary runways (44%), partially owning to the prioritization model of ACAP as described in Section 8.3.

Table 8.2 - Survey Respondent Secondary Runway Condition Data

Study Category	Respondents	Very Good	Good	Fair	Poor	Very Poor
Community	10		40%	20%	30%	10%
NAS	2	50%		50%		
Northern & Remote	2				50%	50%
Regional Non-Passenger	1		100%			
Regional Passenger	9	33%	11%	33%	11%	11%
Total	**24**	**17%**	**25%**	**25%**	**21%**	**13%**

Taxiways facilitate the ground movement of aircraft and vehicles throughout the airport. Approximately half (48%) of respondent airports reported that their taxiways are in fair condition, with a further 40% stating that their taxiways are in good or very good condition (Table 8.3). Similar to the discussions regarding primary and secondary runways, respondents in the Community and Northern & Remote categories more frequently identified that their taxiways are in poor or very poor condition versus the other categories of airports studied.

Table 8.3 - Survey Respondent Taxiway Condition Data

Study Category	Respondents	Very Good	Good	Fair	Poor	Very Poor
Community	16		38%	44%	13%	6%
NAS	2		100%			
Northern & Remote	7	14%		57%	29%	
Regional Non-Passenger	4	25%	50%	25%		
Regional Passenger	13	8%	31%	62%		
Total	**42**	**7%**	**33%**	**48%**	**10%**	**2%**

Aprons are used for a variety of purposes including aircraft parking, servicing, loading and unloading, and ground movement. The majority of respondents (59%) reported that their aprons are in fair condition (Table 8.4). Once again, Community (27%) and Northern & Remote (29%) airport respondents reported that their apron assets are in poor or very poor condition more commonly versus NAS, Regional Non-Passenger, and Regional Passenger respondents.

Table 8.4 - Survey Respondent Apron Condition Data

Study Category	Respondents	Very Good	Good	Fair	Poor	Very Poor
Community	15		33%	40%	7%	20%
NAS	2			100%		
Northern & Remote	7	14%		57%	29%	
Regional Non-Passenger	4		50%	50%		
Regional Passenger	13	8%	15%	77%		
Total	**41**	**5%**	**22%**	**59%**	**7%**	**7%**

Airfield lighting and supporting electrical systems permit safe aircraft operations during hours of darkness and during periods of reduced visibility. Approximately one third (36%) of respondents identified that their airfield lighting systems are in good or very good condition, with half (48%) of respondents reporting that their systems are in fair condition (Table 8.5). 14% of respondents noted that their airfield lighting is in poor or very poor condition, with this category again limited to Community and Northern & Remote respondents.

Table 8.5 - Survey Respondent Airfield Lighting and Electrical System Condition Data

Study Category	Respondents	Very Good	Good	Fair	Poor	Very Poor
Community	16	6%	13%	63%	19%	
NAS	2		50%	50%		
Northern & Remote	7	29%		29%	29%	14%
Regional Non-Passenger	4	25%		75%		
Regional Passenger	13	8%	62%	31%		
Total	**42**	**12%**	**26%**	**48%**	**12%**	**2%**

To ensure that airports are maintained on year-round basis, operators utilize specialized equipment such as plows, snow blowers, sweepers, spreaders, and friction testing devices. The equipment maintained by each airport varies based on their operational needs, level of service provided, and local weather conditions. Overall, 65% of respondent airports identified that their mobile equipment fleets are in very good or good condition, with an additional 18% of respondents identifying that their fleets are in fair condition (Table 8.6).

Table 8.6 - Survey Respondent Airport Maintenance Equipment Condition Data

Study Category	Respondents	Very Good	Good	Fair	Poor	Very Poor
Community	15	13%	47%	27%	13%	
NAS	2		50%		50%	
Northern & Remote	6		50%	17%	33%	
Regional Non-Passenger	4	25%	25%	25%		25%
Regional Passenger	13	23%	62%	8%	8%	
Total	**40**	**15%**	**50%**	**18%**	**15%**	**3%**

From the condition assessment data submitted by the respondent airports, several conclusions are made:

- Community airport respondents generally provided lower infrastructure condition ratings versus other categories of airports. Depending on the category of infrastructure being considered, between 13% and 40% of Community respondents identified that their assets are in poor or very poor condition. Aprons, secondary runways, and lighting systems were the three areas of primary concern for this category of airports.
- Northern & Remote respondents, similar to Community airports, identified increased levels of assets in poor to very poor condition. Close to half (43%) of Northern & Remote respondents identified that their airfield lighting systems and primary runways are in poor or very poor condition – both asset classes are essential to continued operations.
- The infrastructure challenges experienced at Community and Northern & Remote airports can be attributed to factors that include their ineligibility for ACAP funding and limited ability to internally fund renewal projects. As noted previously, 92% of Community respondents and 75% of Northern & Remote respondents realized operating deficits in a typical pre-pandemic year.
- Although both surveyed NAS airports benefited pre-pandemic from significant activity levels as a result of their passenger air services and other diversified roles, these facilities exhibited variability in the condition of their assets, ranging from poor to very good. Neither NAS airport was eligible for ACAP prior to the COVID-19 pandemic, necessitating that other funding sources are pursued.
- Despite being ineligible for ongoing capital funding through ACAP, Regional Non-Passenger respondents generally reported the condition of their assets as being fair or better.
- Regional Passenger airports generally had favourable (fair to very good) asset condition ratings, with the notable exception of secondary runways that are subject to a lower prioritization through ACAP. The majority of the surveyed Regional Passenger airports benefit from ongoing access to ACAP funding (subject to the limitations of this program), and 60% of respondents in this category realized pre-pandemic operating surpluses that could be reinvested into capital projects.

8.2 Future Capital Projects

Capital planning is an important component of effective and responsible airport management. Survey respondent airports that have developed capital plans, master plans, or other similar resources provided information regarding the projects that are intended to be pursued across the 14 categories of assets noted previously across three planning horizons:

1. 2022 to 2025;
2. 2026 to 2030; and
3. 2031 to 2035.

A total of 34 survey respondents submitted capital planning data for at least one of the 14 categories of infrastructure projects. For airports that did not submit capital project data, reasons may include the lack of need to pursue such projects, the unavailability of budget estimates, and / or the absence of long-term planning surrounding capital priorities. As assets degrade over time, it is anticipated that all survey respondents and airports across Ontario more broadly will have to undertake various capital projects to ensure the continued availability of their infrastructure.

Table 8.7 provides the total capital project costs reported by respondent airports across all 14 categories of infrastructure included in the outreach survey, as well as average total costs per year, average costs per airport, and average costs per airport per year. Between 2022 and 2025:

- The 34 airports that submitted data have a combined total of approximately $224,331,000 in capital projects planned, or approximately $56,083,000 in annual projects;
- The two surveyed NAS airports have the highest level of capital projects planned, with an average of $34,960,000 per airport in this period;
- Regional Passenger and Regional Non-Passenger respondents had the second and third highest levels of capital spending planned, respectively. Regional Passenger respondents identified an average of $9,175,000 in capital projects as being required, with Regional Non-Passenger facilities averaging $5,365,000 per airport; and
- Community and Northern & Remote airports have comparable levels of anticipated capital requirements, averaging $2,643,000 and $1,912,000 per respondent airport in this period.

In subsequent years, respondent airports have outlined a total of $247,382,000 in planned capital projects between 2026 and 2030 and $102,101,000 in projects between 2031 and 2035. On an annual basis, an average of $49,476,000 in capital projects is planned between 2026 and 2030 and $20,420,000 between 2031 and 2035. It is important to note that the decreasing cost estimates in later years is likely attributable to airports not having firmly defined their capital needs in these planning horizons and / or uncertainty associated with providing long-term cost estimates. Taken together, these totals underscore the significant cost associated with ensuring the continued safety and operational usability of the infrastructure assets that exist at Ontario's airports.

Table 8.7 - Survey Respondent Airport Total Capital Project Data

Study Category	Respondents	Total Project Costs [1]	Average Total Project Costs per Year	Average Project Costs per Airport	Average Project Costs per Airport per Year
2022 – 2025					
Community	14	$37,007,000	$9,251,750	$2,643,357	$660,839
NAS	2	$69,920,000	$17,480,000	$34,960,000	$8,740,000
Northern & Remote	5	$9,560,000	$2,390,000	$1,912,000	$478,000
Regional Non-Passenger	3	$16,095,000	$4,023,750	$5,365,000	$1,341,250
Regional Passenger	10	$91,749,150	$22,937,288	$9,174,915	$2,293,729
Total	**34**	**$224,331,150**	**$56,082,788**	**$6,597,975**	**$1,649,494**
2026 – 2030					
Community	12	$35,804,000	$7,160,800	$2,983,667	$596,733
NAS	2	$58,850,000	$11,770,000	$29,425,000	$5,885,000
Northern & Remote	3	$6,545,000	$1,309,000	$2,181,667	$436,333
Regional Non-Passenger	2	$58,000,000	$11,600,000	$29,000,000	$5,800,000
Regional Passenger	8	$88,183,400	$17,636,680	$11,022,925	$2,204,585
Total	**27**	**$247,382,400**	**$49,476,480**	**$9,162,311**	**$1,832,462**
2031 – 2035					
Community	10	$28,137,000	$5,627,400	$2,813,700	$562,740
NAS	1	$42,750,000	$8,550,000	$42,750,000	$8,550,000
Northern & Remote	1	$550,000	$110,000	$550,000	$110,000
Regional Non-Passenger	1	$12,200,000	$2,440,000	$12,200,000	$2,440,000
Regional Passenger	7	$18,463,900	$3,692,780	$2,637,700	$527,540
Total	**20**	**$102,100,900**	**$20,420,180**	**$5,105,045**	**$1,021,009**

Notes

[1] Cost estimates are as reported by survey respondents for the following categories of infrastructure: Primary runways, secondary runways, taxiways, aprons, airside access roads, airfield lighting and electrical systems, perimeter fencing and access controls, drainage infrastructure, terminal buildings, maintenance garages, airport maintenance equipment, rescue and firefighting equipment, groundside access roads, and groundside parking lots.

Table 8.8 illustrates the scale of the costs associated with infrastructure rehabilitation, reconstruction, and replacement projects at airports in Ontario based on data submitted by airport operators through the outreach survey. Six categories of infrastructure are included in Table 8.8: primary runways, secondary runways, taxiways, aprons, airfield lighting and electrical systems, and mobile equipment. Based on data provided by respondent airports for all projects planned between 2022 to 2025:

- For primary runway rehabilitation and reconstruction projects, an average total cost per airport of $4,860,000 was reported based on data submitted by 16 respondent airports. Average costs per airport varied between $1,868,000 for Community respondents and $12,750,000 for NAS respondents;
- Secondary runway projects planned at nine respondent airports have an average cost per airport of $3,610,000;
- Taxiway projects planned at 15 respondent airports have an average cost per airport of $1,276,000;
- Apron projects planned at 12 respondent airports have an average total cost per airport of $1,231,000;
- Based on data provided by 18 respondent airports, an average of $1,073,000 per facility is expected to be allocated to airfield lighting and electrical projects; and
- With respect to maintenance equipment acquisition projects, the average anticipated cost per airport among 18 respondent facilities is $1,227,000.

The financially intensive nature of airport capital projects as demonstrated through this analysis is indicative of the challenges faced by operators in advancing these essential priorities without seeking external financial support. Further, the high costs per project limits the coverage that grant funding programs can provide – as described in Section 9.1.1, $38,000,000 in annual funding is budgeted for ACAP by the federal government. Using primary runway projects at Regional Passenger respondent airports as an example, the average cost of $5,390,000 per airport between 2022 and 2025 can also be expected to be incurred at other ACAP eligible airports nationally. Accordingly, the finite amount of ACAP funding can only be distributed to a limited number of airport projects nationwide each year, and many of AMCO's member airports are ineligible for ACAP funding.

Peterborough Airport

Table 8.8 - Survey Respondent Airport Planned Capital Projects

Study Category	2022-2025			2026-2030			2031-2035		
	Respondents	Total Estimated Costs	Average Estimated Cost	Respondents	Total Estimated Costs	Average Estimated Cost	Respondents	Total Estimated Costs	Average Estimated Cost
Primary Runway									
Community	6	$11,205,000	$1,867,500	7	$11,993,000	$1,713,286	5	$16,620,000	$3,324,000
NAS	2	$25,500,000	$12,750,000						
Northern & Remote	2	$8,100,000	$4,050,000	3	$5,500,000	$1,833,333			
Regional Non-Passenger	1	$6,000,000	$6,000,000	2	$30,000,000	$15,000,000	1	$10,000,000	$10,000,000
Regional Passenger	5	$26,950,000	$5,390,000	5	$37,189,300	$7,437,860	3	$3,271,700	$1,090,567
Total	**16**	**$77,755,000**	**$4,859,688**	**17**	**$84,682,300**	**$4,981,312**	**9**	**$29,891,700**	**$3,321,300**
Secondary Runway									
Community	5	$7,489,000	$1,497,800	3	$806,000	$268,667	1	$4,500,000	$4,500,000
NAS	1	$15,000,000	$15,000,000						
Northern & Remote									
Regional Non-Passenger							1	$200,000	$200,000
Regional Passenger	3	$10,000,000	$3,333,333						
Total	**9**	**$32,489,000**	**$3,609,889**	**3**	**$806,000**	**$268,667**	**2**	**$4,700,000**	**$2,350,000**

	2022-2025			2026-2030			2031-2035		
	Respondents	Total Estimated Costs	Average Estimated Cost	Respondents	Total Estimated Costs	Average Estimated Cost	Respondents	Total Estimated Costs	Average Estimated Cost
Taxiways									
Community	5	$5,097,000	$1,019,400	5	$5,600,000	$1,120,000	2	$1,250,000	$625,000
NAS	2	$3,000,000	$1,500,000	2	$5,000,000	$2,500,000	1	$7,000,000	$7,000,000
Northern & Remote				1	$250,000	$250,000			
Regional Non-Passenger	2	$4,590,000	$2,295,000	1	$5,000,000	$5,000,000	1	$1,000,000	$1,000,000
Regional Passenger	6	$6,460,000	$1,076,667	4	$8,300,000	$2,075,000	1	$2,000,000	$2,000,000
Total	**15**	**$19,147,000**	**$1,276,467**	**13**	**$24,150,000**	**$1,857,692**	**5**	**$11,250,000**	**$2,250,000**
Aprons									
Community	2	$2,585,000	$1,292,500	5	$4,900,000	$980,000	3	$1,767,000	$589,000
NAS	2	$1,650,000	$825,000	2	$4,000,000	$2,000,000	1	$5,000,000	$5,000,000
Northern & Remote				2	$750,000	$375,000			
Regional Non-Passenger							1	$1,000,000	$1,000,000
Regional Passenger	8	$10,542,000	$1,317,750	2	$3,300,000	$1,650,000	1	$1,000,000	$1,000,000
Total	**12**	**$14,777,000**	**$1,231,417**	**11**	**$12,950,000**	**$1,177,273**	**6**	**$8,767,000**	**$1,461,167**

	2022-2025			2026-2030			2031-2035		
	Respondents	Total Estimated Costs	Average Estimated Cost	Respondents	Total Estimated Costs	Average Estimated Cost	Respondents	Total Estimated Costs	Average Estimated Cost
Airfield Lighting and Electrical Systems									
Community	5	$7,533,000	$1,506,600	2	$640,000	$320,000	3	$2,030,000	$676,667
NAS	2	$5,000,000	$2,500,000	1	$6,000,000	$6,000,000	1	$150,000	$150,000
Northern & Remote	3	$500,000	$166,667	1	$20,000	$20,000			
Regional Non-Passenger	2	$1,280,000	$640,000						
Regional Passenger	6	$5,001,200	$833,533	5	$1,828,500	$365,700	5	$2,130,500	$426,100
Total	**18**	**$19,314,200**	**$1,073,011**	**9**	**$8,488,500**	**$943,167**	**9**	**$4,310,500**	**$478,944**
Airport Maintenance Equipment									
Community	5	$1,079,000	$215,800	2	$800,000	$400,000	1	$300,000	$300,000
NAS	2	$7,000,000	$3,500,000	2	$3,200,000	$1,600,000	1	$3,000,000	$3,000,000
Northern & Remote	2	$900,000	$450,000						
Regional Non-Passenger	1	$3,000,000	$3,000,000	1	$3,000,000	$3,000,000			
Regional Passenger	8	$10,098,450	$1,262,306	6	$9,963,400	$1,660,567	5	$3,032,600	$606,520
Total	**18**	**$22,077,450**	**$1,226,525**	**11**	**$16,963,400**	**$1,542,127**	**7**	**$6,332,600**	**$904,657**

8.3 Planned Funding Sources and Project Implementation Timelines

Through the outreach survey, respondents were asked to identify the funding source(s) that they intend to use for their next planned capital rehabilitation, reconstruction, and / or replacement project across the 14 categories of infrastructure included. Table 8.9 outlines the funding sources that respondent airports intend to leverage to advance their next planned projects for their primary runway, secondary runway, taxiways, aprons, airfield lighting and electrical system, and maintenance equipment:

- Municipal support was noted by numerous Community, Regional Non-Passenger, and Regional Passenger respondents as being an intended funding tool. As described previously in Sections 7.3 and 7.4, the availability of municipal financial support is contingent on there being sufficient public and political will regarding the airport in question and residual budgetary capacity;
- Provincial and federal grant funding support through programs other than ACAP was selected as a planned option by respondent airports in all categories. As the Government of Ontario does not maintain an airport-specific funding program and the federal government's ongoing involvement is limited to ACAP, this means that respondent airports intend to pursue grants that are not exclusive to aviation (e.g., National Trade Corridors Fund);
- ACAP eligible airports (Regional Passenger respondents and select Northern & Remote facilities) rely heavily on this program. Among these airports, ACAP is the primary source of external funding intended to be used for their next planned primary runway, taxiway, apron, airfield lighting, and maintenance equipment project. As secondary runways are assigned a lower priority level by Transport Canada subject to factors such as local wind conditions, usability of the primary runway, and frequency of use, ACAP was not the primary funding source for these projects; and
- Airports ineligible for ACAP funding are more reliant on funding from their respective municipalities, as well as grants offered at the provincial and federal levels. Community, Northern & Remote, and Regional Non-Passenger respondent airports are especially impacted by the limited funding supports available to them – 50% of Community and Regional Non-Passenger respondents and 43% of Northern & Remote respondents could not identify how they intend to fund their next primary runway project, despite the need identified in Section 8.2 for such projects at airports in these categories.

Billy Bishop Toronto City Airport

Table 8.9 - Survey Respondent Airport Planned Capital Funding Sources

Study Category	Respondents	ACAP	Municipal Funding	Federal / Provincial Funding	Unknown
Primary Runway					
Community	16		3	2	8
NAS	2	1			
Northern & Remote	7	1		1	3
Regional Non-Passenger	4		3	2	2
Regional Passenger	13	12	3	2	
Total	**42**	**14**	**9**	**7**	**13**
Secondary Runway					
Community	16		3	2	7
NAS	2			1	1
Northern & Remote	7	1			2
Regional Non-Passenger	4				2
Regional Passenger	13	4	1	2	3
Total	**42**	**5**	**4**	**5**	**15**
Taxiways					
Community	16		3	1	7
NAS	2			1	
Northern & Remote	7	2		1	2
Regional Non-Passenger	4		1	1	3
Regional Passenger	13	9	4	4	
Total	**42**	**11**	**8**	**8**	**12**

Notes
Respondents were permitted to select more than one funding source if applicable.

Study Category	Respondents	ACAP	Municipal Funding	Federal / Provincial Funding	Unknown
Aprons					
Community	16		3	2	6
NAS	2				
Northern & Remote	7	2		1	2
Regional Non-Passenger	4		1	1	3
Regional Passenger	13	9	3	2	1
Total	**42**	**11**	**7**	**6**	**12**
Airfield Lighting and Electrical Systems					
Community	16		5	2	3
NAS	2	1		1	
Northern & Remote	7	2		1	2
Regional Non-Passenger	4		1	1	3
Regional Passenger	13	12	2	1	
Total	**42**	**15**	**8**	**6**	**8**
Airport Maintenance Equipment					
Community	16		4	1	6
NAS	2			1	
Northern & Remote	7	2	1		1
Regional Non-Passenger	4		3	2	2
Regional Passenger	13	12	2	1	
Total	**42**	**14**	**10**	**5**	**9**

Notes
Respondents were permitted to select more than one funding source if applicable.

Through the outreach survey, respondents were asked to identify whether accessing required capital funding resulted in a delay in the planned implementation of their most recent rehabilitation, reconstruction, or replacement projects for six categories of infrastructure: primary runways, secondary runways, taxiways, aprons, airfield lighting and electrical systems, and maintenance equipment. Airports that submitted responses to this question are analyzed according to whether they are eligible for ACAP funding – for ACAP eligible airports, it is assumed that the project was funded through this program.

Based on the data provided in Table 8.10, conclusions are as follows:

- **Primary Runway Projects:** 40% of respondent airports did not experience a delay in implementing primary runway rehabilitation or reconstruction projects. Among respondent airports eligible for ACAP funding, 58% of operators experienced a delay of between 1 and 5 years, indicating that project timelines may have had to be shifted based on funding availability at the federal level. Among non-ACAP eligible airports, one third (33%) of respondents indicated that their planned capital project has been delayed by more than 5 years due to the unavailability of funding.
- **Secondary Runway Projects:** Compared to primary runway projects, ACAP eligible airports experienced increased delays while trying to secure funding for secondary runway projects. All ACAP eligible survey respondents that recently completed a secondary runway project experienced some form of delay, with 80% of respondents identifying a delay of 5 years or more. The timelines for ACAP ineligible survey respondents were similar to that of primary runway projects, with one third of respondents experiencing a delay of 5 or more years due to the availability of funding.
- **Taxiway and Apron Projects:** Data provided by both ACAP eligible and ineligible respondent airports was similar for both taxiway and apron projects. Across the respondent airports that provided this data, approximately half (50% to 53%) experienced no delay or a delay of 1 year or less in funding their most recent taxiway or apron project. However, between 47% and 50% of respondents experienced a delay of greater than 2 years as a result of funding unavailability.
- **Airfield Lighting and Electrical Systems:** For ACAP eligible airports, 66% of respondents identified that their planned airfield lighting projects were able to proceed with zero or less than 1 year of delay. Only 11% of ACAP eligible airports experienced a delay of greater than 5 years. For ACAP ineligible airports, a similar proportion of respondents (57%) completed their most recent lighting or electrical project with no delay or a delay of 1 year or less. However, a significantly higher proportion (36%) of respondents experienced a delay exceeding 5 years due to the lack of funding.
- **Airport Maintenance Equipment:** Unlike the delays commonplace at ACAP ineligible airports, mobile equipment replacement projects were advanced with no delay for 67% of the respondent airports, while 25% of respondents identified a delay of 5 years or more. Through ACAP, mobile equipment projects are classified as Priority 2 in Transport Canada's determination process, behind Priority 1 items such as airfield pavement and lighting rehabilitation projects. An even distribution was observed, with 50% of ACAP eligible respondent airports completing mobile equipment replacement projects with no delay or less than 1 year of a delay, while 50% of respondents identified a delay exceeding 2 years.

Table 8.10 - Survey Respondent Airport Capital Project Implementation Delays Due to Funding Availability

Project Type	ACAP Eligibility	Respondents	Delay Period vs. Planned Project Implementation			
			No Delay	1 Year or Less	2 to 5 Years	More Than 5 Years
Primary Runway	ACAP Ineligible	7	39%	17%	11%	33%
	ACAP Eligible	3	43%	29%	29%	
	All Respondents	**10**	**40%**	**20%**	**16%**	**24%**
Secondary Runway	ACAP Ineligible	10	50%	10%	10%	30%
	ACAP Eligible	5		20%		80%
	All Respondents	**15**	**33%**	**13%**	**7%**	**47%**
Taxiways	ACAP Ineligible	15	33%	20%	7%	40%
	ACAP Eligible	7	29%	14%	14%	43%
	All Respondents	**22**	**32%**	**18%**	**9%**	**41%**
Aprons	ACAP Ineligible	12	42%	8%	8%	42%
	ACAP Eligible	7	29%	29%	14%	29%
	All Respondents	**19**	**37%**	**16%**	**11%**	**37%**
Airfield Lighting and Electrical Systems	ACAP Ineligible	14	50%	7%	7%	36%
	ACAP Eligible	9	44%	22%	22%	11%
	All Respondents	**23**	**48%**	**13%**	**13%**	**26%**
Airport Maintenance Equipment	ACAP Ineligible	12	67%		8%	25%
	ACAP Eligible	12	25%	25%	25%	25%
	All Respondents	**24**	**46%**	**13%**	**17%**	**25%**

Capital project delays greater than 5 years are of particular importance. Figure 8.1 illustrates how a typical airfield pavement deteriorates over time and the relative cost of rehabilitation throughout its life cycle. Implementing appropriately timed capital projects allows for a cost-effective rehabilitation strategy, such as a simple milling and paving operation to renew the pavement structure. As assets degrade further, the level of effort and cost in returning these assets to their pre-degradation condition increases – over time, a full-depth reconstruction may be required, for example. Further, the degradation of airport assets decreases their usability unless properly maintained and repaired, potentially resulting in safety and operational concerns from Foreign Object Debris or system failures.

Figure 8.1 - Typical Airfield Pavement Condition Life Cycle (FAA)

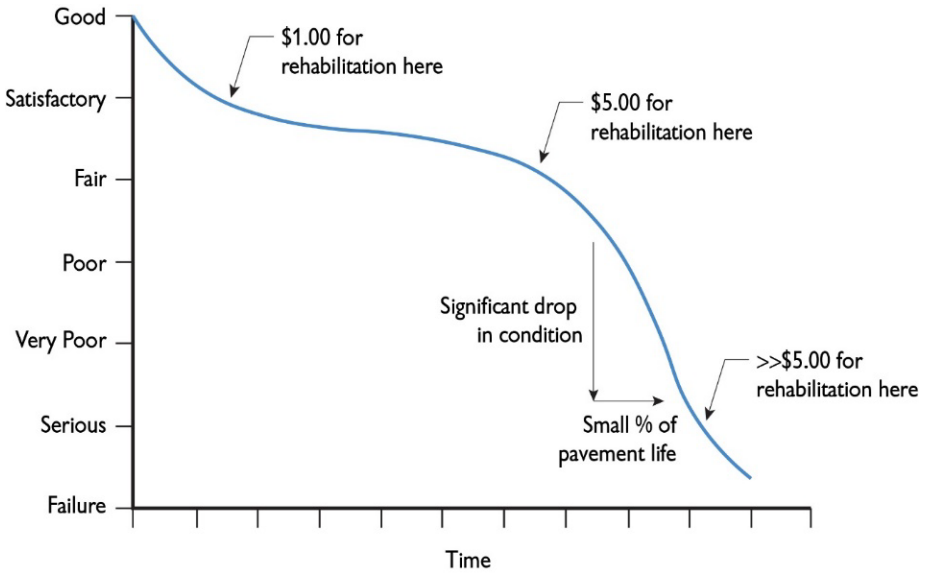
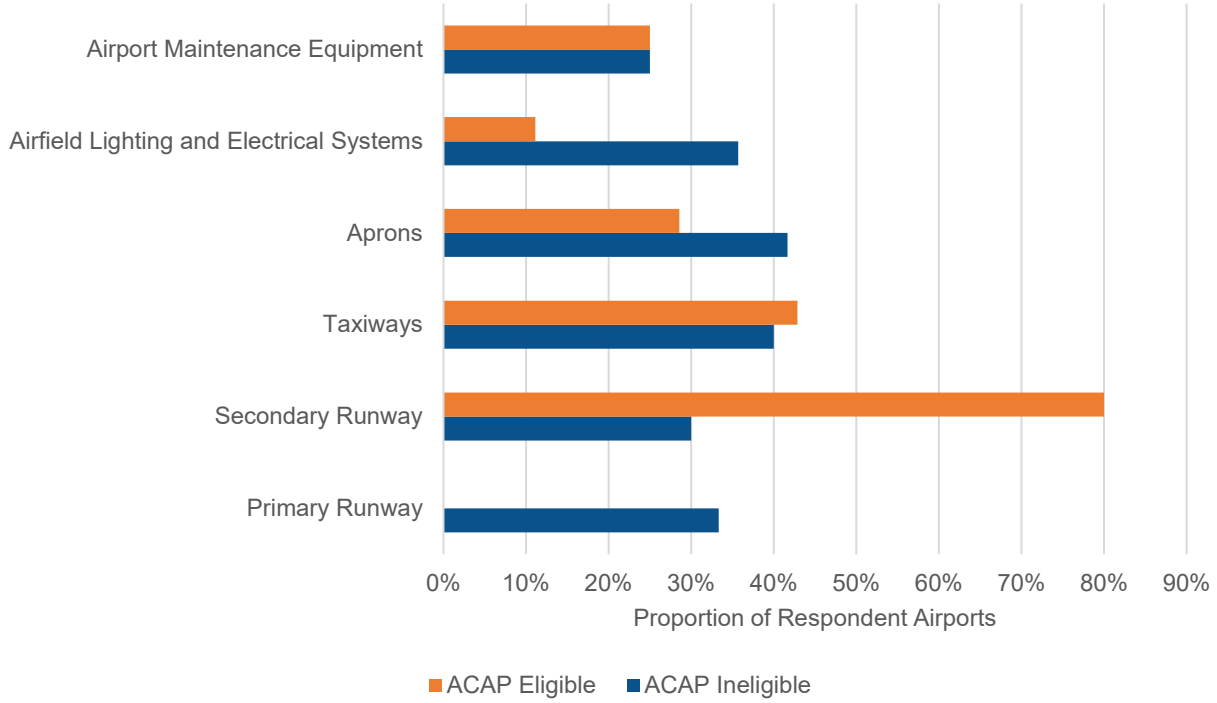


Figure 8.2 depicts the respondent airport data for capital project delays exceeding 5 years. Among ACAP ineligible airports, recapitalization projects for assets of key importance frequently incurred delays exceeding 5 years, such as primary runways (33% of respondents), taxiways (40%), aprons (42%), and lighting systems (36%). While ACAP eligible airports have access to an ongoing source of federal funding for assets used to support scheduled passenger services, these facilities also commonly experience project delays exceeding 5 years due to funding challenges. Most notably, 80% of respondent airports identified delays exceeding 5 years for secondary runway projects[7], 43% for taxiway projects, and 29% for apron projects.

Secondary runway at Sarnia Chris Hadfield Airport

[7] Secondary runway projects are eligible at a lower priority level by Transport Canada, subject to factors such as local wind conditions, seasonal usability of the primary runway, and frequency of use.

Figure 8.2 - Survey Respondent Airport Capital Project Delays Exceeding 5 Years



8.4 Airport Funding Priorities

Through the comments shared by the survey respondent airports, a series of key themes with respect to their capital funding priorities have been identified. These comments supplement the quantitative data provided previously and align with the findings of the analyses in the preceding sections:

- For airports without scheduled passenger air services, funding is difficult to secure given their ineligibility for ACAP support, unavailability of airport-specific funding programs at the provincial level, and competition for non-airport grant funding programs that also address other local or regional priorities;
- At ACAP airports, the project eligibility criteria (i.e., capital assets that support scheduled passenger air services) is a limitation on their ability to fund non-air carrier infrastructure projects such as taxiways to commercial development areas, non-terminal building aprons, and supporting infrastructure;
- ACAP's total budget assigned on an annual basis by the federal government was identified as resulting in project delays, as numerous airports both in Ontario and across Canada compete for a limited amount of funding;
- For airports that are reliant on municipal support for capital projects, the availability of funding is hindered by other local priorities of equal or greater importance and the limited financial reserves of the applicable municipality;
- Temporary pandemic-related funding programs such as the two-year increase in the ACAP budget and expanded eligibility criteria, RATI, and ACIP have been welcomed by eligible airports and enabled critical projects to proceed. As these temporary changes and programs end, concern is expressed that pre-pandemic funding challenges will return;

- Funding to support energy efficiency and greenhouse gas reduction projects would enable airports to contribute in an increased manner to these national goals; and
- Climate change has the potential to increase infrastructure degradation and the associated capital funds required by airports.

In addition to the capital funding priorities identified above, respondent airports also identified priorities for non-capital initiatives, including:

- Providing support for air service, business development, and marketing projects to enable airports to increase their operating revenues and economic roles; and
- Initiating financial support at smaller airports for the provision of screening services by CATSA.

Chatham-Kent Municipal Airport

9 CROSS-JURISDICTIONAL FUNDING REVIEW

As explored in Section 8, Ontario's airports are faced with significant capital funding requirements in the coming years that, for many facilities, will require external financial support from the provincial and / or federal levels of government. Section 9 provides a profile of ongoing airport-specific funding programs available through the federal government, as well as funding initiatives administered by provincial governments. The intent of the cross-jurisdictional review is to identify how other governments are addressing the need for funding to support critical infrastructure projects at Canada's airports.

The cross-jurisdictional review focusses on airport-specific funding programs only and does not include cases where the federal or provincial levels of government operate airports; provide financial support to other parts of the aviation sector (e.g., air carriers); or funding programs that include airports as an eligible category but that are not the primary purpose of the program. Temporary airport funding programs are profiled for context; however, ongoing funding programs are the primary focus of the review.

9.1 Federal Programs

9.1.1 Airports Capital Assistance Program

Regular Funding Program

ACAP was created in 1995 and is administered by Transport Canada with the objective of funding projects at regional airports that contribute to safety, protect infrastructure assets, and reduce operating costs. Up to $38M is allocated on an annual basis nationwide, with this total being unchanged since 2000. Approximately 200 airports were eligible for the program prior to the COVID-19 pandemic. ACAP-eligible airports are those that:

- Are not owned or operated by the Government of Canada
- Are certified; and
- Support year-round scheduled commercial passenger services with a minimum of 1,000 annual passengers and a maximum of 525,000 annual passengers.

Among the 42 survey respondent airports, 14 facilities (33%) were eligible for ACAP prior to the COVID-19 pandemic, including 92% of Regional Passenger respondents and 29% of Northern & Remote respondents. The inaccessibility of ACAP to Community, Regional Non-Passenger, and select Northern & Remote airports owing to their certified status or lack of scheduled passenger service is shown in Table 9.1, as well as the two NAS respondents given their federal ownership.

Table 9.1 - Survey Respondent Airport ACAP Eligibility

Study Category	ACAP Eligible		ACAP Ineligible	
	Number	Proportion	Number	Proportion
Community			16	100%
NAS			2	100%
Northern & Remote	2	29%	5	71%
Regional Non-Passenger			4	100%
Regional Passenger	12	92%	1	8%
Total	**14**	**33%**	**28**	**67%**

The proportion of project costs that are funded through ACAP decreases with higher passenger volumes. For example, projects airports with between 1,000 and 49,999 annual enplaned / deplaned passengers are eligible for 100% funding, while facilities that serve between 500,000 and 524,999 passengers are eligible for 5% funding. Projects eligible under ACAP follow a three-part prioritization:

1. Projects to rehabilitate airside facilities or buy equipment for aircraft rescue and firefighting. Examples include runway and taxiway rehabilitation projects, visual aid and lighting replacements, and the acquisition of firefighting equipment;
2. Mobile equipment acquisition projects, such as snow blowers, plows, and tractors; and
3. Terminal building safety improvement projects, such as sprinkler upgrades and asbestos removal.

With few exceptions, ACAP is limited to the rehabilitation or replacement of existing assets as opposed to the development of new facilities and is confined to infrastructure that is directly associated with air carrier operations. A taxiway serving a general aviation hangar row, for example, would be ineligible for funding through ACAP.

COVID-19 Program Changes

In May 2021 during the COVID-19 pandemic, the federal government announced a series of temporary enhancements to ACAP that would apply over a two-year period, including:

- A one-time increase in annual funding, including an additional $93M in 2021-2022 and $93M in 2022-2023; and
- The extension of program eligibility to eight NAS airports serving fewer than 1M annual passengers, including London International Airport and Thunder Bay International Airport in Ontario.

These changes were made recognizing that the significant financial impacts experienced by regional airports had the potential to delay or cancel critical infrastructure rehabilitation and replacement projects. While the future of the COVID-19 pandemic remains uncertain and the trajectory of the financial recovery of Ontario's airports is unclear as of 2022, the pandemic-related ACAP changes described above have not been announced for continuation past 2022-2023 and the program is expected to return to its pre-pandemic $38M annual budget.

9.1.2 Airport Critical Infrastructure Program

The Airport Critical Infrastructure Program was announced in May 2021 as a temporary program in response to the COVID-19 pandemic, with $490M in funding to be made available over a five-year period. ACIP eligible airports include NAS and non-NAS airports that served more than 525,000 passengers in 2019 – in Ontario, this includes six airports: Toronto Pearson International Airport, Ottawa International Airport, London International Airport, Thunder Bay International Airport, Hamilton International Airport, and Billy Bishop Toronto City Airport. Under ACIP, eligible projects include safety-related initiatives, projects to improve operational efficiency or security, and rapid transit connectivity projects.

ACIP is a temporary program and its renewal has not been announced beyond the terms of the $490M five-year period set to expire in 2026.

9.1.3 Regional Air Transportation Initiative

In 2021, the federal government made a one-time announcement of $206M in funding on a national scale for the Regional Air Transportation Initiative. In Ontario, RATI is administered through the two Regional Development Agencies: FedDev Ontario and FedNor Ontario. RATI was opened to regional and local airports that support air service connectivity, with an emphasis on facilities that support scheduled passenger air services that were negatively impacted by the COVID-19 pandemic.

The RATI program targets projects that will result in increased regional air transportation connectivity, address the cash flow needs of airports negatively impacted by the COVID-19 pandemic, and / or adapt or modernize airport operations. Although applications were prioritized according to the degree to which they achieve the program aims, mandatory criteria regarding certification or minimum activity levels were not used. As a result, a wide range of airports in Ontario have benefited from RATI funding, including Community airports such as Tillsonburg and St. Thomas, Regional Passenger facilities such as Sarnia, and Northern & Remote facilities such as Wawa. Projects advanced through RATI funding have included terminal building modernizations, master planning and air service data collection studies, capital construction projects, and mobile equipment replacement projects.

The RATI program is fully subscribed as of May 2022 and its reopening for additional applications has not been announced.

9.1.4 Airport Relief Fund

The Airport Relief Fund was announced in May 2021 as a one-time program to provide $65M in support in response to the negative financial impacts that the COVID-19 pandemic has had to major passenger processing airports. ARF support is intended to be used to ensure the continuation of operations as opposed to capital projects. In Ontario, Billy Bishop Toronto City Airport ($3.1M), Hamilton International Airport ($2.6M), London International Airport, Ottawa International Airport ($5.7M), and Thunder Bay International Airport ($1.7M) have been awarded ARF support as of May 2022.

The renewal of the ARF program has not been announced as of May 2022.

9.2 British Columbia

9.2.1 British Columbia Air Access Program

The British Columbia Air Access Program (BCAAP) was launched in 2015 and is the latest in a series of funding initiatives that have been available since 1979, including the Air Transport Assistance Program (1979 to 2001) and the Transportation Partnership Program (2003 to 2009). BCAAP has an annual base budget of $8M and is administered by British Columbia's Ministry of Transportation and Infrastructure. Four purposes have been established for BCAAP:

1. Ensure the safety and reliability of aviation facilities;
2. Maximize economic benefits;
3. Provide benefits to air ambulance and wildfire suppression operations; and
4. Reduce airport carbon footprints.

Eligible airports are public use facilities that serve less than 1M annual enplaned / deplaned passengers. While ACAP eligible airports may also receive BCAAP funding, these facilities must first apply to the federal government before BCAAP funds can be received. BCAAP does not include eligibility provisions related to certification or minimum annual passengers, and accordingly is widely available to airports throughout the province. BCAAP's cost-sharing system is as follows:

- Airside Projects: Up to 75% of eligible project costs;
- Transitional Projects: Up to 60%;
- Groundside Projects: Up to 50%; and
- Climate / Environmental Projects: Up to 75%.

Based on consultations with Provincial Staff, the justification for BCAAP and its predecessor programs is the recognition that a network of well-maintained airports is essential to support essential public services (air ambulance and wildfire suppression operations) and connectivity, given the mountainous terrain and the requirement for back-up transportation options when roads are impassable. BCAAP is currently undergoing a comprehensive review at the time of this Study's preparation to ensure the program is appropriately positioned for post-pandemic requirements.

9.2.2 2021 Regional Airport Connectivity Fund

In March 2021, the Government of British Columbia announced a one-time $16.5M funding program for 55 regional airports to ensure their continued availability despite the negative financial impacts of the COVID-19 pandemic. Eligible airports were identified through an expression of interest process as facilities that support air ambulance services, with four brackets of funding established based on the revenues and financial impacts experienced by each airport:

- Category A – Up to $720,000;
- Category B – Up to $360,000;
- Category C – Up to $180,000; and
- Category D – Up to $90,000.

The 55 airports that received funding included major scheduled passenger airports (e.g., Victoria International Airport, Kelowna International Airport) as well as smaller airports that do not support scheduled services but that serve other roles in the provincial aviation system. The 2021 relief funding is a one-time program and its renewal has not been announced.

9.3 Alberta

As part of the Government of Alberta's Strategic Transportation Infrastructure Program, the Community Airport Program (CAP) was launched in 1996 to provide capital financial support with the goal of maintaining Alberta's network of approximately 70 ACAP ineligible community airports. The justification for the CAP centres on ensuring aviation safety, the effective provision of public air services (e.g., air ambulance and wildfire suppression operations), and furthering local and regional economic development. The annual budget for the CAP varies annually and typically ranges between $1.5M and $2.0M.

Eligible airports are facilities that are owned by a municipality and are publicly available. Airports that are eligible for ACAP or that are owned by private interests, charitable societies, or non-government entities do not qualify for funding. Projects are advanced on a cost-sharing basis, with the Government of Alberta contributing 75% to project costs. Eligible projects include the rehabilitation of an airport's primary runway, apron, and taxiway, as well as airfield lighting projects. Infrastructure expansion projects, improvements to supporting assets (e.g., buildings, visual navigation aids, utilities), and development areas are ineligible through the CAP.

9.4 Saskatchewan

The Government of Saskatchewan administers the Community Airport Partnership Program (CAPP) through its Ministry of Highways. The CAPP was launched in 2007/2008 to support municipally owned airports, recognizing the role that these facilities play in supporting economic and social development, including air ambulance services. Community-owned, regionally focused airports that support the following roles are eligible: community access, air ambulance operations, commercial operations, economic development, and aviation safety. The CAPP does not include criteria regarding certification or activity levels, and ACAP airports are permitted to apply for non-ACAP eligible projects.

Approximately $1M in funding is allocated on an annual basis to the CAPP. Projects are funded on a 50% cost-sharing basis to a maximum of $275,000 per community per year. Priority is given to safety-related airside capital projects, such as the rehabilitation or replacement of airside surfaces and visual navigation aids. Infrastructure expansion projects are also considered where a safety, economic, or social case can be made. Requests are evaluated by the Government of Saskatchewan with representatives from the Saskatchewan Aviation Council; operational experts from the Regina and Saskatoon airport authorities; Municipalities of Saskatchewan, and the Ministry of Highways.

In 2020/2021, a one-time stimulus program related to the COVID-19 pandemic was introduced that temporarily increased the funding available to $1.5M.

9.5 Manitoba

The Government of Manitoba administers the Manitoba Airport Assistance Program (MAAP) to provide operating support to municipal airport commissions that oversee publicly available facilities without scheduled passenger air services. To be eligible, airports must meet the following criteria:

- At least one 2,000 ft. x 75 ft. runway meeting Transport Canada requirements;
- Certification or registration by Transport Canada for day VFR flying;
- Ability to expand the runway to 2,500 ft. x 100 ft.; and
- Certification or registration by Transport Canada for night VFR flying.

The MAAP offers an annual operating grant of $1,200 to airports with unpaved runways and $2,400 to airports with paved runways.

The Government of Manitoba formerly offered a capital funding program (the Manitoba Airport Capital Assistance Program) for improvements at smaller airports not eligible for ACAP funding, with funding provided on a 50% cost sharing basis. The Manitoba Airport Capital Assistance Program was discontinued in 2004 due to financial challenges.

9.6 Quebec

9.6.1 Marine, Air and Rail Transportation Efficiency Improvement Assistance Program

The Government of Quebec is in the process of renewing its Marine, Air and Rail Transportation Efficiency Improvement Assistance Program (PETMAF) for an additional five-year term. The renewed PETMAF is expected to offer $40.1M between 2021 and 2026 to increase the use of renewable energy and increase the efficiency in the transportation of goods as part of the province's Plan for a Green Economy (2030) and Implementation Plan (2021-2026). Airports are eligible for funding for projects that improve energy efficiency and reduce greenhouse gas emissions, such as infrastructure and equipment replacements, pilot programs, and studies for greenhouse gas reduction solutions. Eligible airports will be expected to contribute a minimum of up to 33% of project costs.

9.6.2 Quebec Assistance Program for Regional Airport Infrastructure

The Quebec Assistance Program for Regional Airport Infrastructure (PAQIAR) aimed to support airport owners and operators in carrying out various projects and in acquiring the equipment needed to operate an airport. The program had a budget envelope of $100 million over a 4-year period, starting in 2018 and ending in March 2022. The objectives of the program were to:

- Maintain the Quebec airport network in good condition and ensure its sustainability;
- Contribute to the development of the airport network; and
- Contribute to the supply of air services and the mobility of people through adequate infrastructure.

Eligible projects included the rehabilitation and improvement of airside infrastructure and equipment; the renovation and construction of airport buildings; and the procurement of mobile equipment. Criteria used in assessing the eligibility of airports included the degree to which each facility contributed to goals of mobility, healthcare access, wildfire suppression, and economic development. A minimum contribution of between 10% and 25% of eligible project costs was expected from the beneficiary airport, and no restrictions on ACAP funding were explicitly stated. Combined public financing from the provincial government was not to exceed 75% in most cases, with select exceptions for a 90% contribution.

9.6.3 Assistance Program for Regional Air Services

With the Assistance Program for Regional Air Services (PADAR), the Government of Quebec aimed to support airports, air carriers, municipalities, and local organizations with improving and developing their air services. PADAR launched in 2019 with $22.5M allocated prior to its cessation in March 2022. With respect to airports, eligible projects included initiatives related to the establishment, improvement or reinstatement of air services; planning exercises, including business plans, master plans, strategic plans, and marketing plans; and air service development studies.

9.7 Nova Scotia

The Government of Nova Scotia does not maintain an ongoing airport-specific funding program. However, in May 2022, Nova Scotia announced a one-time funding allocation of $19.3M for Halifax Stanfield International Airport ($13M) and J.A. Douglas McCurdy Sydney Airport ($6.3M). The funding support provided to Halifax will be used as part of the airport's air access incentive packages to assist in attracting new domestic, transborder, and international routes. The funding provided to Sydney will be used for air service development incentives ($1M) and for infrastructure upgrades to the facility's runways and terminal building ($5.3M).

9.8 Newfoundland & Labrador

An ongoing airport funding program is not provided by the Government of Newfoundland & Labrador. In February 2022, the provincial government announced a one-time funding support program totalling $1M, to be distributed between St. John's International Airport ($500,000), Deer Lake Regional Airport ($250,000), and Gander International Airport ($250,000).

9.9 Key Conclusions

Select comparison criteria of each of the 14 federal and provincial support programs described previously are provided in Table 9.2. Based on the review of the funding programs available across Canada, pertinent conclusions are summarized as follows:

Airports Capital Assistance Program

- Given the unavailability of airport funding programs at the provincial level, Ontario's airports are reliant on federal funding support;
- ACAP is the only capital funding program that has been consistently offered by the federal government prior to the COVID-19 pandemic, and is expected to return to being the only program after pandemic-related supports are closed (RATI, ACIP, and ARF);
- While ACAP is an important source of funding for regional airports, it's annual funding allotment of $38M has been unchanged over 20 years and approximately 200 eligible airports nationwide compete for this limited total. If ACAP funding had been increased with inflation, the program would be allocated approximately $60M in 2022. The competition for ACAP funding is further challenged by increasing capital project costs over time without a commensurate increase in the program's budget; and
- While ACAP is a valuable tool for airports that support scheduled passenger air services, facilities that do not support such operations but that serve other critical economic (e.g., charter operations, corporate traffic, flight training) and social roles (e.g., wildfire suppression, air ambulance operations) are left without a regularly available capital funding program.

Federal Pandemic-Related Funding Programs

- Through RATI and ACIP, the federal government provided capital funding support on a one-time basis to a wide range of airport types. With RATI, the focus on anticipated project outcomes as opposed to definitive eligibility criteria has assisted in broadening the degree to which airports without scheduled passenger air services could participate. Community airports previously ineligible for ACAP funding, such as Tillsonburg Regional Airport and St. Thomas Municipal Airport, were able to benefit from funding supports;
- ACIP provides targeted support to ensure that capital projects at larger airports not eligible for ACAP can proceed. As a one-time funding announcement, this is not indicative that the federal government plans to introduce permanent supports for the country's major passenger facilities outside of non-dedicated programs such as the National Trade Corridors Fund; and
- The ARF provided one-time operational financial relief to major passenger airports that experienced significant negative financial impacts. However, this does not signal a long-term involvement by the federal government in funding airport operations.

Niagara Central Dorothy Rungeling Airport

Provincial Funding Programs

- Seven of the ten provinces have introduced one-time or recurrent financial support programs in recent years, with Ontario, New Brunswick, and Prince Edward Island being the exceptions;
- Recurrent capital support is currently provided by British Columbia, Alberta, and Saskatchewan; recurrent operational support is provided by Manitoba; and Quebec will return to providing an ongoing support program in the near future. In each of these jurisdictions, eligible facilities include airports without scheduled service that cannot benefit from ACAP and / or ACAP eligible airports where the proposed project is not funded through this federal program; and
- Three provinces (British Columbia, Nova Scotia, and Newfoundland & Labrador) have announced one-time funding programs to provide pandemic-specific relief for capital projects, operating expenses, and / or business restoration efforts. British Columbia took an expansive approach and included a full range of regional and local airports, while Nova Scotia and Newfoundland limited their support to each province's primary scheduled air service facilities.

Table 9.2 - Cross-Jurisdictional Funding Program Summary

		Federal				Ontario	British Columbia		Alberta	Saskatchewan	Manitoba	Quebec			Nova Scotia	Newfoundland & Labrador
Program		**Airports Capital Assistance Program**	**Airport Critical Infrastructure Program**	**Regional Air Transportation Initiative**	**Airport Relief Fund**		**British Columbia Air Access Program**	**2021 Regional Airport Connectivity Fund**	**Community Airport Program**	**Community Airport Partnership Program**	**Manitoba Airport Assistance Program**	**Marine, Air and Rail Transportation Efficiency Improvement Assistance Program**	**Quebec Assistance Program for Regional Airport Infrastructure**	**Assistance Program for Regional Air Services**	**2022 Airport Funding**	**2021 Airport Funding**
Status		Active	Fully Subscribed	Fully Subscribed	Fully Subscribed		Active	Fully Subscribed	Active	Active	Active	Upcoming	Ended March 2022	Ended March 2022	Fully Subscribed	Fully Subscribed
Renewal Term		Annual	One-Time	One-Time	One-Time		Annual	One-Time	Annual	Annual	Annual	Five-Year	Four-Year	Three-Year	One-Time	One-Time
Budget		$38M	$490M	$206M	$65M		$8M	$16.5M	$1.5M - $2.0M	$1M	$2,400 / Eligible Airport	$40.1M (Combined with marine and rail transport)	$100M	$22.5M	$19.3M	$1M
Airport Eligibility	**With Scheduled Passenger Service Airports**	Eligible (1,000 – 525,000 Passengers)	Eligible (> 525,000 Passengers)	Eligible	Eligible (22 Predetermined Airports)	**N/A**	Eligible (< 1M passengers)	Eligible (55 Predetermined Airports)	Ineligible	Eligible	Ineligible	Eligible	Eligible	Eligible	Eligible (2 Predetermined Airports)	Eligible (3 Predetermined Airports)
	Without Scheduled Passenger Service	Ineligible	Ineligible		Ineligible		Eligible		Eligible		Eligible				Ineligible	Ineligible
Project Eligibility	**Operations**	No	No	Yes	Yes		No	Yes	No	No	Yes	No	No	No	Yes	Yes
	Capital Rehabilitation / Replacement	Yes	Yes	Yes	No		Yes	No	Yes	Yes	No	No	Yes	No	Yes	No
	Capital Expansion	No	Yes	Yes	No		Yes	No	Yes	Yes	No	No	No	No	No	No
	Business Development	No	No	Yes	No		No	No	No	No	No	No	No	Yes	Yes	Yes
	Environmental Initiatives	No	No	No	No		Yes	No	No	No	No	Yes	No	No	No	No

10 CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusions

Building on the analysis articulated through this Study, the following conclusions are made in terms of the importance of Ontario's airports and their funding challenges:

- Ontario's airports are economic assets within the communities and regions they serve by supporting scheduled and charter passenger air services; air cargo; corporate aviation; and other commercial operations such as aerial surveying and flight training. In addition to the direct benefits of on-airport employment and activities, indirect and induced economic benefits are generated regionally;
- Airports of all sizes and types are critical to ensuring the continued provision of essential air services, including air ambulance operations, search and rescue, wildfire suppression, law enforcement, emergency management, and youth and early career development. Taking air ambulance operations as one example, 100% of surveyed airports reported that they support patient transportation missions in a typical year, enabling timely access to essential healthcare;
- Prior to the COVID-19 pandemic, 69% of respondent airports incurred an operating deficit while 31% realized an operating surplus. Only 5% of respondent airports indicated that they are fully financially viable, without the need for operating and capital funding support;
- The COVID-19 pandemic negatively impacted the financial performance of 68% of respondent airports and accentuated pre-existing challenges such as increasing regulatory obligations, variable public and political will, and the limited financial capacity of municipal airport owners;
- Capital rehabilitation, reconstruction, and replacement projects are essential to ensuring the continued availability of essential airfield and supporting infrastructure. Between 2022 and 2025, a combined total of approximately $224M in capital projects is planned by 34 airports, including $53M planned by 22 Community, Northern & Remote, and Regional Non-Passenger facilities that have less access to capital support programs;
- The unavailability of capital funding in Ontario is a challenge acutely experienced by airports that do not support scheduled passenger air services and cannot benefit from ACAP. These facilities provide other economic and social benefits to their communities through their support of commercial and public air services. 50% and 43% of Community and Northern & Remote airport respondents, respectively, are unable to identify a funding source for their next primary runway improvement project;
- Given increasing capital project costs, no sustained budget increases in over 20 years, and competition for funding across approximately 200 airports nationwide, ACAP is increasingly oversubscribed;
- The degradation of infrastructure threatens the future of Ontario's airports. As with other assets such as highways and roads, upkeep and renewal are required to ensure their proper functioning and to enable the continued realization of economic and social benefits; and
- Although provincial land use and transportation plans and policies have repeatedly affirmed the economic and social importance of Ontario's airports, no dedicated financial support is available to address the capital needs of these facilities since the cessation of the Municipal Airports Program in 1997-1998. In contrast, seven of the ten provinces have introduced financial support programs in recent years, with Ontario, New Brunswick, and Prince Edward Island being the exceptions.

10.2 Recommendations

Through regional transportation plans prepared by the Government of Ontario and considering the information and analysis presented within this study, the social and economic importance of the province's airports has been recognized and affirmed. Looking ahead, it is recommended that the Government of Ontario take on an increased leadership role in championing the provincial airport network by implementing a new funding program that would be similar to the funding models utilized by other provincial governments (e.g., British Columbia) and by forming a panel to advise on issues of concern and priorities:

Recommendation #1 – Ontario Airport Capital Funding Program

While federal programs (with recommended budgetary increases) are expected to continue to be an available tool for providing capital support to regional airports that support scheduled passenger air services, it is recommended that the Government of Ontario adopt the approach used in other jurisdictions such as British Columbia, Alberta, and Saskatchewan and implement a provincial funding program that addresses identified gaps in ACAP. Specifically, it is recommended that an airport capital funding program be initiated that addresses three key priorities: 1) the rehabilitation and reconstruction of existing airside assets and supporting aeronautical infrastructure; 2) the procurement of replacement mobile equipment for maintenance and firefighting; and 3) initiatives to improve energy efficiency and / or decrease greenhouse gas emissions.

Eligible applicants for this program are recommended to include publicly available airports without scheduled passenger air services and publicly available airports that support scheduled passenger air services to a predetermined maximum (e.g., 1,000,000 annual passengers). It is recommended that airports eligible for ACAP funding also be permitted to apply to this potential program for projects that are ineligible or have been denied ACAP funding.

Further, it is recommended that project funding requests be evaluated on the basis of the social and economic benefits supported by the applicant airport. This may include the consideration of a fulsome range of factors such as: 1) past essential air service activity levels (e.g., air ambulance and law enforcement flights); 2) commercial activity (e.g., corporate and charter flights, flight training); 3) demonstrated financial need; and 4) unique circumstances such as the availability of limited alternative forms of non-aviation transportation to the airport's catchment area.

Funding for a provincial airport capital support program could be provided through the full or partial allocation of the Government of Ontario's aviation fuel tax, reinvesting the revenues generated through the functioning of Ontario's aviation sector into the facilities that are integral to the viability of this industry.

Recommendation #2 – Restoration of Ontario Air Advisory Panel

In 2007, the Ontario Air Advisory Panel was formed to guide the development of a provincial air transportation strategy. This panel has since been disbanded – however, the restoration of the Ontario Air Advisory Panel is recommended concurrent with the implementation of Recommendation #1. The intent of the panel would be to advise the MTO and Government of Ontario on issues and matters of importance to airport operators and to ensure that airports are kept aware of developments at the provincial level. Membership in the Air Advisory Panel could include representatives from the airport sector (e.g., AMCO), municipalities (e.g., Association of Municipalities of Ontario), key aircraft operators (e.g., ORNGE, NDMNRF, OPP), and the Government of Ontario (e.g., MTO).

In addition to the recommended call to action at the provincial level, this Study recognizes the important role that federal support has served in ensuring the continued availability of Ontario's airports in the past decades. At the federal level, the following recommendations are made to the Government of Canada for targeted supports to ensure the continued availability and safety of the country's airports:

Recommendation #3 – Airports Capital Assistance Program Budget Increase

This Study reaffirms the positions of the Canadian Airports Council, AMCO, Regional and Community Airports of Canada (RCAC), Atlantic Canada Airports Association, Réseau québécois des aéroports, British Columbia Aviation Council, Manitoba Aviation Council, and Saskatchewan Aviation Council calling for a permanent increase in the budget of ACAP. ACAP is an essential program that has enabled critical safety-related capital projects to be completed at Ontario's regional airports that support scheduled passenger air services.

Prior to the COVID-19 pandemic, RCAC advocated for ACAP to be permanently increased to $95M per year to account for historical inflation and rising project costs. As ACAP provides support to airports nationally, it is recommended that Transport Canada engages with industry stakeholders across the country to identify an appropriate revised funding allocation that more appropriately addresses the needs and costs associated with implementing safety-related projects in the 2020s.

Recommendation #4 – Regional Air Transportation Initiative Renewal

The RATI program has served as a unique opportunity for airports negatively impacted by the COVID-19 pandemic to pursue initiatives to restore regional connectivity. Although indications of recovery in the aviation sector are becoming evident in 2022, surveyed airports that experienced service decreases during the pandemic highlighted the continued need for support to assist air carriers in restoring operations. As the projects funded through the initial two-year term of RATI are implemented and evaluated for the degree to which they have achieved their expected outcomes, it is recommended that consideration be given to the renewal of the RATI program for additional terms if a clearly defined need is identified.

For decades, Ontario's airport operators have accepted the challenges associated with maintaining these facilities for the benefit of the province's residents and businesses. Many of these airports' runways, taxiways, aprons, and other critical infrastructure assets have reached or are approaching the end of their service lives and require rehabilitation and / or replacement. In the coming years, it is expected that success will, more than ever, be contingent on effective partnerships between airport operators and the provincial and federal levels of government. Through effective and targeted support, the preservation of this network of transportation assets can occur, ensuring that their critical social and economic benefits can be realized within their surrounding communities and across Ontario.

Air Canada Express De Havilland Canada Dash 8-400

Appendix A - Airport Outreach Survey Questions

Representing Ontario's Airports

2022 Study of Airports and Aerodromes in Ontario

Introduction

The Airport Management Council of Ontario, with the assistance of HM Aero Aviation Consulting, is completing a Study of Airports and Aerodromes in Ontario to ensure that the priorities of these facilities can be championed, with a focus on policymaking and funding to support long-term viability and associated economic and social benefits. It is expected that the results of this Study will be used to approach the provincial and federal levels of government and make a compelling case for increased support to our sector.

Instructions
Participation in this survey is voluntary and is highly encouraged by AMCO and HM Aero to support the development of robust and data-driven recommendations.

For respondents that represent two or more airports / aerodromes, we request that you submit separate survey responses for each facility.

Survey responses are requested no later than February 18, 2022.

The estimated duration of the survey is between 30 and 60 minutes. If you need to exit and return to the survey, you can do so until you click the "Done" button. For this setting to work properly, you must use the same device and web browser used to start the survey on; a cookie will be stored in your browser that remembers your survey responses.

Before you begin the survey, it is recommended that you have the following materials readily available:

- **Historical airport financial information (i.e., operating expenses and revenues, capital expenses, grant funding) for 2016-2021 if available;**
- **Historical aircraft and passenger movement statistics;**
- **Historical airport and aviation business employment numbers;**
- **Previously completed economic impact analyses and infrastructure assessments; and**
- **Planned capital projects including anticipated year of completion and project value.**

If a question is not applicable to your airport / aerodrome, please feel free to move on to the next question.

If you have any questions or problems with accessing the survey, please contact

Andrew Macdonald at Andrew.Macdonald@hmaero.ca.

Representing Ontario's Airports

2022 Study of Airports and Aerodromes in Ontario

Facility Profile

The following questions will be used by our team to gain an understanding of trends and challenges by airport / aerodrome type. Please note that the answers specific to your facility will not be reported in the Study without your written authorization.

* 1. What is the name of your facility?

* 2. What is the regulatory classification of your facility?

- ◯ Certified Airport
- ◯ Registered Aerodrome

* 3. Which option best describes the ownership model of your facility?

- ◯ Municipally Owned – Single Municipality
- ◯ Municipally Owned – Two or More Municipalities
- ◯ Provincially Owned
- ◯ Federally Owned
- ◯ Privately Owned by an Individual or Corporation
- ◯ Privately Owned by a Not-for-Profit Corporation
- ◯ Owned by First Nations Community
- ◯ Other (please specify)

* 4. Which option best describes the operational model of your facility?

- ◯ Operated by Municipal Staff – Airport-specific department
- ◯ Operated by Municipal Staff – Other pre-existing department(s) (e.g., public works, transportation services, etc.)
- ◯ Operated by Contracted Individual or Corporation
- ◯ Operated by a Not-for-Profit Corporation
- ◯ Privately Operated
- ◯ Provincially Operated
- ◯ Federally Operated
- ◯ Other (please specify)

Representing Ontario's Airports

2022 Study of Airports and Aerodromes in Ontario

Economic Impacts and Benefits

Data from the following questions will be used to articulate the economic importance and value of Ontario's airports and aerodromes.

5. For each of the following years, how many aircraft movements occurred at your facility? If exact values are not known, please provide an estimate. Please round to the nearest whole number.

2016	
2017	
2018	
2019	
2020	
2021	

6. For each of the following years, how many passengers enplaned and deplaned at your facility? If exact values are not known, please provide an estimate. Please round to the nearest whole number.

2016	
2017	
2018	
2019	
2020	
2021	

7. For each of the following years, what was the cargo throughput (annual kg) at your facility? If exact values are not known, please provide an estimate. Please round to the nearest whole number.

2016	
2017	
2018	
2019	
2020	
2021	

8. In a typical year prior to the COVID-19 pandemic (e.g., 2019), approximately how many times per year did your facility support the following types of activity?

	Never	Rarely – Fewer than 10 flights per year	Occasionally – 10-30 flights per year	Frequently – Greater than 30 flights per year
Scheduled passenger air carrier services	○	○	○	○
Charter passenger air carrier services	○	○	○	○
Scheduled cargo air carrier services	○	○	○	○
Charter cargo air carrier services	○	○	○	○
“Other commercial” services (e.g., aerial application, aerial surveying / photography, infrastructure inspection flights, etc.)	○	○	○	○
General aviation – corporate / business	○	○	○	○
General aviation – private / recreational	○	○	○	○

9. During the COVID-19 pandemic (March 2020 to present), has the frequency of each of the following types of activity changed from the pre-pandemic level reported above?

	Yes - Increased Levels	Yes - Decreased Levels	No - Similar Levels
Scheduled passenger air carrier services	○	○	○
Charter passenger air carrier services	○	○	○
Scheduled cargo air carrier services	○	○	○
Charter cargo air carrier services	○	○	○
“Other commercial” services (e.g., aerial application, aerial surveying / photography, infrastructure inspection flights, etc.)	○	○	○
General aviation – corporate / business	○	○	○
General aviation – private / recreational	○	○	○

10. Approximately how many Full-Time Equivalent positions are employed by the airport / aerodrome operator? Please include contracted third-party resources engaged by the airport / aerodrome operator in your estimate and round to the nearest full number.

2019 ☐

2020 ☐

2021 ☐

11. Approximately how many Full-Time Equivalent positions were employed by aviation tenants / businesses of your airport / aerodrome? Please consider employees of tenants, businesses, CATSA, NAV CANADA, etc. and round to the nearest full number.

2019 ☐

2020 ☐

2021 ☐

12. If an economic impact study has been completed for your facility in the past five years, what were the direct single-year economic impacts? Please round to the nearest whole number.

Gross Domestic Product ($)	
Full-Time Equivalent Positions	
Labour Earnings ($)	

13. If an economic impact study has been completed for your facility in the past five years, what were the total (direct + indirect + induced) single-year economic impacts? Please round to the nearest whole number.

Gross Domestic Product ($)	
Full-Time Equivalent Positions	
Labour Earnings ($)	

14. Is your facility marketed within economic development materials (e.g., brochures, websites, site selection resources) of its nearby municipalities or economic development organizations?

- ◯ Yes
- ◯ No

15. Under the category of economic impacts and benefits, do you have any other comments that you would like to share?

Representing Ontario's Airports

2022 Study of Airports and Aerodromes in Ontario

Social Impacts and Community Benefits

Data from the following questions will be used to articulate the importance of Ontario's airports and aerodromes to their communities from a social impacts perspective.

16. Is your facility a permanent or seasonal base of operations for the following public, emergency, or charitable air services? Please select all that apply.

- [ ] Air Ambulance Operator
- [ ] Wildfire Suppression Operator
- [ ] Law Enforcement Operator (e.g., municipal, OPP, RCMP)
- [ ] Search and Rescue Operator (e.g., Coast Guard, OPP, RCAF)
- [ ] Emergency Management Operator
- [ ] Other (please specify)

17. In a typical year prior to the COVID-19 pandemic (e.g., 2019), approximately how many times per year did your facility support the following public, emergency, or charitable air services?

	Never	Rarely – Fewer than 10 flights per year	Occasionally – 10-30 flights per year	Frequently – Greater than 30 flights per year
Air ambulance flights, including patient transfers and organ transfers	○	○	○	○
Wildfire suppression flights (e.g., fixed and rotary-wing air tankers, bird dogs, and supporting aircraft)	○	○	○	○
Law enforcement (e.g., municipal, OPP, and RCMP aircraft operations)	○	○	○	○
Charter cargo air carrier services	○	○	○	○
Search and rescue (e.g., Coast Guard, OPP, CASARA, and RCAF Search and Rescue operations)	○	○	○	○
Emergency management operations (e.g., community evacuation efforts)	○	○	○	○
Charitable flights (e.g., Pilots N Paws, Hope Air, etc.)	○	○	○	○

18. During the COVID-19 pandemic (March 2020 to present), has the frequency of each of the following public, emergency, or charitable air services changed from the pre-pandemic level reported above?

	Yes - Increased Levels	Yes - Decreased Levels	No - Similar Levels
Air ambulance flights, including patient transfers and organ transfers	○	○	○
Wildfire suppression flights (e.g., fixed and rotary-wing air tankers, bird dogs, and supporting aircraft)	○	○	○
Law enforcement (e.g., municipal, OPP, and RCMP aircraft operations)	○	○	○
Charter cargo air carrier services	○	○	○
Search and rescue (e.g., Coast Guard, OPP, CASARA, and RCAF Search and Rescue operations)	○	○	○
Emergency management operations (e.g., community evacuation efforts)	○	○	○
Charitable flights (e.g., Pilots N Paws, Hope Air, etc.)	○	○	○

19. During the COVID-19 pandemic (March 2020 to present), has your facility supported any of the following pandemic-related air services? Please select all that apply.

- ☐ Intercommunity transport flights for Personal Protective Equipment, medical supplies, etc.
- ☐ Intercommunity transport flights for medical staff (e.g., medical staff being flown to remote communities; out-of-province medical staff being redeployed to Ontario)
- ☐ Vaccine distribution and immunization efforts (e.g., vaccine transportation, transportation of medical personnel for vaccination campaigns)
- ☐ Other (please specify)

[ ]

20. In a typical year, does your facility support any of the following education / youth development opportunities? Please select all that apply.

- [ ] School Tours – Elementary, Middle, and / or High School
- [ ] Youth Group Tours – Air Cadets, Scouts, etc.
- [ ] High School Co-op Education Placements / Internships
- [ ] Post-Secondary Co-op Education Placements / Internships
- [ ] Other (please specify)

21. Under the category of social impacts and community benefits, do you have any other comments that you would like to share?

Representing Ontario's Airports

2022 Study of Airports and Aerodromes in Ontario

Infrastructure and Capital Funding

The following questions will be used to explore how the current funding environment for airports / aerodromes influences infrastructure projects and capital requirements.

22. How would you classify the current condition of each of the following infrastructure assets? For instances where a category applies to two or more assets (e.g., Taxiway Network), please assign a representative condition rating.

	Very Poor	Poor	Fair	Good	Excellent	N/A
Primary Runway	◯	◯	◯	◯	◯	◯
Secondary Runway	◯	◯	◯	◯	◯	◯
Taxiways	◯	◯	◯	◯	◯	◯
Aprons	◯	◯	◯	◯	◯	◯
Airside Access Roads	◯	◯	◯	◯	◯	◯
Airfield Lighting and Airside Electrical Systems	◯	◯	◯	◯	◯	◯
Perimeter Fencing and Access Controls	◯	◯	◯	◯	◯	◯
Drainage Infrastructure	◯	◯	◯	◯	◯	◯
Terminal Building	◯	◯	◯	◯	◯	◯
Maintenance Garage / Combined Services Building	◯	◯	◯	◯	◯	◯
Mobile Equipment – Airport Maintenance	◯	◯	◯	◯	◯	◯
Mobile Equipment – ARFF	◯	◯	◯	◯	◯	◯
Groundside Access Roads	◯	◯	◯	◯	◯	◯
Groundside Parking Lots	◯	◯	◯	◯	◯	◯

23. For capital rehabilitation, reconstruction, and / or replacement projects planned for 2022-2025 across each of the following categories of infrastructure, what is the approximate total capital cost anticipated to be incurred? Please round to the nearest whole number.

Primary Runway	
Secondary Runway	
Taxiways	
Aprons	
Airside Access Roads	
Airfield Lighting and Airside Electrical Systems	
Perimeter Fencing and Access Controls	
Drainage Infrastructure	
Terminal Building	
Maintenance Garage / Combined Services Building	
Mobile Equipment – Airport Maintenance	
Mobile Equipment – ARFF	
Groundside Access Roads	
Groundside Parking Lots	

24. For capital rehabilitation, reconstruction, and / or replacement projects planned for 2026-2030 across each of the following categories of infrastructure, what is the approximate total capital cost anticipated to be incurred? Please round to the nearest whole number.

Primary Runway	
Secondary Runway	
Taxiways	
Aprons	
Airside Access Roads	
Airfield Lighting and Airside Electrical Systems	
Perimeter Fencing and Access Controls	
Drainage Infrastructure	
Terminal Building	
Maintenance Garage / Combined Services Building	
Mobile Equipment – Airport Maintenance	
Mobile Equipment – ARFF	
Groundside Access Roads	
Groundside Parking Lots	

25. For capital rehabilitation, reconstruction, and / or replacement projects planned for 2031-2035 across each of the following categories of infrastructure, what is the approximate total capital cost anticipated to be incurred? Please round to the nearest whole number.

Primary Runway	
Secondary Runway	
Taxiways	
Aprons	
Airside Access Roads	
Airfield Lighting and Airside Electrical Systems	
Perimeter Fencing and Access Controls	
Drainage Infrastructure	
Terminal Building	
Maintenance Garage / Combined Services Building	
Mobile Equipment – Airport Maintenance	
Mobile Equipment – ARFF	
Groundside Access Roads	
Groundside Parking Lots	

26. For the most recently completed capital rehabilitation, reconstruction, and / or replacement projects across each of the following categories of infrastructure, did accessing the required capital funds result in a delay in the planned implementation of the project?

	No Delay	Yes - 1 Year or Less	Yes - 2 to 5 Years	Yes - Greater Than 5 Years	N/A
Primary Runway	◯	◯	◯	◯	◯
Secondary Runway	◯	◯	◯	◯	◯
Taxiways	◯	◯	◯	◯	◯
Aprons	◯	◯	◯	◯	◯
Airside Access Roads	◯	◯	◯	◯	◯
Airfield Lighting and Airside Electrical Systems	◯	◯	◯	◯	◯
Perimeter Fencing and Access Controls	◯	◯	◯	◯	◯
Drainage Infrastructure	◯	◯	◯	◯	◯
Terminal Building	◯	◯	◯	◯	◯
Maintenance Garage / Combined Services Building	◯	◯	◯	◯	◯
Mobile Equipment – Airport Maintenance	◯	◯	◯	◯	◯
Mobile Equipment – ARFF	◯	◯	◯	◯	◯
Groundside Access Roads	◯	◯	◯	◯	◯
Groundside Parking Lots	◯	◯	◯	◯	◯

27. Is your facility eligible for capital funding through the Airports Capital Assistance Program?

- ◯ Yes
- ◯ No

28. For the next planned capital rehabilitation, reconstruction, and / or replacement projects across each of the following categories of infrastructure, how do you plan to fund the project? Please select all options that apply.

	Airports Capital Assistance Program	Regional Air Transportation Initiative	Internal Capital Reserves	Financial Loan / Borrowing	Funding by One or More Municipalities	Grant from Provincial / Federal Levels	Unknown / No Funding Plan
Primary Runway	☐	☐	☐	☐	☐	☐	☐
Secondary Runway	☐	☐	☐	☐	☐	☐	☐
Taxiways	☐	☐	☐	☐	☐	☐	☐
Aprons	☐	☐	☐	☐	☐	☐	☐
Airside Access Roads	☐	☐	☐	☐	☐	☐	☐
Airfield Lighting and Airside Electrical Systems	☐	☐	☐	☐	☐	☐	☐
Perimeter Fencing and Access Controls	☐	☐	☐	☐	☐	☐	☐
Drainage Infrastructure	☐	☐	☐	☐	☐	☐	☐
Terminal Building	☐	☐	☐	☐	☐	☐	☐
Maintenance Garage / Combined Services Building	☐	☐	☐	☐	☐	☐	☐
Mobile Equipment – Airport Maintenance	☐	☐	☐	☐	☐	☐	☐
Mobile Equipment – ARFF	☐	☐	☐	☐	☐	☐	☐
Groundside Access Roads	☐	☐	☐	☐	☐	☐	☐
Groundside Parking Lots	☐	☐	☐	☐	☐	☐	☐

Other (please specify)

29. Under the category of infrastructure and capital funding, do you have any other comments that you would like to share?

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Financial Performance and Funding Requirements

The next set of questions will explore the financial position of Ontario's airports / aerodromes before, and as a result of, the COVID-19 pandemic.

30. Prior to the COVID-19 pandemic (e.g., from 2016 to 2019), which option best described the overall financial position of your airport / aerodrome?

- ◯ Viable: Aeronautical and non-aeronautical revenues were sufficient to cover or exceed both capital expenses and operating costs
- ◯ Self-Sustaining: Aeronautical and non-aeronautical revenues were sufficient to cover operating costs, although capital expenses required external funding
- ◯ Not Self-Sustaining: Aeronautical and non-aeronautical revenues were insufficient to cover operating costs and capital expenses. External funding was required to cover both an operating deficit and capital expenditures.

31. During the COVID-19 pandemic (March 2020 – present), which option best describes the overall financial position of your airport / aerodrome?

- ◯ Viable: Aeronautical and non-aeronautical revenues are sufficient to cover or exceed both capital expenses and operating costs
- ◯ Self-Sustaining: Aeronautical and non-aeronautical revenues are sufficient to cover operating costs, although capital expenses require external funding
- ◯ Not Self-Sustaining: Aeronautical and non-aeronautical revenues are insufficient to cover operating costs and capital expenses. External funding is required to cover both an operating deficit and capital expenditures.

32. What was the average annual operating deficit or surplus incurred by your facility in the following two periods? Please round to the nearest whole number.

Prior to the COVID-19 pandemic (2016 - 2019): Deficit ($)

Prior to the COVID-19 pandemic (2016 - 2019): Surplus ($)

During the COVID-19 pandemic (2020 – 2021): Deficit ($)

During the COVID-19 pandemic (2020 – 2021): Surplus ($)

33. Prior to the COVID-19 pandemic (e.g., from 2016 to 2019), how would you categorize the overall trends that were being experienced in each of the following categories:

	Decreasing Significantly (> 5% per year)	Decreasing (1% - 5% per year)	Stable (+/- 1% per year)	Increasing (1% - 5% per year)	Increasing Significantly (> 5% per year)
Operating Expenses	◯	◯	◯	◯	◯
Operating Revenues	◯	◯	◯	◯	◯

34. During the COVID-19 pandemic (March 2020 - present), how would you categorize the overall trend being experienced in each of the following categories:

	Decreasing Significantly (> 5% per year)	Decreasing (1% - 5% per year)	Stable (+/- 1% per year)	Increasing (1% - 5% per year)	Increasing Significantly (> 5% per year)
Operating Expenses	◯	◯	◯	◯	◯
Operating Revenues	◯	◯	◯	◯	◯

35. As a result of the COVID-19 pandemic, has your facility had to take any of the following cost reduction measures? Please select all that apply.

- ☐ Staffing – Temporary Layoffs of Existing Position(s)
- ☐ Staffing – Permanent Layoffs of Existing Position(s)
- ☐ Staffing – Deferred Hiring of Planned or Vacant Position(s)
- ☐ Staffing – Cancelled Hiring of Planned or Vacant Position(s)
- ☐ Other (please specify)

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- ☐ Change to Service Levels (e.g., reduction of staffed hours)
- ☐ Capital – Deferral of Capital Project(s)
- ☐ Capital – Cancellation of Capital Project(s)

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Closing

The closing questions are an opportunity for you to share any additional perspectives that you may have on behalf of your airport / aerodrome that weren't covered through the preceding questions.

36. When considering factors that are external to your facility (e.g., regulatory changes, public support, political will, etc.), what are the three most significant challenges that influence your airport / aerodrome?

37. When considering opportunities for future financial support to Ontario's airports and aerodromes, what are your three most significant priorities?

Appendix B - Infrastructure Condition Definitions

Condition Rating	Definition
Very Good	• Asset is in a sound condition • Operational and well-maintained • Asset is likely to perform adequately with routine maintenance for 10 years or more.
Good	• Asset is in acceptable condition but is starting to show signs of minor wear • Minimal short-term failure risk is present but potential for deterioration or reduced performance over the next 5-10 years exists • Asset is likely to require minor remedial works
Fair	• Asset has evidence of deterioration • Minor components or isolated sections of the asset require replacement or repair, but the asset still functions safely at an adequate level of service • Failure is unlikely within 2 years, but further deterioration is likely and major rehabilitation is expected to be required within 5 years • Remedial work is required but the asset is still serviceable.
Poor	• Asset and its components function but require a high level of maintenance to remain operational • Significant renewal/upgrades are required
Very Poor	• Asset has failed or failure is imminent • A high risk of asset breakdown is present with a serious impact on performance • Reconstruction or replacement is required urgently

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