Alberta's Community Airports:
Support for Long-Term Viability

Final Report
May 16, 2024

AAMA
ALBERTA AIRPORTS MANAGEMENT ASSOCIATION

Foreword

Alberta benefits from its renowned aviation sector that yields considerable economic, social, and emergency management value. The Alberta Airports Management Association (AAMA) is the voice for a thriving and valued network of community airports. AAMA's leadership has heard from airport operators on challenges affecting their long-term viability and has commissioned the following Study to effectively work with the provincial and federal governments and aligned partners towards their resolution. Six calls to action are established:

1. That the Province's **Strategic Transportation Infrastructure Program** be revised to include non-municipal community airport operators; expanded project eligibility to include the full range of initiatives required to address aviation safety, airport availability, emergency management, and economic development; and that funding be increased to a target of $15M per year;
2. The introduction of **operating financial support** by the Province to community airports, with contributions determined based on each airport's use by Alberta Health Services, Alberta Wildfire, and aircraft activities of strategic significance, such as flight training;
3. That the annual allocation of the federal **Airports Capital Assistance Program** be increased from $38M to $95M;
4. That the **Alberta Community Partnership funding program** be continued by the Province, including the Intermunicipal Collaboration and Strategic Initiatives streams;
5. That a **regional passenger air service working group** be formed with the Province, airport operators, and industry stakeholders to examine challenges affecting the viability of these services and actions that can be taken in response; and
6. That the **tools available to limit incompatible land uses** in the vicinity of certified airports and registered aerodromes by reviewed by Transport Canada.

This Study is built on a spirit of collaboration and partnership and recognizes the contributions made by the provincial and federal levels of government to the airport sector, most notably through the Strategic Transportation Infrastructure Program, Airports Capital Assistance Program, Regional Airport Development Grant, and Regional Air Transportation Initiative. The commitment that has been demonstrated by both levels of government to Alberta's airport sector serves as a foundation for further success through the implementation of the recommendations provided in this Study.

With collaboration and commitment by all levels of government and industry, AAMA sees a clear path forward to ensure that Alberta's community airports will grow as productive assets for the betterment of Alberta's residents and the strength of the provincial economy.

Sincerely,

Alberta Airports Management Association

William Stewart, AAE
Chair

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Cover Photo: CL215T airtanker parked at Manning Municipal Airport

1 INTRODUCTION

1.1 The Albertan Aviation Sector

Alberta's robust and competitive aviation sector is a tool for economic productivity and prosperity. The Province of Alberta notes that its aviation industry is ranked third in Canada by company size and has identified the sector as a priority for growth and development. The 2023 mandates for the Ministers of Advanced Education; Jobs, Economy and Trade; and Transportation and Economic Corridors underscore this prioritization, with key directions of:

- Funding additional aviation management seats at post-secondary institutions;
- Providing grants to help more Albertans pursue a career in aviation; and
- Removing barriers to the growth and development of Alberta's airports.

Alberta's community airports are essential components of the broader provincial aviation sector, providing intercommunity connectivity, opportunities for skilled employment and economic productivity, and essential emergency management and healthcare access.

> *"**Alberta's aviation industry** plays an important role in strengthening and diversifying our economy by expanding access to markets and creating jobs in the province. Regional airports are key assets in supporting the air sector and the movement of people."*
>
> Minister of Transportation and Economic Corridors, April 4, 2024

1.2 Objectives

The Alberta Airports Management Association (AAMA) is the voice for a thriving and valued network of community airports. AAMA is the predominant forum for Alberta's airport operators to resolve common issues and problems and serves as a liaison between its members and the provincial and federal governments.

This Study has been commissioned to assist AAMA in its work with airport operators, the provincial and federal governments, and aligned partners in ensuring the long-term viability of Alberta's community airports. The objectives of this Study are to:

1. Outline the economic, social, and emergency management **value of community airports**;
2. Communicate the **operating and financial realities** of providing airport services;
3. Identify **challenges and threats** that face Alberta's community airports; and
4. Provide **targeted recommendations** for support to ensure continued viability.

1.3 Study Process

HM Aero Aviation Consulting was commissioned by AAMA to lead the preparation of the Study. Data collection to support the analysis within the Study included a literature review of existing publications; outreach with Alberta Municipalities and Rural Municipalities of Alberta[1]; and primary data collection with community airport operators through surveying.

Surveying was used to gather the perspectives of airport operators as they relate to the focus areas of the Study and represents an important part of its overall methodology. A 34-question survey was developed by HM Aero and AAMA that addressed each respondent airport's ownership and operational model; financial performance; use, social, and economic benefits; infrastructure and supporting services; and priorities for future sustainability. Online surveys were distributed to 81 community airport owners and / or operators in September 2024.

Survey responses were received from 51 community airport representatives, representing 55% of Alberta's 93 community airports. The survey response data included all certified community airports (11 facilities) and 49% of registered aerodrome operators (40 of 82 facilities). All except two economic regions achieved response rates exceeding 50% as shown in Table 1.1. The list of all airports that provided survey responses is available in Table 2.2.

Table 1.1 - Community Airport Survey Responses by Economic Region

Economic Region	Airports	Survey Responses	Proportion
Banff – Jasper – Rocky Mountain House	3	3	100%
Wood Buffalo – Cold Lake	8	6	75%
Camrose – Drumheller	22	14	64%
Edmonton	5	3	60%
Lethbridge – Medicine Hat	14	8	57%
Red Deer	4	2	50%
Athabasca – Grande Prairie – Peace River	31	14	45%
Calgary	6	1	17%
Total	**93**	**51**	**55%**

[1] Alberta Municipalities represents Alberta's summer villages, villages, towns, cities, and specialized municipalities, where over 85% of Albertans live, work and play. Rural Municipalities of Alberta represents 69 municipal districts, counties, and special areas. Both organizations support their respective members through advocacy efforts targeted at municipal issues.

2 ALBERTA'S COMMUNITY AND REGIONAL AIRPORTS

2.1 Overview

The Albertan aviation sector is supported by a network of 204 registered aerodromes and certified airports per the Canada Flight Supplement, including:

- **Major Passenger Processing Airports:** Calgary International Airport, Edmonton International Airport, Fort McMurray International Airport, and Grande Prairie Airport. Cumulatively, these four airports served 26.6M passengers in 2023;
- **Federally Operated Airports:** Four aerodromes and airports are federally operated through Parks Canada and the Department of National Defence, as well as two border airports operated by the Montana Aeronautics Division;
- **Provincially Operated Airports:** 11 aerodromes in remote areas are maintained by the Province to support wildfire suppression operations;
- **Private Use Facilities:** 88 aerodromes and airports are operated by private individuals, corporations, and flying clubs or societies primarily for recreational purposes or to support major resource-related business activity; and
- **Community Airports:** 95 facilities maintained by municipalities, not-for-profit groups, and other entities that serve a diverse mix of commercial, emergency, and private roles. Due to their respective operation by the Calgary Airport Authority and Edmonton Regional Airports Authority, Springbank Airport and Villeneuve Airport are excluded from the Study. The remaining **93 community airports** are the focus of this Study.

The distribution of community airports by economic region is shown in Figure 2.1 and Table 2.1, with the comprehensive list of each facility provided in Table 2.2.

Table 2.1 - Community Airports by Economic Region

Economic Region	Community Airports	Area (km^2)	Area per Airport (km^2)	Residents	Residents per Airport
Calgary	6	12,614	2,102	1,590,639	265,107
Edmonton	5	15,746	3,149	1,462,041	292,408
Lethbridge – Medicine Hat	14	51,459	3,676	301,794	21,557
Athabasca – Grande Prairie – Peace River	31	268,301	8,655	264,601	8,536
Red Deer	4	9,890	2,473	213,470	53,368
Camrose – Drumheller	22	76,750	3,489	201,143	9,143
Wood Buffalo – Cold Lake	8	125,889	15,736	142,026	17,753
Banff – Jasper – Rocky Mountain House	3	74,008	24,669	86,921	28,974
Total / Average	**93**	**634,657**	**6,824**	**4,262,635**	**45,835**

Note: Population is per 2021 Statistics Canada census data.

Figure 2.1 - Alberta's Community Airports

Table 2.2 - Alberta's Community Airports

CEF4 – Airdrie	CEZ3 – Edmonton / Cooking Lake *	CEK6 – Killam-Sedgewick *	CEW3 – St. Paul *
CYWM – Athabasca	CFB6 – Edmonton / Josephburg	CFN5 – La Crete *	CEJ3 – Stettler *
CEP3 – Barrhead *	CPL6 – Edmonton / Parkland *	CYLB – Lac La Biche *	CFN7 – Sundre
CFK2 – Bashaw	CYET – Edson *	CEG3 – Lacombe *	CEM5 – Swan Hills
CEN2 – Bassano *	CEJ6 – Elk Point *	CYQL – Lethbridge *	CED5 – Taber *
CEU2 – Beaverlodge	CYEA – Empress *	CYLL – Lloydminster *	CEN3 – Three Hills *
CFV2 – Beiseker	CEB5 – Fairview *	CFX4 – Manning *	CEV7 – Tofield
CYBF – Bonnyville *	CFD4 – Foremost	CFV6 – Margaret Lake	CFB4 – Trout Lake
CEF3 – Bow Island	CYPY – Fort Chipewyan *	CEV5 – Mayerthorpe	CEL6 – Two Hills
CFM7 – Boyle	CEY3 – Fort Macleod *	CYXH – Medicine Hat *	CEL5 – Valleyview *
CYBP – Brooks	CEZ4 – Fort Vermilion	CEW5 – Milk River	CEN6 – Vauxhall *
CFK4 – Calling Lake	CED4 – Fox Creek	CFX2 – Okotoks *	CEV3 – Vegreville *
CEQ3 – Camrose	CEC3 – Fox Lake	CEA3 – Olds-Didsbury	CYVG – Vermilion *
CEA6 – Cardston *	CFU4 – Garden River	CED3 – Oyen	CEE8 – Viking
CER2 – Castor *	CFD5 – Grimshaw	CYPE – Peace River *	CFX6 – Vulcan *
CEG5 – Chipewyan Lake	CEL4 – Hanna *	CZPC – Pincher Creek	CEE5 – Wabasca
CEJ4 – Claresholm *	CEA5 – Hardisty *	CEH3 – Ponoka	CYWV – Wainwright *
CEN5 – Cold Lake *	CYOJ – High Level *	CEH6 – Provost	CEP6 – Warner
CFG3 – Consort	CZHP – High Prairie *	CYOP – Rainbow Lake	CES4 – Westlock *
CYCT – Coronation *	CEN4 – High River	CYQF – Red Deer *	CEX3 – Wetaskiwin *
CFG4 – Debolt *	CEM4 – Innisfail	CEH5 – Red Earth Creek	CYZU – Woodlands *
CFM4 – Donnelly *	CEP5 – Janvier	CYRM – Rocky Mountain House *	**Note:** An asterisk (*) denotes an airport that provided a survey response.
CER3 – Drayton Valley	CEC4 – Jasper-Hinton *	CYZH – Slave Lake *	
CEG4 – Drumheller *	CFG5 – John D'Or Prairie	CFS5 – Spirit River *	

2.2 Community Contexts

Community airports primarily serve smaller urban and rural municipalities:

- The average population of the main municipality served by each community airport was 8,300 residents as of 2021;
- Over two thirds (68%) of community airports serve a primary community with a population of less than 5,000 residents, as shown in Table 2.3; and
- An additional 16% of studied airports serve primary communities of 5,000 to 10,000 residents.

8,300 Residents

Average community population served (2021)

When including each airport's surrounding non-urban municipality, the average population served by each airport was 18,000 residents in 2021. Only eight of Alberta's 93 community airports serve a primary community of more than 50,000 residents: Airdrie, Edmonton / Cooking Lake, Edmonton / Josephburg, Edmonton / Parkland, Lethbridge, Medicine Hat, Okotoks, and Red Deer.

Table 2.3 - Population Composition of Communities Served

Population Served	Primary Community	Total Population
< 1,000	31%	5%
1,000 to 5,000	37%	23%
5,000 to 10,000	16%	27%
10,000 to 50,000	12%	37%
50,000 to 100,000	3%	5%
> 100,000	1%	3%
Total	**100%**	**100%**

Notes:

- Population is per 2021 Statistics Canada census data.
- The primary community population is based on the nearest or namesake municipality served.
- The total population includes the population of the primary municipality and the surrounding non-urban municipality.

St. Paul Municipal Airport

2.3 Ownership and Operation

The origins of Alberta's community airports are varied, including facilities that were:

- Developed during World War II to support pilot training and logistics;
- Constructed by Transport Canada;
- Built with provincial support through the Alberta Airport Development Program; and
- Prepared through private or community-led efforts.

The Province was historically the owner of up to 72 community airports until a comprehensive divestment program was implemented in the 1990s. Transport Canada owned six regional and local airports in Alberta that were also divested in the 1990s as part of the National Airports Policy.

Today, municipalities are the primary entities responsible for the ownership of community airports. 84% of community airports are independently or jointly owned by municipal governments. Within this category, the majority of facilities are maintained by non-airport municipal resources, such as public works or transportation services departments. 10% of all community airports are maintained by an airport-specific municipal department, and a further 6% of airports are municipally owned and operated by a contracted service provider or a not-for-profit, such as the local flying club.

The remaining 16% of community airports are owned and operated by not-for-profit flying clubs or associations (5%); First Nations (4%); not-for-profit airport service commissions and authorities (3%); and private entities (3%).

Ownership of Community Airports

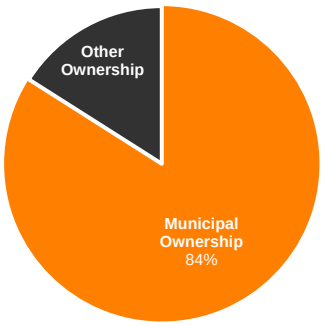


Table 2.4 - Community and Regional Airport Ownership and Operational Models

Ownership	Operational Model	Airports	Proportion
Municipal	Non-Airport Municipal Resources	63	68%
	Airport Dedicated Municipal Resources	9	10%
	Contracted Private Operator	3	3%
	Contracted Not-for-Profit Operator	3	3%
Not-for-Profit – Flying Club or Association		5	5%
First Nation		4	4%
Not-for-Profit – Airport Authority or Service Commission		3	3%
Private Individual or Corporation		3	3%
Total		**93**	**100%**

Note: Classifications assigned based on the Canada Flight Supplement, online resources, and information held by HM Aero.

2.4 Infrastructure and Maintenance

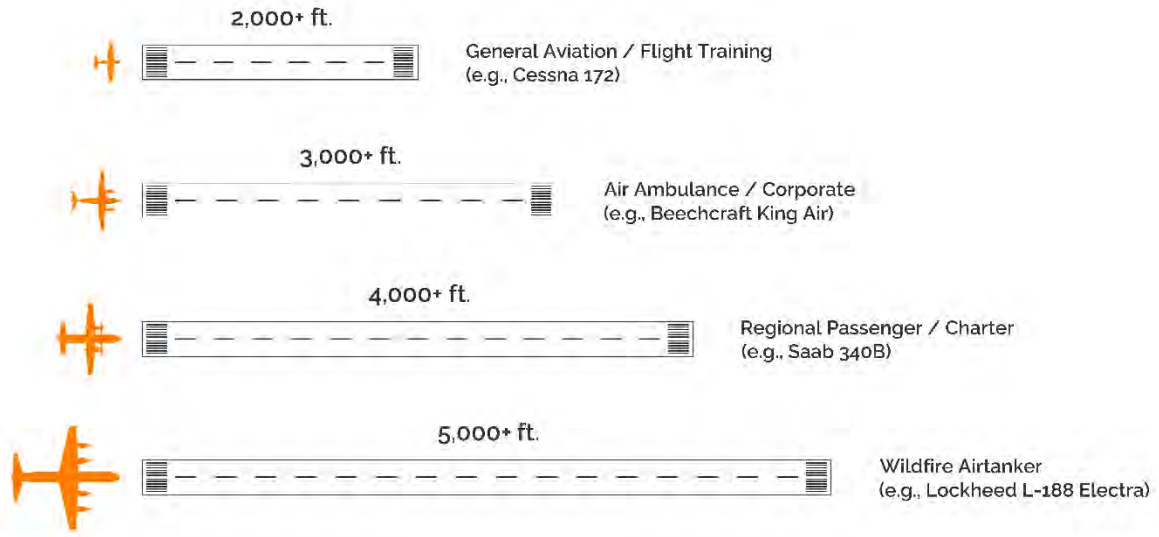
The infrastructure, supporting services, and maintenance model provided at each airport directly influences its ability to meet local objectives for that facility's role. The provision of the supporting services required by users and the adequacy and state of repair of airfield infrastructure are imperative priorities for community airport operators.

2.4.1 Airport Infrastructure

Runway Capabilities

The length, surface, and visual aids of an airport's primary runway are three of the main characteristics that influence an airport's operational capabilities. The runway lengths required for takeoffs and landings vary based on factors such as the aircraft's weight, the runway surface condition, winds and weather conditions, and pilot technique. For example:

- Light single-engine aircraft used for recreation and flight training purposes typically require a runway length of 2,000 ft. or more;
- Regional single and twin-engine corporate, charter, and air ambulance aircraft typically require a runway length of 3,000 ft. or more, such as the Beechcraft King Air;
- Twin-engine turboprop aircraft used for scheduled and charter regional air services often require runway lengths of 4,000 ft. or greater. Examples include the 19-seat Beechcraft 1900 and 50-seat De Havilland Canada Dash 8-300 operated by carriers such as Central Mountain Air and Sunwest Aviation to provide charter services; and
- Multi-engine airtankers deployed for wildfire suppression operations generally require runway lengths of 5,000 ft. or more, such as the Lockheed L-188 Electra and De Havilland Canada Dash 8-400AT. The nine community airports that support airtanker bases have an average runway length of 5,600 ft.



As shown in Table 2.5, approximately two thirds (62%) of community airports have primary runway lengths of between 2,000 ft. and 4,000 ft., generally limiting their use to smaller single and twin-engine aircraft used for flight training, aerial application, air ambulance, and private purposes. Approximately one third (33%) of airports have runway lengths between 4,000 ft. and 6,000 ft., while a limited number of airports have primary runways exceeding 6,000 ft., those being the facilities serving Edson, Lethbridge, Pincher Creek, and Red Deer.

Table 2.5 - Community Airport Primary Runway Lengths

Primary Runway Length (ft.)	Airports	Proportion
2,000 to 3,000	18	19%
3,000 to 4,000	40	43%
4,000 to 5,000	16	17%
5,000 to 6,000	15	16%
6,000 to 7,000	3	3%
7,000 to 8,000	1	1%
Total	**93**	**100%**
Note: Data is as published in the Canada Flight Supplement.		

Most airports are served by a single runway, with only 13 airports (14%) having a secondary runway. The majority of secondary runways are less than 3,000 ft. in length, are unpaved, and are not supported by lighting systems. The Lethbridge, Medicine Hat, and Red Deer airports are the three facilities with paved and lighted secondary runways, although the length of Medicine Hat's secondary runway (2,850 ft.) typically limits operations to smaller private and flight training aircraft.

83% of primary runways are equipped with edge lighting to support operations during hours of darkness. Most primary runways (87%) are prepared with a paved surface, with 11% having a turf surface and 2% with a gravel surface.

Supporting Services

Instrument Flight Procedures are used by aircraft flying under Instrument Flight Rules and enable arrivals and departures during periods of inclement weather (i.e., reduced visibilities and ceilings). Instrument Flight Procedures may be designed and maintained by NAV CANADA (the national air navigation service provider) or be privately sponsored by airport operators and maintained by third-party contractors. 55% of community airports have one or more Instrument Flight Procedures published in the Canada Air Pilot or Restricted Canada Air Pilot, with the majority of these being GNSS-based procedures[2]. Community airports with Instrument Flight Procedures are shown in Figure 2.2.

62%
Airports with a limited runway length of 2,000 ft. - 4,000 ft.

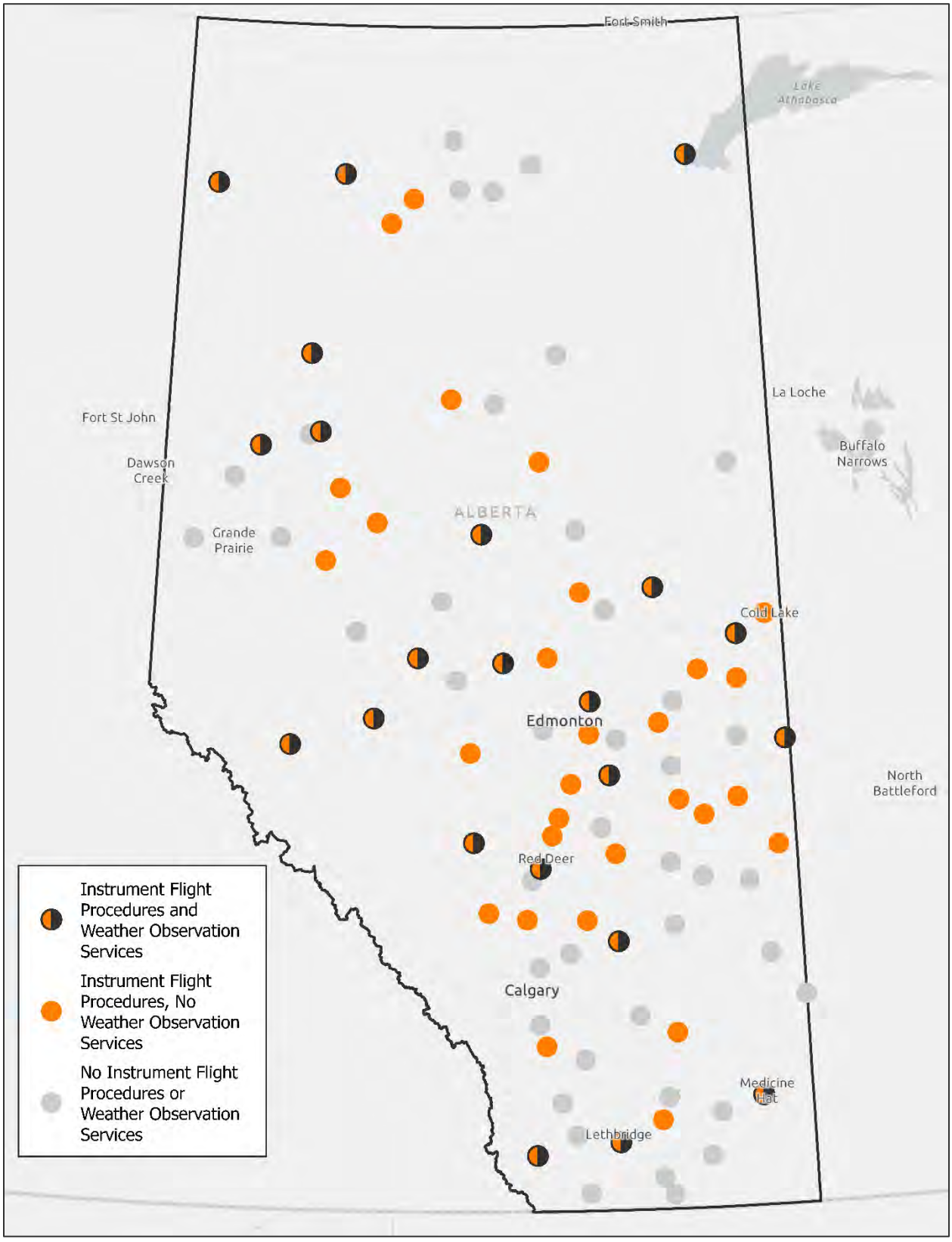
83%
Airports with airfield lighting

55%
Airports with Instrument Procedures

24%
Airports with Weather Observation Services

[2] Instrument Flight Procedures can be developed using ground-based electronic navigation aids or through the use of Global Positioning System (GPS) / Global Navigation Satellite System (GNSS).

Figure 2.2 - Instrument Flight Procedures and Weather Services at Community Airports



Weather observation and reporting services provide pilots with essential safety-related information, supporting preflight and enroute planning to determine if the destination weather will be suitable. Instrument Flight Procedures are also reliant on the availability of a local atmospheric pressure source for pilots to calibrate their altimeters to. The use of altimeter setting sources from other airports typically results in more restrictive weather limits. Only 24% of community airports have weather observation services reported in the Canada Flight Supplement, with large gaps in coverage throughout Alberta shown in Figure 2.2.

Services provided to support aircraft operations vary considerably between airports. Based on information reported in the Canada Flight Supplement, 57% of community airports have aircraft refuelling services available[3]:

- 29% of airports have both jet fuel and avgas;
- 25% have only avgas;
- 3% have only jet fuel; and
- 43% of airports have no fuel.

The Canada Border Services Agency designates select facilities as Airports of Entry that are authorized for the processing and clearance of aircraft arriving from other countries (e.g., a Canadian or American aircraft arriving from the United States). Four community airports are designated as Airports of Entry: Edmonton / Cooking Lake, Lethbridge, Milk River, and Ponoka. Each of these facilities are restricted to CANPASS private and corporate permit holders.

As noted previously, NAV CANADA is the national air navigation service provider. NAV CANADA maintains an Air Traffic Control Tower at Red Deer Regional Airport and Flight Service Stations at five community airports: High Level, Lethbridge, Lloydminster, Medicine Hat, and Woodlands. NAV CANADA establishes on-location flight information services according to its Level of Service Policy, depending on criteria such as a given airport's number of aircraft movements, the operation of scheduled air services, and site-specific traffic factors and risk control requirements.

Flight training aircraft at Lethbridge Airport

[3] Jet fuel and avgas are the two primary types of aviation fuel. Jet fuel is used primarily by turboprop and turbofan aircraft, while 100 Low Lead ("avgas") is used by piston engine aircraft.

2.4.2 Operations and Maintenance

Regulatory Status

Aerodromes are defined as any area of land, water, frozen surface, or other supporting surface used, designed, prepared, equipped, or set apart for the arrival, departure, movement, or servicing of aircraft. Aerodromes can be classified as:

- **Registered aerodromes**, meaning an aerodrome that has been registered in the Canada Flight Supplement under Subpart 301 of the Canadian Aviation Regulations; and
- **Certified airports**, an aerodrome that holds an airport certificate granted by Transport Canada. Certified airports are operated under Subpart 302 of the Canadian Aviation Regulations and are subject to significantly greater obligations for the design and maintenance of airfield infrastructure, operational standards, and regulatory oversight. An airport is required to be certified when it is located within a built-up area, supports scheduled passenger air services, or doing so is deemed to be in the public interest by the Minister of Transport.

88% of the 93 community airports are operated as registered aerodromes and 12% are operated as certified airports. Over the past 20 years, eight community airports have relinquished their certification, opting instead to be maintained as registered aerodromes: Camrose, Cold Lake Regional, Jasper-Hinton, Lacombe, Manning, Peace River, Rainbow Lake, and Vermilion. Two airports (Okotoks and Woodlands) have pursued and secured certification in the same time period, with the former due to its location in a built-up area and the latter out of interest in pursuing scheduled passenger air services.

Maintenance Level of Service

Maintenance service levels are set at the discretion of each airport operator based on the requirements of their primary users, regulatory requirements, and available financial, staff, and equipment resources. The level of service provided influences each airport's usability and the types of aircraft operators for which it may be suitable. Incomplete snow clearing and ice control, for example, routinely renders airports as temporarily inaccessible.

Operations and Maintenance

- 88% of community airports are operated as registered aerodromes
- 50% of surveyed registered aerodromes are winter maintained by non-airport specific resources on a high priority basis, 23% on a low priority basis
- Winter maintenance is not provided at 8% of surveyed registered aerodromes

More than two thirds of community airports are maintained by municipal governments through non-airport specific resources, such as the public works or transportation departments. 10% of airports are operated by dedicated municipal resources, 6% are maintained by private or not-for-profit operators on behalf of a municipality, and a further 8% of facilities are maintained and owned by a not-for-profit airport authority, service commission, association, or flying club.

Winter operations are generally the most demanding period for community airport operators due to the challenges and requirements associated with snow clearing and ice control. Surveyed airport operators identified their approaches to winter maintenance as shown in Table 2.6:

- At certified airports, 82% of facilities are maintained by dedicated crews during predetermined days and hours of operation, and 9% are maintained by municipal crews on a priority basis;
- Only 18% of registered aerodromes are maintained by dedicated crews. At 73% of registered aerodromes, operations are the responsibility of various municipal departments. Half of registered aerodromes are maintained by these non-airport crews on a prioritized basis, and approximately one quarter of facilities are cleared on a low priority basis after other municipal priorities are addressed; and
- At 8% of registered aerodromes, no winter maintenance is provided.

While the level of service set for an airport is independent of its regulatory status, it is noted that only 12% of community airports are certified, with the balance maintained as registered aerodromes. Applying the survey results to the 82 registered aerodromes, the predominant approach across Alberta is generally that these facilities are maintained by non-airport municipal crews on a priority basis as resources permit, or on a low priority basis as deemed suitable by the operator.

Table 2.6 - Winter Maintenance Service Levels

Winter Maintenance Service Model	Certified Airport	Registered Aerodrome	All Facilities
Winter maintenance is provided by dedicated airport crews during predetermined days / hours of operation	82%	18%	**31%**
Winter maintenance is provided by non-airport crews on a priority basis (e.g., Priority 1 route)	9%	50%	**41%**
Winter maintenance is provided by non-airport crews on a low priority basis (e.g., after all municipal streets are cleared)	0%	23%	**18%**
No winter maintenance is provided	0%	8%	**6%**
Other form of winter maintenance model	9%	3%	**4%**
Total	**100%**	**100%**	**100%**

Note: Data is self-reported by airport survey respondents and has not been independently verified. Information provided for 51 airports.

Runway snow clearing at Woodlands County Airport

The availability of suitable equipment and trained operators is a major influence on the winter maintenance level of service that can be provided at community airports. In general, certified airport operators are equipped with the resources required to effectively perform winter maintenance, most commonly through a combination of one or more plow trucks, towed sweepers, snow blowers, runway de-icing / anti-icing chemical applicators, and condition testing equipment as shown in Table 2.7.

Registered aerodrome operators, representing most community airports in Alberta, conducts winter maintenance with less robust equipment availability:

- Approximately two thirds of aerodrome operators conduct snow clearing with a grader or plow truck, with limited capacities for sweeping airfield surfaces to improve surface conditions;
- Less than half of registered aerodrome operators have snow blowers available to assist with clearing windrows and large accumulations of snow. At facilities without such equipment, graders, loaders, skid steers, and / or other equipment may be used;
- Only one third of registered aerodrome operators reported the capability to apply specialized airfield de-icing and anti-icing materials, primarily due to the cost of such chemicals and the considerable winter maintenance expertise required to use these products effectively; and
- Less than one fifth of registered aerodrome operators have equipment, such as decelerometers, available for surface condition testing beyond visual observations. This results in less information on runway surface conditions for aircraft operators and may render an airport as being inaccessible for flight crew requiring this information.

Table 2.7 - Winter Maintenance Equipment Availability

Winter Maintenance Equipment	Certified Airport	Registered Aerodrome	All Facilities
Plow Truck(s)	91%	58%	**65%**
Sweeper(s) – Towed	91%	15%	**31%**
Sweeper(s) – Attachment	45%	23%	**27%**
Snow Blowers	100%	45%	**57%**
Graders	18%	70%	**59%**
Airfield De-icing / Anti-icing Chemical Applicator(s)	91%	33%	**45%**
Airfield Sand Applicator(s)	64%	13%	**24%**
Surface Condition Testing Equipment (e.g., decelerometer)	82%	15%	**29%**
No Equipment Available	0%	8%	**6%**
Note: Data is self-reported by airport survey respondents and has not been independently verified. Information provided for 51 airports.			

2.5 Financial Viability

51 airports reported their financial viability status as part of the surveying process, with three classifications established (Table 2.8):

1. **Not Financially Self-Sustaining:** Airports with revenues that are insufficient to cover operating and capital expenses. Over three quarters (78%) of surveyed airports identified that they are not financially self-sustaining;
2. **Financially Self-Sustaining:** Airports with revenues that exceed operating expenses but that require external support for capital expenses. 16% of respondents identified as being financially self-sustaining; and
3. **Financially Viable:** Airports with sufficient revenues to fund operating and capital expenses. A total of three airports (6%) reported being financially viable.

Table 2.8 - Airport Financial Viability

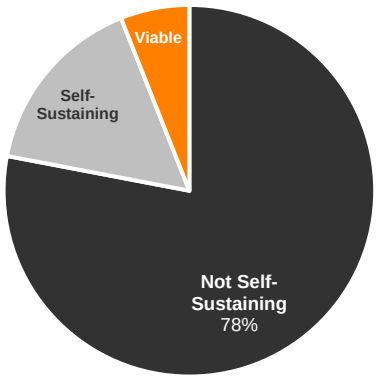
	Airports	Proportion
Not Financially Self-Sustaining	40	78%
Financially Self-Sustaining Note 1	8	16%
Financially Viable Note 1	3	6%
Total	**51**	**100%**

Note 1: Despite self-reporting as being financially viable or self-sustaining, six airports also provided financial information indicating that they incur operating deficits. Classifications are as provided by the airport operator.

Note 2: Data is self-reported by airport survey respondents and has not been independently verified.

Among the 41 airports that provided data indicating a deficit was incurred in 2022, the average annual value was $112,000. Within this sample of airports, 76% incurred a deficit of less than $100,000, 20% had a deficit of between $100,000 and $500,000, and two airports reported deficits exceeding $500,000 (5%). The highest operating deficits were generally reported by operators of airports that are certified and maintained on a year-round basis with dedicated staffing and resources.

Financial Viability of Surveyed Community Airports



Survey respondents were asked to identify trends in their operating expenses over the preceding three years. As shown in Table 2.9, the number of airports experiencing a decrease in their expenses is limited. Approximately one quarter of all respondents identified that their expenses are stable, while 72% of respondents are experiencing increasing operating costs. This includes 74% of airports that are already not financially self-sustaining and 63% of airports that are self-sustaining but not viable.

Certified airport operators identified greater levels of operating expense increases compared to registered aerodromes. 60% of the 11 certified airport operators identified that their expenses are increasing significantly by 5% or more per year, compared to 36% of registered aerodromes, and 20% of certified airport operators identified that their expenses are increasing by 1% to 5% per year.

Table 2.9 – Operating Expense Trends

Airport Category	Annual Operating Expense Trends (2020-2022)				
	Decreasing Significantly (> 5%)	Decreasing (1% to 5%)	Stable (+/- 1%)	Increasing (1% to 5%)	Increasing Significantly (> 5%)
Not Financially Self-Sustaining	0%	5%	21%	24%	50%
Financially Self-Sustaining	0%	0%	38%	50%	13%
Financially Viable	0%	0%	33%	67%	0%
All Respondents	**0%**	**4%**	**24%**	**31%**	**41%**

Note: Data is self-reported by airport survey respondents and has not been independently verified. Information provided for 49 airports.

Surveyed airports have generally experienced stability in their operating revenues. Two thirds of all respondents identified that their revenues are stable year-over-year, while 27% of airports are experiencing growth in revenues (Table 2.10). A small proportion of airports (7%) are experiencing a decrease in their annual operating revenues. A challenge is that among airports with increasing operating expenses, revenues are not growing to keep pace. Among the sample of airports reporting that their operating expenses are increasing, 10% identified that their revenues are decreasing, 62% noted their revenues to be stable, and 24% identified that their revenues are increasing modestly by 1% to 5% per year.

Operating Expenses and Revenues

- 72% of all surveyed airports are experiencing increasing operating expenses
- Only 27% of surveyed airports are seeing revenue growth
- 60% of certified airport operators are contending with significant (more than 5% per year) increases in expenses
- Airports that are not presently financially viable are seeing limited revenue growth while contending with increasing expenses

Table 2.10 - Operating Revenue Trends

Airport Category	Annual Operating Revenue Trends (2020-2022)				
	Decreasing Significantly (> 5%)	Decreasing (1% to 5%)	Stable (+/- 1%)	Increasing (1% to 5%)	Increasing Significantly (> 5%)
Not Financially Self-Sustaining	3%	7%	67%	17%	7%
Financially Self-Sustaining	0%	0%	75%	25%	0%
Financially Viable	0%	0%	33%	67%	0%
All Respondents	**2%**	**5%**	**66%**	**22%**	**5%**

Note: Data is self-reported by airport survey respondents and has not been independently verified. Information provided for 41 airports.

The capital and operating financial challenges experienced by community airports has been studied on numerous occasions over the past two decades:

- **2002:** The *Study of the Viability of Smaller Canadian Airports*, authored on behalf of a working group of provincial departments responsible for transportation, encompassed 26 airports across Canada with less than 200,000 annual passengers and found that:
    - Four of the 26 airports were viable, meaning that they had sufficient revenues to cover operating costs and debt servicing;
    - Nine airports were self-sustaining, with revenues that covered operating costs; and
    - 13 airports, or half of the facilities reporting data, were not self-sustaining.
- **2004:** Transport Canada's *Regional and Small Airports Study* found that 48% of reviewed airports were unable to sustain their operating and capital costs, and among airports that generate an operating surplus, only a quarter of their capital requirements can be self-funded.
- **2007:** Alberta Infrastructure and Transportation prepared the *Alberta Small Airports Strategy* and found that:
    - Among 72 community airports in 2005, 53 incurred a deficit, 11 were in a breakeven position, and six airports generated a surplus. Surpluses and deficits in this study included both operating and capital expenses and revenues;
    - Community airports are faced with limited revenue generating opportunities; and
    - Among the 12 regional airports supporting scheduled passenger air services in 2005, revenues from such activities improved their financial position. Of the eight regional airports reporting their financial performance, five were in a deficit position with an average deficit of $75,000. Three of the eight airports were in a surplus position.

Similar studies have articulated the financial pressures faced by community airports in other jurisdictions, such as the *BC Regional Airports: A Policy Guide to Viability* (2005) report, *Study of Municipal Airports in Ontario* (2006), *Ontario Municipal Airports Data Collection Study* (2011), and *Study of Ontario's Airports and Aerodromes* (2022).

Spirit River Airport

3 ASSETS FOR PUBLIC HEALTH AND SAFETY

Alberta's community airports are maintained to ensure the wellbeing and safety of residents, businesses, critical infrastructure, and natural resources. By supporting access to healthcare, wildfire response efforts, search and rescue operations, and policing, community airports directly contribute to the mandates of the Province and makes a meaningful impact to the lives of Albertans.

3.1 Access to Healthcare

The Province, through Alberta Health Services (AHS), uses fixed-wing and rotary-wing air ambulance resources as an essential part of the delivery of health and emergency medical services. Aviation assets are used for interfacility transfers, whereby a patient is moved between two health facilities to meet their evaluation and / or care requirements, as well as for on-scene response by rotary-wing aircraft. The Province's 2024 budget includes funding for an independent review of the air ambulance program, including response times, operational efficiency, and ground coordination.

Ground, fixed-wing, and rotary-wing ambulances are deployed according to medical care requirements, resource availability, and numerous conditions to connect patients with the healthcare resources that they require. Table 3.1 provides a summary demonstrating the relative benefits and usage of each mode of transport in the delivery of the medical program. The fixed-wing air ambulance program is delivered by contracted operators on behalf of AHS. 24-hour air ambulance service is provided from 10 bases, including the following community airports:

- Fort Vermilion;
- High Level;
- Lac La Biche;
- Medicine Hat;
- Peace River; and
- Slave Lake.

Table 3.1 - Comparison of Medical Transportation Modes

Characteristic	Ground Ambulance	Air Ambulance – Fixed-Wing	Air Ambulance – Rotary-Wing [4]
Speed	Short Distance: Quick Long Distance: Slow	Short Distance: Slow Long Distance: Quick	Short Distance: Slow Long Distance: Quick
Usage Frequency	Most Frequent	Middle	Least Frequent
Services	Scene Calls Interfacility Transfers	Interfacility Transfers	Scene Calls Interfacility Transfers
Level of Service	Basic Life Support Advanced Life Support	Advanced Life Support	Critical Care (STARS) Advanced Life Support (HERO, HALO)
Accessibility	Dependent on Road Access	Requires Suitable Airport	Scene Calls – Can Land in a Variety of Settings Interfacility Transfers – Requires Landing Zone or Helipad
Weather Impacts	Least Dependent	Moderately Dependent	Most Dependent
Range	Short Range	Long Range	Medium Range
Source: Alberta Health. (2021, June 22). *Helicopter emergency medical services report 2021*			

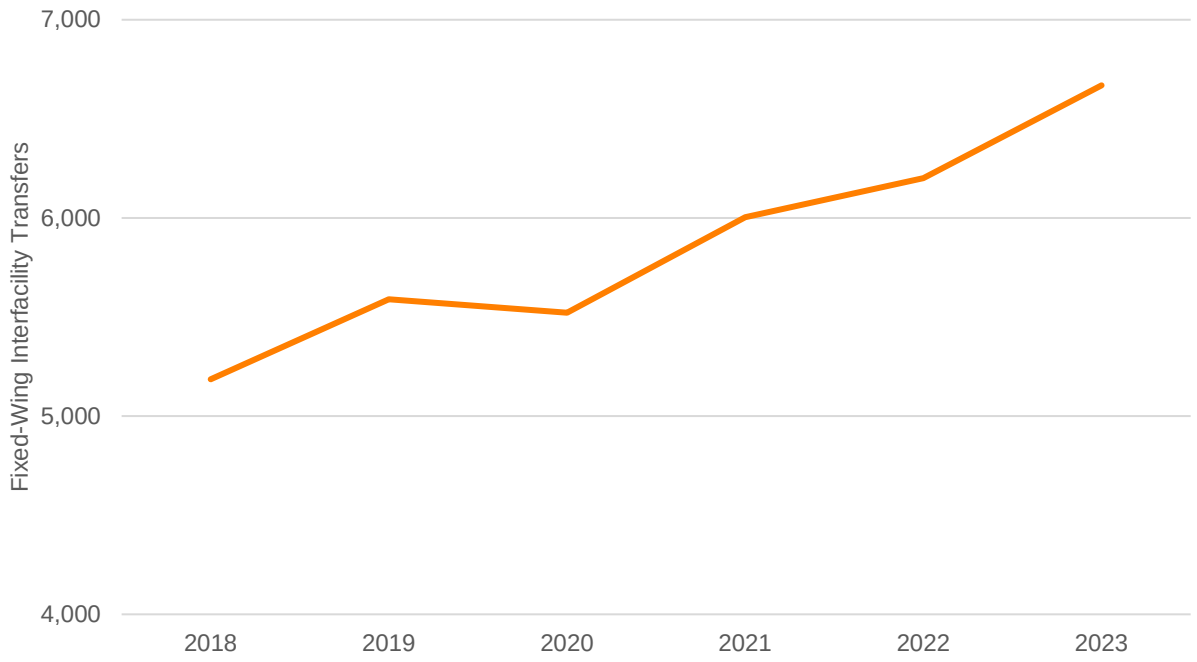
[4] Helicopter-based air ambulance services and transport are provided by three contracted providers in Alberta: the Shock Trauma Air Rescue Service (STARS), Helicopter Air Lift Operation (HALO), and Helicopter Emergency Response Organization (HERO).

Air ambulance interfacility transfer services provide time-effective links for patients to higher level of medical care facilities located in larger urban areas such as Calgary and Edmonton. For the multitude of communities throughout Alberta that are multiple hours by road from their nearest receiving medical centre, fixed and rotary-wing interfacility patient transfers:

- **Reduce patient times in transit.** Using a fixed-wing air ambulance transfer from Peace River to Edmonton as an example, this route has a flight time of approximately 1 hour versus the 5-hour trip by road;
- Enable the provision of **high levels of onboard care** while enroute; and
- Keep **ground ambulance and medical personnel in their home community** when they would otherwise need to travel multiple hours to and from the receiving facility.

Since 2018, 74 community airports have supported at least one fixed-wing interfacility patient transfer. The number of patient transfers at these airports has risen in each year reviewed, increasing from approximately 5,200 flights in 2018 to 6,700 flights in 2023, as shown in Figure 3.1.

Figure 3.1 - Fixed-Wing Interfacility Patient Transfers at Community Airports



Data Source: AHS. Includes both inbound and outbound fixed-wing interfacility transfers.

6,669
Fixed-wing patient transfers operated to and from community airports in 2023

29%
Growth in fixed-wing transfers at community airports between 2018 and 2023

74
Community airports that have supported fixed-wing air ambulance access (2018-2023)

6
Community airports with fixed-wing air ambulance bases

Rotary-wing services are provided by three organizations: the Shock Trauma Air Rescue Service (STARS), Helicopter Emergency Response Organization (HERO), and Helicopter Air Lift Operator (HALO). HALO, located in Medicine Hat, is the sole service provider based at a community airport. Rotary-wing resources are predominantly used for scene calls and to a lesser extent, interfacility patient transfers. Close to two thirds of airport survey respondents (63%) identified that they support rotary-wing air ambulance operations in a typical year.

3

Rotary-Wing Emergency Medical Service providers

Data on interfacility patient transfers operated by STARS was provided by AHS for 2019 to 2023. During this period, patient transfer missions originated from 90 hospitals and medical centres across Alberta, 67% of which are served by an on-site heliport. Among the 30 hospitals not supported by a heliport, 93% are served by a nearby community airport that can be used by STARS. In addition, 47% of the reviewed hospitals are served by both an on-site heliport and a nearby community airport, with the latter facility providing operational advantages described below.

147+

STARS patient transfers operated from community airports in 2023

An annual average of 140 patients were transferred by STARS from hospitals only served by community airports between 2019 and 2023 (Table 3.2). An additional 596 patients were transferred on average per year from hospitals with on-site heliports that also have nearby community airports as alternative facilities. An unknown proportion of these missions may have been operated from the nearby community airports due to heliport closures, the unavailability of required services, or other factors.

30

Community airports with jet fuel services for mid-mission refuelling

Table 3.2 - STARS Interfacility Patient Transfers

	2019	2020	2021	2022	2023
Hospital Served by Community Airport	126	122	144	159	147
Hospital Served by Community Airport and On-Site Heliport	494	531	690	627	639
Total	**620**	**653**	**834**	**786**	**786**
Data Source: AHS.					

Rotary-wing medical operations remain prevalent at airports serving communities both with and without hospital heliports due to:

- **Infrastructure and regulatory deficiencies** that may preclude the heliport's use. STARS' introduction of the BK-117 and AW-139 to their fleet, for example, required numerous hospital heliports to be upgraded to support operations by these larger aircraft. For instance, following the closure of the Castor Hospital heliport in 2021 due to operational challenges with its built-up context, STARS operations were relocated to the Castor Airport;
- **Temporary helipad closures** to facilitate maintenance projects. Examples include the use of Tofield Airport for STARS operations during roof construction at the local health centre in 2024;
- The availability of **jet fuel services**, supporting mid-mission refuelling and extending the operational range of STARS, HERO, and HALO; and
- Select community airports are routinely used for **rotary-wing pilot training**, such as Wetaskiwin Regional Airport given its proximity to STARS' base in Edmonton.

3.2 Responding to Wildfires

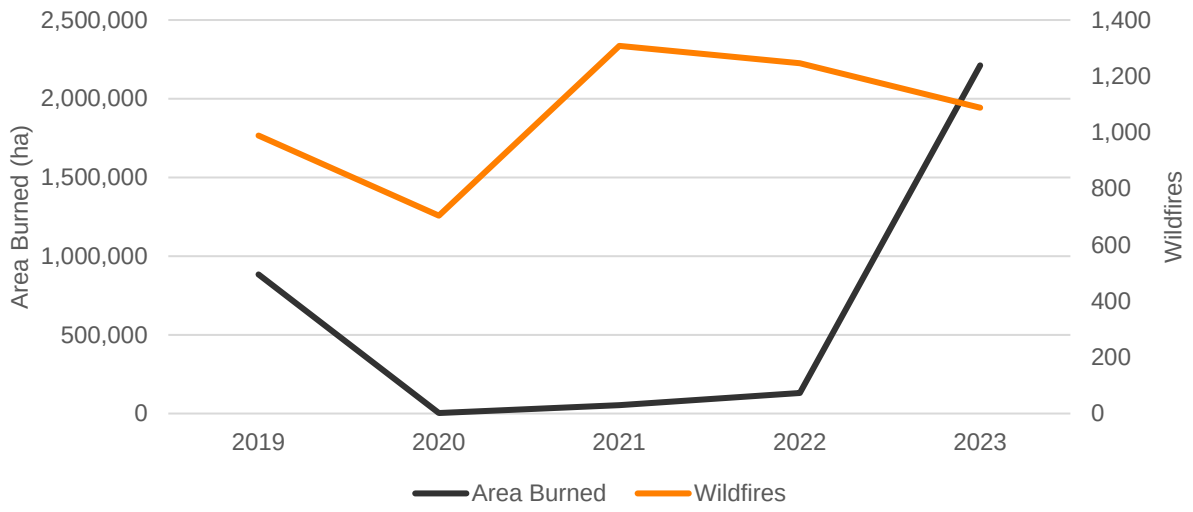
Wildfire suppression, encompassing all functions required to control and extinguish a wildfire post-detection, is the responsibility of the Province of Alberta under the oversight of Alberta Wildfire. Wildfire activity varies annually in extent and severity; over the past five years, the cumulative area burned has ranged from a low of approximately 3,300 ha in 2020 to 2.2M ha in 2023 (Figure 3.2). Wildfire response efforts are coordinated based on five protection criteria:

1. Human life;
2. Communities
3. Watersheds and sensitive soils;
4. Natural resources; and
5. Infrastructure.

2023 Wildfire Season

- Largest area burned in recorded history (2.2M hectares)
- 1,094 wildfires, 61% human caused
- 48 communities and over 38,000 people evacuated
- Drought and wildfire expenses totalled $2.9B, including agriculture disaster support

Figure 3.2 - Alberta Annual Wildfire Activity

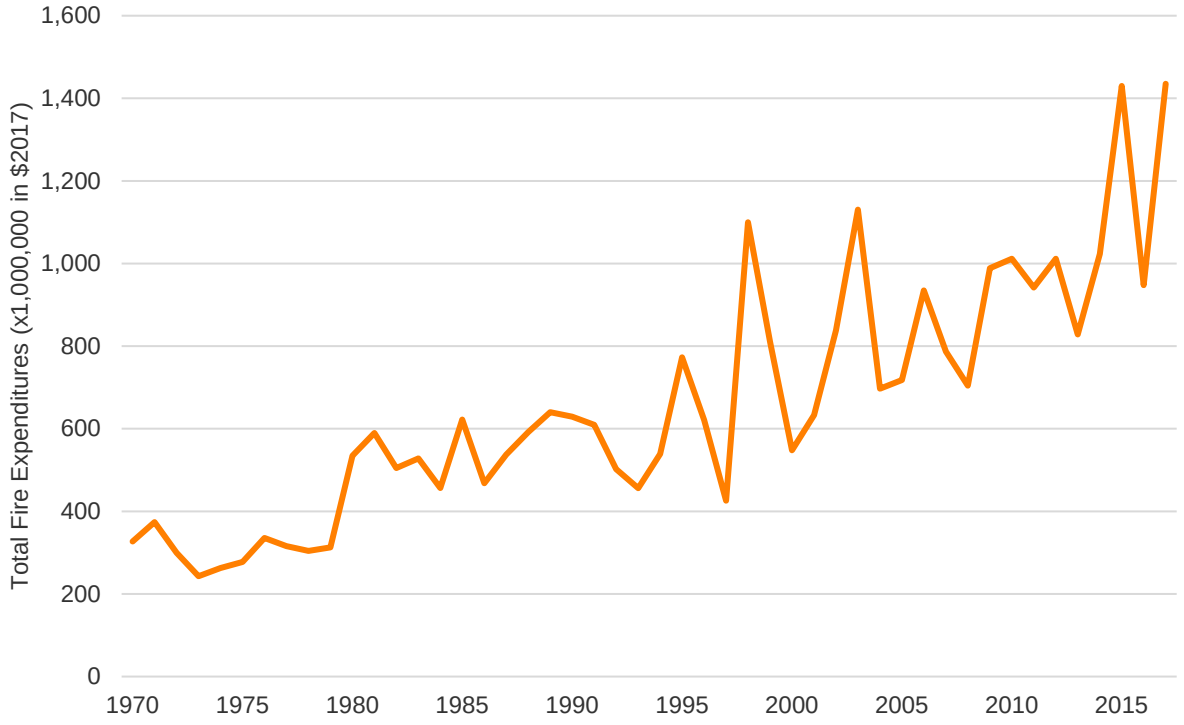


Data Source: *Alberta Wildfire seasonal statistics.*

CL215T airtankers at Manning Municipal Airport

Based on data published by Natural Resources Canada, national wildfire protection-related expenses have increased from $374M in 1970 to $1.44B in 2017 (both values in 2017 dollars, as shown in Figure 3.3). On average, expenses have increased by $150M per decade. The rising expenses of wildfire preparedness and response efforts by provincial and territorial governments, including the Province of Alberta, includes the additional financial resources allocated to airborne resources. In Alberta in 2019, $209.8M was spent on aircraft for wildfire preparedness and suppression[5].

Figure 3.3 - National Total Fire Expenditures



Data Source: *Natural Resources Canada.*

The resources required by Alberta Wildfire to mount effective responses are significant. Following the challenging 2023 wildfire season, the Province's 2024 budget will add $151M over three years and provide additional airborne support by expanding the rotary-wing and fixed-wing airtanker contracts. The continued importance of aviation assets in Alberta Wildfire's strategy is underscored through Budget 2024, which includes direction that the airtanker fleet renewal process will begin. The deployment of these aviation assets is inseparable from Alberta's community airports.

Budget 2024 Wildfire Preparedness

- Additional $151M allocated over three years to Alberta Wildfire
- $2B allocated in contingency funding for 2024 wildfire season expenses
- Nighttime wildfire rotary-wing contracts increased from one to three
- Two new airtanker contracts added
- Process of replacing the existing airtanker fleet announced

[5] MNP LLP. (November 2020). *Spring 2019 Wildfire Review: Final Report.*

Fixed and rotary-wing aircraft are contracted by Alberta Wildfire to deliver the aerial components of its program, including fire detection, fire suppression, crew and equipment transportation, and other tasks. Aviation assets routinely employed include:

- Ground-based airtankers such as the Lockheed L-188 Electra, De Havilland Canada Dash 8-400AT, and Air Tractor 802;
- Amphibious airtankers, including the Canadair CL-215T and Air Tractor 802;
- Fixed-wing birddogs, such as the Cessna 208 and Rockwell TC-690; and
- A wide range of rotary-wing assets, ranging from light and intermediate helicopers such as the Bell 206 and Eurocopter AS350 to heavy platforms such as Boeing CH-47 and Sikorksy S-64.

The fixed-wing airtanker program is operated from 13 bases throughout Alberta, nine of which are located at the community airports identified in Table 3.3. Airtanker bases are developed by Alberta Wildfire and include refuelling facilities, retardant loading infrastructure, and supporting facilities. The airport operator is responsible for maintaining the airfield infrastructure required to support airtanker arrivals and departures.

Table 3.3 – Community and Regional Airport Airtanker Bases

Airport / Airtanker Base	Annual Wildfire Movements	Airport / Airtanker Base	Annual Wildfire Movements	Airport / Airtanker Base	Annual Wildfire Movements
Edson	150	Manning	1,250	Rainbow Lake	Not Reported
High Level	8,500	Pincher Creek	Not Reported	Rocky Mountain House	Not Reported
Lac La Biche	1,180	Slave Lake	1,000	Woodlands	600

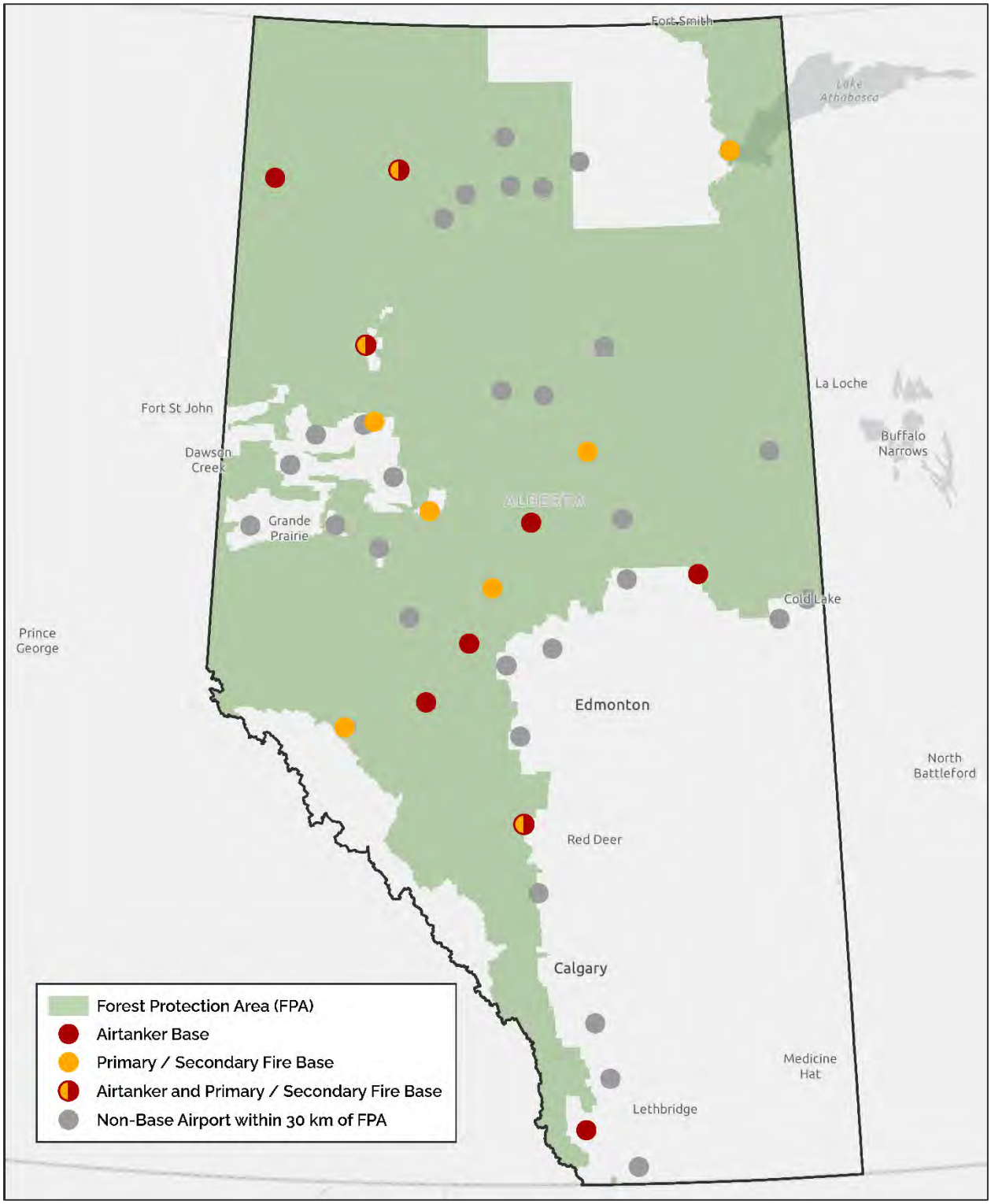
Note: Aircraft movements are as reported by the airport operator for a typical year, and estimates have been provided where firm data is unavailable.

In addition to the airtanker bases, wildfire services are operated from other community airports:

- Designated Primary and Secondary Fire Bases used for rotary-wing operations are located at nine community airports;
- Rotary-wing operators based at community airports throughout Alberta are contracted by Alberta Wildfire to support response efforts;
- Community airports located near active wildfires are used by responding aircraft for refuelling and as temporary bases, decreasing the transit time to and from the fire zone and increasing the time spent on active operations;
- Wildfire crews and equipment are routinely transported to and from fire zones by government and commercially chartered aircraft; and
- Select airports are centres for seasonal maintenance and pilot proficiency training, such as Red Deer Regional Airport.

Figure 3.4 illustrates the community airports that support designated airtanker and rotary-wing operations bases. In addition, community airports located within 30 km of the Provincially designated Forest Protection Areas are shown – as noted above, these facilities are often activated to support rotary-wing operations. During heightened periods of wildfire use at these airports, non-emergency aircraft operations may be limited to provide maximum flexibility (e.g., accommodating rotary-wing parking adjacent to runways or taxiways). These restrictions and additional services are provided by community airports recognizing the strategic emergency management importance of wildfire aircraft.

Figure 3.4 - Community Airports and Wildfire Suppression



Note: The designation of bases is per the Province of Alberta. (April 27, 2017). *Forest Areas of Alberta.* Facilities not collocated with a community airport have been excluded.

3.3 Supporting Law Enforcement

Law enforcement services in numerous communities throughout Alberta are provided by the Royal Canadian Mounted Police. The Royal Canadian Mounted Police's Air Services Branch, through its fleet of fixed and rotary-wing aircraft, provides operational support in law enforcement that enables the organization to fulfill its mandates. Examples of taskings fulfilled by the Air Services Branch include:

- The use of fixed and rotary-wing aircraft for police personnel and equipment transportation;
- Rotary-wing aircraft being deployed to provide oversight for law enforcement activities, investigations, and searches; and
- The transportation of police teams into remote or inaccessible regions.

The Air Services Branch provides support to front-line policing and is responsive to unpredictable emergent events across Alberta. As such, any of Alberta's community airports has the potential to be heavily utilized when required. One such example is the extensive use of High Prairie Airport over a three-day period in 2021 by RCMP aircraft in attempts to capture an active shooter. **38% of surveyed airport operators report use by law enforcement flights** in a typical year.

3.4 Enabling Search and Rescue

Air assets are used to support effective search and rescue operations across Alberta's extensive and varied landscapes. Search and rescue efforts can encompass the efforts of multiple local, provincial, and national bodies, including the Canadian Armed Forces, Parks Canada, Royal Canadian Mounted Police, policing agencies, volunteer organizations, and private businesses. Aircraft are activated on an as-required basis according to the specific conditions of each search and rescue scenario; to support these efforts, community airports may serve as refuelling locations and temporary operational bases. **37% of surveyed community airports indicate that their facility is used in a practice or operational search and rescue capacity** in a typical year.

Community airports are home to rotary-wing operators that provide search and rescue services and local chapters of the Civil Air Search and Rescue Association, a volunteer organization that uses private aircraft in search and rescue roles. Community airports are commonly activated by the Royal Canadian Air Force to support search and rescue training exercises. Lethbridge Airport, for example, was used for a five-day training exercise in 2023. This exercise included approximately 100 Canadian and American military personnel and multiple fixed-wing and rotary-wing assets.

Royal Canadian Air Force CC-138 Twin Otter at Slave Lake Airport

4 SUPPORTING A RESILIENT ECONOMY

Community airports provide economic benefits to their regions and Alberta as a whole through time-effective intercommunity access, professional pilot training, aviation services that support high importance sectors, aerial application, economic development, and construction.

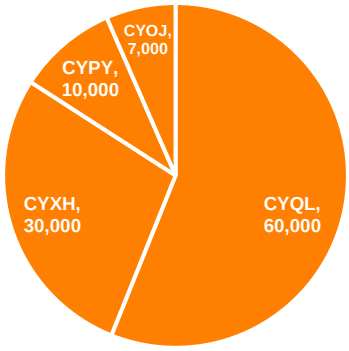
> *"Regional airports play a critical role in **keeping Alberta connected and our economy growing**."*
>
> Minister of Jobs, Economy and Trade
> April 4, 2024

4.1 Intercommunity Connectivity

4.1.1 Scheduled Passenger Air Services

Four community airports support scheduled passenger services that are available to the public:

- **Fort Chipewyan** supports air services to Fort Smith and Edmonton by Northwestern Air Lease. Fort Chipewyan Airport handles approximately 10,000 passengers in a typical year;
- **High Level** facilitates service to Edmonton with Central Mountain Air and Northwestern Air Lease, with the latter carrier also providing connectivity to Fort Smith and Hay River. High Level Airport accommodates approximately 7,000 passengers annually; and
- **Lethbridge** and **Medicine Hat** each support multiple flights per day to Calgary by WestJet through its WestJet Link regional brand. Lethbridge and Medicine Hat process approximately 60,000 and 30,000 passengers per year, respectively. Service will transition to WestJet Encore in October 2024, with a reduction in daily frequencies.



107,000 Passengers

Annual passengers handled by the four community airports with scheduled passenger services in a typical year

These services are operated by smaller twin-engine turboprop aircraft, such as the 19-seat Beechcraft 1900 and Jetstream 31 / 32, and the 34-seat Saab 340. While the 107,000 passengers travelling through Alberta's four community airports with scheduled services is a fraction of the 27M passengers handled at the four primary passenger airports (Calgary, Edmonton, Fort McMurray, and Grande Prairie), regional passenger air services provide economic and social benefits to their regions, including:

- **Enhancing the liveability** of communities by providing connectivity for travellers into and from the national air transportation system;
- Improving **time effective corporate travel**, enhancing the ability of employers to conduct business efficiently;
- Facilitating inbound **tourism access** and the visitor economy of each region served; and
- Providing **access to the services** and amenities of major metropolitan areas.

4.1.2 Corporate and Private Air Access

Community airports of all types function as aerial gateways into the regions they serve, providing access for corporately owned, chartered, and private aircraft for business and recreational purposes, such as:

- Transporting executives, management, and employees to job sites in support of their duties. For example, the airports in Bonnyville, Lloydminster, and Woodlands County each support multiple weekly flights chartered by major resource sector employers;
- Moving time-sensitive cargo between communities, such as just-in-time and hot shot deliveries of parts and supplies; and
- Providing access into communities for individuals travelling by private or chartered aircraft for discretionary purposes, such as tourism or visiting friends and relatives. General aviation tourism represents an important component of the economic impact of smaller community airports, such as Drumheller and Wetaskiwin.

767 Passengers

Average passengers per year reported across 26 airports without scheduled services

68,000 Passengers

Estimated number of passengers served by community airports per year, excluding scheduled services

While the scale of intercommunity access facilitated by air is typically a fraction of travel by road, corporate and private air access represents a time-effective travel option that can decrease the challenges of distance that limit business and private movement. All community airports, as public use facilities, can support intercommunity access according to the predetermined needs of each traveller and the suitability of the airfield infrastructure for their aircraft.

26 community airports that do not handle scheduled air services provided estimates of their annual passenger activity. Approximately 20,000 passengers are handled at these airports per year, or an average of nearly 800 passengers per airport. Applying this average to the 89 community airports that do not support scheduled passenger services, **total activity across Alberta is estimated at 68,000 passengers per year**, in addition to the passengers recorded at the four community airports with scheduled services. As passenger data is not consistently recorded at most community airports, actual activity levels cannot be verified and may be greater or less than the estimate provided.

Charter and corporate access is routinely used to support the effective movement of staff and cargo for the resource sector, including oil and gas employers and businesses with distributed operations. Actual usage levels vary considerably at each community airport based on local drivers of demand for corporate and private aircraft operations. Despite the prevalence of scheduled passenger services at the forefront of the public's mind, intercommunity corporate and private access yields considerable economic and social value.

Workforce transportation charters at Lloydminster Airport

4.2 Training the Next Generation of Professional Pilots

Alberta is renowned for its role in training the next generation of professional pilots, beginning with the British Commonwealth Air Training Program during World War II, and extending to today. The entry of new professional pilots into the aviation sector is critical to replace individuals leaving the workforce through retirement or pursuing new careers, and to accommodate forecast growth in air travel demand. The Canadian Council for Aviation & Aerospace in 2018 estimated that 7,300 new professional pilots would be needed in Canada by 2025. In 2020, CAE, forecasted the need for over 260,000 new professional pilots globally over the next decade.

Professional Pilot Training

- Importance identified as part of the 2023 mandate to the Minister of Advanced Education
- 16 community airports support based Flight Training Units
- 46% of surveyed community airports facilitate flight training in varying capacities
- Community airports are well-suited for flight training, with reduced levels of airport and airspace congestion

The importance of flight training has been recognized by the Province and identified in the 2023 mandate letter to the Minister of Advanced Education, directing that the Province will fund additional aviation management seats at post-secondary institutions and provide grants to help more Albertans pursue a career in aviation. Actions that have been taken by the Province include the release of the Aviation Skills Grant to offset training costs for eligible employers, contributing to the not-for-profit Elevate Aviation Training Centre, and providing support for Mount Royal University to expand its post-secondary programming.

A total of 27 Flight Training Units with bases of operation in Alberta provide training to the Commercial Pilots License level. **16 Flight Training Units** are based at the following community airports:

- Beiseker;
- Camrose;
- Claresholm;
- Edmonton / Cooking Lake;
- Edmonton / Parkland;
- High River;
- Lacombe;
- Lethbridge;
- Lloydminster;
- Medicine Hat;
- Okotoks;
- Olds-Didsbury;
- Red Deer;
- Three Hills;
- Wetaskiwin; and
- Woodlands.

Flight Training Units range from businesses with a single aircraft to entities providing comprehensive training services with multiple aircraft and post-secondary affiliations. Airports hosting these Flight Training Units therefore serve as hubs for the ground and flight components of student pilot curricula.

In addition to community airports with a Flight Training Unit based on-site, other facilities support professional pilot training by serving as a location for cross-country flights, during which student pilots practice navigation and operations at unfamiliar airports; as well as practice visual and instrument approaches. **46% of surveyed community airports reported being used by Flight Training Units** based at other facilities for such purposes, spreading training operations across the broader aviation system in Alberta.

Flight training at Red Deer Regional Airport

Given the airspace constraints of major passenger processing airports and the challenges with integrating small flight trainers alongside larger commercial aircraft, the 16 community airports noted above and the additional facilities that support training aircraft from other airports function as important parts of Alberta's flight training capacity.

Airport operators also serve a unique role in providing introductory experiences for youth exploring careers in the aviation sector through tours and educational events. 35% of surveyed airport operators host elementary, middle, and / or high school tours in a typical year, and 17% of airport respondents host tours by youth organizations like the Royal Canadian Air Cadets. Other events commonly hosted include familiarization flights for kids and teens, community open houses, and air shows.

Medicine Hat Regional Airport is an example of a community airport that links flight training with high school education, serving as the base for the DR South Alberta Flight Academy that is provided in partnership by Prairie Rose Public Schools, Eagle Butte High School, and Super T Aviation. The program allows students to earn their private pilot's license while completing their high school diploma and has 38 students enrolled as of early 2024.

4.3 Cross-Sector Economic Support

Aviation services provided from community airports are used to support economic sectors of importance, generating indirect and induced value to the economy. Examples of cross-sector economic supports facilitated by community airports include:

- Aircraft that support the **oil and gas sector** through pipeline patrols, infrastructure inspections, and aerial construction. The Government of Canada has estimated that over 21% of Alberta's Gross Domestic Product and 6% of employment is attributable to the oil and gas sector;
- Rotary-wing operators that support the **forestry industry** through crew and equipment transportation and aerial logging. Alberta's forestry sector was estimated by the Alberta Forest Products Association in 2020 to generate over 6,600 jobs and $4.3B in Gross Domestic Product;
- **Resource and mining**-related exploration flights;
- Aviation-based **tourism**, such as heliskiing, hunting, and fishing charters;
- Aerial surveying and construction in support of **major infrastructure projects**; and
- Filming for major **movie and television productions**, a sector that has experienced considerable growth in Alberta in recent years. Select productions have resulted in over $140M in spending across Alberta and generated over $70M in salaries and wages.

Rotary-wing aircraft in particular are unique tools that enable major economic sectors to operate more efficiently, effectively, and safely, particularly in remote and difficult to access areas. Research on behalf of the Helicopter Association of Canada in 2016 found that approximately 20% of Canada's rotary-wing fleet was based in Alberta. As larger Remotely Piloted Aircraft Systems are integrated in aerial work, community airports may see their roles evolve to support this activity.

Community airports serve as permanent bases for aerial work operators, as well as sites for mid-mission refuelling, crew rests and turnovers, and temporary bases for projects nearby. Close to half of surveyed airports (43%) serve as the base for one or more aerial work service providers, and **over two thirds of airports (69%) are used by local or itinerant aerial work operators in a typical year**.

4.4 Aerial Application and the Agricultural Economy

The agriculture sector is one of the largest pillars of the Albertan economy, contributing $10.2B to the Gross Domestic Product in 2022 and employing 69,000 residents based on data provided by Invest Alberta. The success of primary crop production is supported through numerous aerial application businesses located throughout Alberta. These businesses support agricultural growers through the spraying of pesticides, fungicides, insecticides, and herbicides and the dispersion of fertilizer and seeds by fixed and rotary-wing aircraft. Benefits in crop production are achieved through the limiting of wheel tracks, trampling, and rutting of fields; the ability to spray in damp conditions; and the functional benefits of the product that is applied.

71% of surveyed airport operators reported that their facility is used for aerial application operations in a typical year, either by companies permanently based on-site or temporarily using the airport while serving customers in the surrounding region.

$10.2B

Gross Domestic Product of the Albertan agricultural sector

71%

Surveyed community airports that report use by aerial applicators

4.5 Economic Development

Airports are often essential parts of economic retention and development efforts. The provision of public infrastructure and supporting services required by incumbent or prospective businesses is a core component of municipal economic development. Airports facilitate business-supportive activities such as scheduled passenger air services, air cargo and courier operations, and corporate and charter access. For certain businesses, the availability of an airport to support one or more of these services is a prerequisite or an advantage in establishing or expanding operations, depending on their specific needs. **56% of surveyed airport operators are marketed as part of the investment-supportive infrastructure** made available by nearby municipalities and economic development organizations.

Passenger flight to Calgary departing Medicine Hat Regional Airport

4.6 Construction and Capital Spending

Airports stimulate economic activity through routine maintenance (e.g., pavement repairs, lighting upkeep) and major capital asset rehabilitation and replacement projects. 51 community airport operators reported a cumulative total of approximately $138M in capital investments between 2014 and 2023, or an **average of $2.7M in capital investments per airport**. As the 51 facilities providing this data represent 55% of all community airports in Alberta, actual capital investment levels will be higher. Airport-related capital projects support the strength of Alberta's construction sector, an industry that represented 7.2% of the Gross Domestic Product in 2021 and 9.1% of employment in 2022.

4.7 A Skilled Aviation and Aerospace Workforce

Community airports provide opportunities for skilled employment directly through their operation, such as airport maintenance technicians, managers, and equipment operators; and the business activities conducted by on-site tenants, such as commercial pilots, aircraft maintenance engineers, flight instructors, and support staff. 51 airports provided data on the number of individuals engaged to operate their facility, and those employed by on-site tenants and businesses. Over 1,100 individuals are employed across this sample of airports in operations and by aviation businesses located on-site, or an average of 22 employees per airport (Table 4.1). Applying this average across Alberta's 93 community airports, it is estimated that over 2,000 employees are engaged in airport operations and by aviation businesses located at community airports.

2,027

Estimated number of employee positions based at community airports

Table 4.1 - Employment per Community and Regional Airport

	Airport Operations	Aviation Tenants and Businesses
Total Employees	142	970
Average Employees per Airport	3	19
Note: Employment numbers are as reported by the airport operator for a typical year. Data provided by 51 airports.		

Runway inspection at Cold Lake Regional Airport

5 COMMUNITY AIRPORT CHALLENGES

Airport operators contend with numerous challenges in making available their facilities to yield public health, safety, and economic benefits to the communities served. The five most significant and commonly experienced challenges that affect the long-term sustainability of community airports include:

1. **Infrastructure Renewal Funding:** The degradation of core airport infrastructure and capital funding availability;
2. **Sustaining Air Ambulance Access:** Difficulties with providing the infrastructure and service levels required to ensure 24/7/365 access for air ambulance operations;
3. **Financial Sustainability:** Their operating financial performance, limited ability to raise operating revenues, and broader fiscal pressures faced by municipal governments;
4. **Regional Air Service Vulnerability:** The slow pace of recovery and vulnerability of regional passenger air services; and
5. **Land Use Incompatibility:** Land uses arising in the vicinity of airports that pose a safety risk or that may be disrupted, and limited tools to address obstacles affecting aviation safety.

These challenges are not universally present across all community airports and may be experienced to varying degrees; further, individual airports may face different threats that affect their facility. However, resolving these factors will result in meaningful improvements to the viability and value of community airports on a widespread scale.

5.1 Infrastructure Degradation and Financial Supports

The viability of community airports and the safety of aircraft operations is inextricably linked to the condition of airfield and transitional infrastructure, such as runways, taxiways, aprons, lighting systems, navigation aids, and wildlife fencing. The ability to complete lifecycle capital asset rehabilitation and replacement projects is in turn influenced by the ability of airport operators to fund these initiatives internally and through the assistance of external sources of financial support – 82% of community airport operators cited the availability of provincial and federal capital funding for infrastructure projects as being extremely important to their long-term viability.

Two capital funding programs are repeatedly discussed in the context of capital projects at community airports in Alberta, with overviews provided below and detailed commentary provided herein[6]:

Strategic Transportation Infrastructure Program (STIP) – Community Airport Program

- Funder: Province of Alberta
- Eligible Applicants: Municipalities that own public use airports, excluding airports that are eligible for federal funding (e.g., ACAP)
- Eligible Projects: Major pavement and lighting rehabilitation projects for the primary runway, taxiway, and apron, and the extension of the primary runway
- Funder Contribution: 75% for pavement and lighting rehabilitation projects, 33% for runway extension projects
- Intake Frequency: Annual

Airports Capital Assistance Program (ACAP)

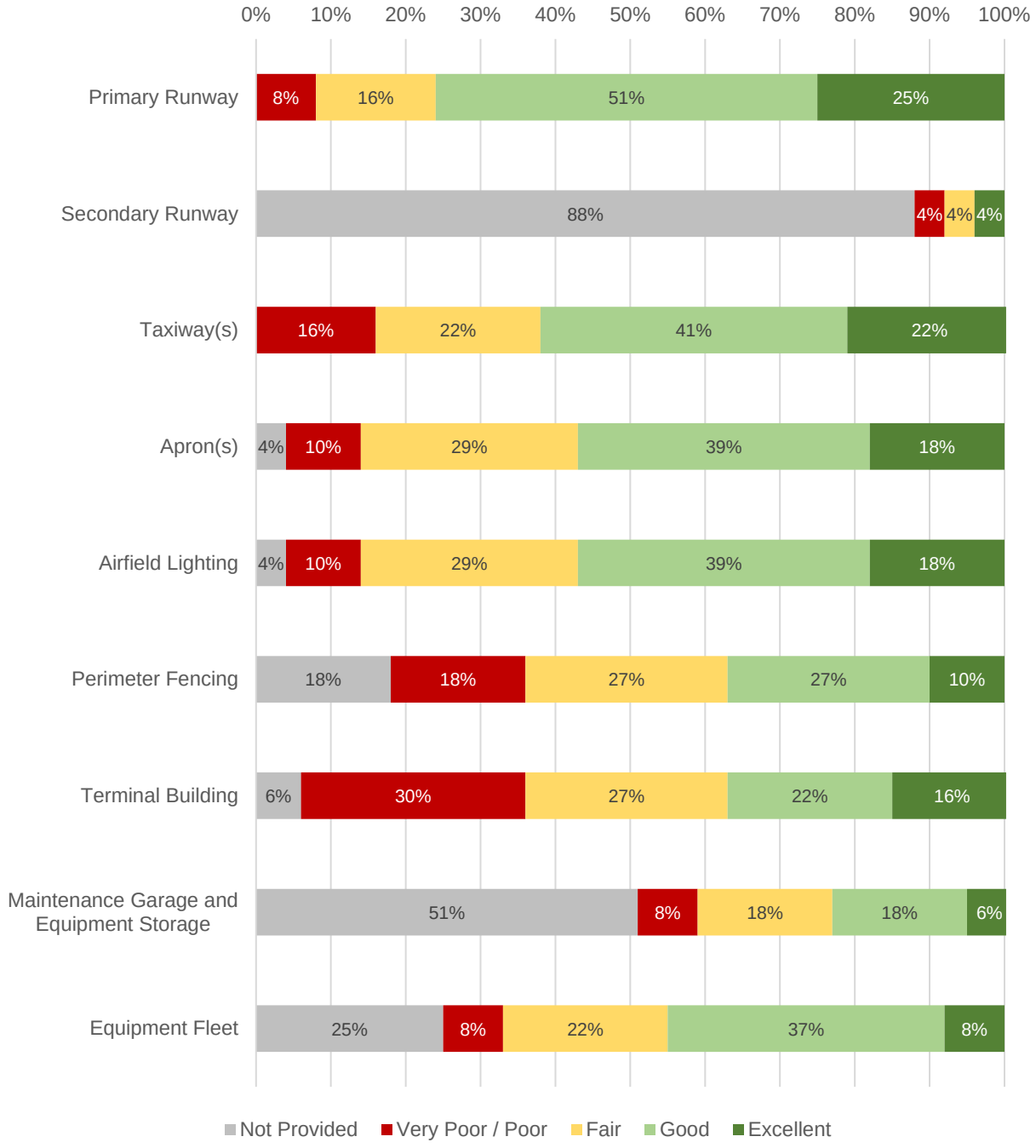
- Funder: Government of Canada
- Eligible Applicants: Certified airports supporting an average of 1,000 to 525,000 scheduled passengers annually over three years
- Eligible Projects: Safety related projects, including the rehabilitation of airside facilities, acquisition of firefighting and maintenance equipment, and terminal building works
- Funder Contribution: Varies with passenger levels; maximum of 100% for airports with 1,000 to 49,999 annual passengers
- Intake Frequency: Annual

[6] The summary information provided is high-level in nature; detailed information on STIP and CAP is provided by their funders.

5.1.1 Infrastructure Conditions and Renewal Requirements

Airport operators were asked to report the condition of their airfield and transitional infrastructure assets on a five-point rating scale. The condition ratings provided by the surveyed community airports are shown in Figure 5.1. Infrastructure condition data has not been independently verified by HM Aero or AAMA and is based on the observations of each airport operator.

Figure 5.1 - Airport Infrastructure Conditions



Note: Infrastructure condition ratings are as reported by the airport operator.

Based on the condition data reported by airport operators, several themes emerge:

- **Primary runways** are reported to be in good or excellent condition by 76% of surveyed airports, with only 8% of facilities reporting their runway to be in poor or very poor condition requiring near-term rehabilitation;
- **Taxiway and apron** pavements were reported to be in good or excellent condition by approximately 60% of airports. Compared to runways, a greater proportion of airports identified these movement areas to be in fair, poor, or very poor condition, which may be partially attributable to the lack of funding for secondary taxiways and aprons through STIP and ACAP;
- 57% of airports identified that their **airfield lighting systems** are in good or excellent condition, with a further 29% of facilities reporting these systems to be in fair condition. 10% of airports report their airfield lighting system as being in poor or very poor condition. Lighting rehabilitation projects are eligible under both STIP and ACAP;
- **Perimeter fencing** is unavailable at 18% of surveyed airports and is in poor or very poor condition at an additional 18% of airports. Perimeter fencing is an essential part of airfield safety and security and is of particular importance at facilities without the staff or resources to complete wildlife management activities, leaving fencing as the first and often only line of defence. As Alberta's Wildlife Act poses several challenges to airport operators for wildlife management, the importance of fencing as a tool for wildlife management is increased. Presently, wildlife fencing projects are eligible under ACAP but are ineligible for funding through STIP;
- **Terminal buildings** are the asset class most widely reported as being in very poor or poor condition, with 30% of surveyed airports providing these condition ratings. Terminal building rehabilitation and improvement projects are rarely funded through ACAP given the program's prioritization criteria and are ineligible for support through STIP;
- **Maintenance garage and equipment storage facilities** are provided at half of surveyed airports, which may be partially a reflection of the reliance of most community airports on non-airport maintenance equipment. At airports with such facilities, 72% identified these assets as being in fair or good condition. Maintenance facilities are ineligible for STIP funding; and
- **Maintenance equipment** was identified as being not applicable at 25% of surveyed airports, consistent with the equipment limitations described in Section 2.4.2 and the reliance on non-airport equipment at most community airports. Among airports that provided condition data, 11% indicated that their fleet is in poor or very poor condition. Numerous types of maintenance equipment is funded through ACAP; however, STIP does not provide funding for equipment.

Lifecycle asset management and appropriately timed rehabilitation efforts are essential to ensuring airport usability and safety. The timing of maintenance and rehabilitation projects also influence overall asset management costs; by proactively completing maintenance (e.g., pavement crack sealing) on a regular basis and limited scope rehabilitations (e.g., pavement overlays) on a periodic basis, the degradation of an asset can be slowed and the need for more extensive asset rehabilitation efforts (e.g., full depth reconstruction) delayed or negated altogether.

Infrastructure degradation can pose a direct threat to aviation safety through the failure of supporting systems, such as airfield lighting and navigation aids; the deterioration of pavement surfaces; and improper drainage that affects surface conditions. This condition is recognized by Transport Canada:

> *"…by taking positive action to tangibly improve asset condition and increase remaining years of useful life, **funded parties mitigate real threats to safety** and in doing so raise safety levels at the airport.."*
>
> Transport Canada, Evaluation of the Airports Capital Assistance Program, March 2015

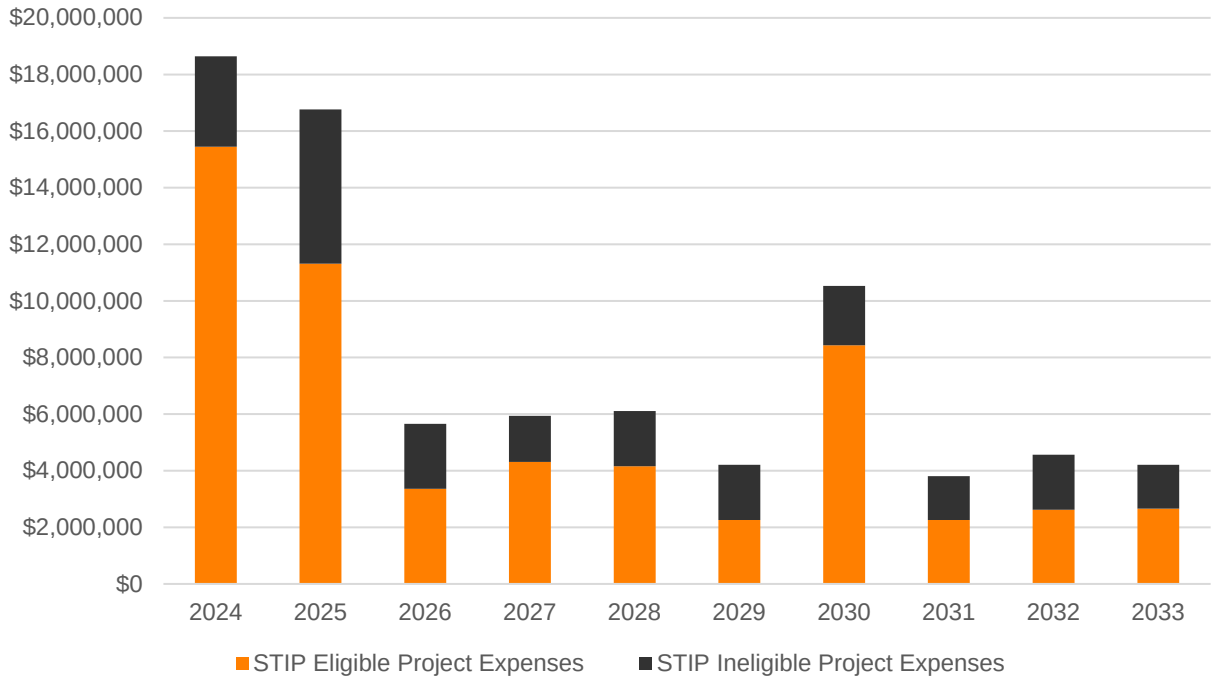
Community airport operators provided information on their planned capital rehabilitation, reconstruction, and replacement projects for the period of 2024 to 2033. This data does not include spending related to the expansion of airfield or transitional infrastructure, such as runway extensions, new taxiways, or municipal servicing. 44 of the 51 surveyed airports provided this data, including project information and cost estimates. A total of **$118.4M in capital rehabilitation and replacement spending is planned across the 44 airports providing data over the next 10 years**, or an average of $11.8M per year (Table 5.1). This includes an average of $7.6M per ACAP-eligible airport and $2.1M per ACAP-ineligible facility.

Focussing on the 39 surveyed airports without scheduled passenger services that are ineligible for ACAP, 71% of planned capital expenses are for primary runway, taxiway, apron, and lighting projects eligible for funding through STIP, for an average of $5.7M in STIP eligible project expenses per year. An additional $23.6M in STIP ineligible capital projects are planned, averaging $2.4M per year. The planned capital expenses at these airports per year is shown in Figure 5.2

Table 5.1 - Planned Capital Expenses at Surveyed Airports

Airport Category	Planned Capital Expenses, 2024-2033	Average Capital Expenses per Year	Average Capital Expenses per Airport, 2024-2033
ACAP Eligible (5 Airports)	$37,951,000	$3,795,000	$7,590,000
ACAP Ineligible (39 Airports)	$80,427,000	$8,043,000	$2,062,000
Total	**$118,378,000**	**$11,838,000**	**$2,690,000**

Figure 5.2 - Planned Capital Expenses at 39 ACAP-Ineligible Surveyed Airports

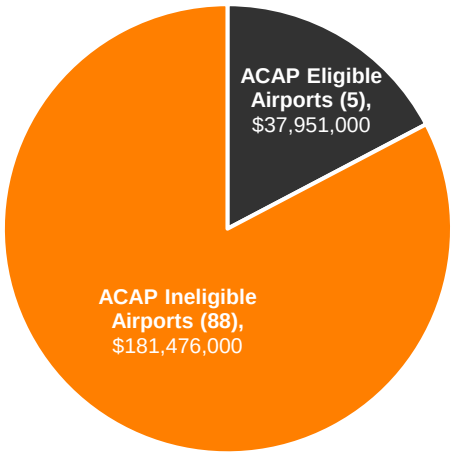


Data Notes: Expenses are based on inputs provided by 39 ACAP-ineligible community airport operators.

- Capital projects and cost estimates are as reported by the airport operator. Where capital cost estimates have not been provided, an estimate has been applied by HM Aero.
- STIP eligible expenses are assumed to include any primary runway, taxiway, apron, airfield lighting, or electrical project. As inputs from operators include both eligible and ineligible taxiway and apron expenses, actual STIP expenses may vary.

Applying the average per ACAP-ineligible airport to the 88 comparable facilities across Alberta, an estimated $181.5M in capital projects is anticipated between 2024 and 2033, or $18.1M per year. Of this total, $128.2M is estimated to be associated with STIP eligible projects, or $12.8M in eligible expenses per year. An estimated $5.3M per year would be associated with projects not eligible for STIP. An additional $38.0M in capital expenses is anticipated from the five community airports eligible for ACAP, bringing **estimated capital expenses across Alberta's 93 community airports to a total of $219.4M between 2024 and 2033**.

Estimated Community Airport Capital Expenses, 2024-2033



Total Estimated Capital Expenses: $219,427,000

As the survey data includes numerous larger airports with more extensive infrastructure requirements, higher levels of planned capital spending, and because operators that did not provide survey responses were mostly smaller facilities, lower multipliers of 1.25 and 1.50 (versus the 2.26 multiplier used through direct extrapolation) are provided for comparison. Total capital spending at the 88 ACAP-ineligible community airports using these lower multipliers could range between $100.5M and $120.6M between 2024 and 2033. Using these multipliers, annual STIP eligible project requests could be between $7.1M and $8.5M.

Table 5.2 - Estimated Capital Expenses at All ACAP Ineligible Airports, 2024-2033

	Survey Data	Study Estimate (2.26 Multiplier)	Sensitivity Analysis	
			1.25 Multiplier	1.50 Multiplier
Airports	39	88	88	88
Total Capital Expenses	**$80,427,000**	**$181,476,000**	**$100,533,000**	**$120,640,000**
Average Capital Expenses per Year	$8,043,000	$18,148,000	$10,053,000	$12,064,000
Average Capital Expenses per Airport	$2,062,000	$2,062,000	$1,142,000	$1,371,000
STIP Eligible Capital Expenses	**$56,826,000**	**$128,222,000**	**$71,032,000**	**$85,239,000**
Average STIP Eligible Expenses per Year	$5,683,000	$12,822,000	$7,103,000	$8,524,000
STIP Ineligible Capital Expenses	**$23,601,000**	**$53,254,000**	**$29,501,000**	**$35,402,000**
Average STIP Ineligible Expenses per Year	$2,360,000	$5,325,000	$2,950,000	$3,540,000

Notes: Expenses are based on inputs provided by 39 ACAP-ineligible community airport operators.

- Capital projects and cost estimates are as reported by the airport operator. Where capital cost estimates have not been provided, a suitable estimate has been applied by HM Aero.
- STIP eligible expenses are assumed to include any primary runway, taxiway, apron, airfield lighting, or electrical project. As inputs from operators include both eligible and ineligible taxiway and apron expenses, actual STIP eligible expenses may vary.

5.1.2 Provincial Support: Strategic Transportation Infrastructure Program

As identified throughout this Study, the availability of provincial funding support at ACAP-ineligible community airports is of paramount significance. STIP was created by the Province in 1995 and includes the Community Airport Program as one of its four streams. STIP is provided by the Province to assist in maintaining Alberta's community airports and to support safety; economic development; and medevac, wildfire, general aviation, and commercial operations.

Since 1999, STIP has funded 98 airside pavement and electrical projects at 56 airports with a cumulative total of $45.9M in contributions. 60% of community airports have received support through STIP since 1999. Prior to the temporary pause of STIP between 2013 and 2017, an annual average of $2.1M was allocated. Since the resumption of STIP in 2017, an average of $2.7M has been allocated per year. Areas for improvement identified by community airports centre on the following themes:

Applicant Eligibility

Current Position: STIP funds community airports that are owned and operated by municipalities, airport commissions, and Métis Settlements.

Areas for Improvement: Expansion of applicant eligibility to include private organizations, charitable societies, and non-government operating authorities and agencies. Approximately one tenth of publicly available community airports are owned by not-for-profit flying clubs and private entities, with examples including Airdrie, Edmonton / Cooking Lake, Edmonton / Parkland, Innisfail, Okotoks, and Ponoka. These airports, despite their non-municipal ownership, are public facilities and serve roles that align with the objectives of STIP.

Project Eligibility

Current Position: The allocation of STIP funding to the rehabilitation of primary airfield pavements and lighting systems encompasses the minimum civil and electrical works required to ensure the continued availability of community airports. Runway extensions are included as an eligible project type at a lower funding share.

Areas for Improvement: Numerous projects that are presently ineligible directly address the objectives of STIP (e.g., air ambulance access, wildfire suppression operations, economic development) and contribute to positive operational outcomes, such as: airfield maintenance equipment acquisition, the development of Instrument Flight Procedures, Automated Weather Observation Systems, wildlife fencing, terminal buildings, and garages.

Cost Sharing Structure

Current Position: The Province contributes 75% of eligible project costs, with the applicant contributing the remaining 25%. Runway extensions are funded on a 33% basis by the Province.

Areas for Improvement: The 75% share of project costs borne by the Province is of significant value to community airport operators. However, the airport's share (25%) still represents a considerable challenge for applicants with limited financial resources, including smaller municipalities and not-for-profit organizations. The $500,000 applicant share of a $2M runway overlay project, for example, may still influence project implementation timelines for a smaller community facing other competing capital priorities (e.g., roadways, water infrastructure) and limited tax revenues.

Annual Funding Allocation

Current Position: An annual average of $2.1M was allocated through STIP between 1999 and 2012, with this total increasing to $2.7M per year between 2017 and 2023.

Areas for Improvement: As airports contend with aging infrastructure, project cost increases, and limited alternative sources of funding, STIP will become increasingly oversubscribed in the coming years. The 88 community airports that are ineligible for ACAP are estimated to have an average of $18.1M in capital expenses planned per year to 2033, and the costs of both cumulative requests and single rehabilitation projects at larger airports will strain the historical funding total. With the recommended changes to both applicant and project eligibility, an influx of capital funding requests will also be expected in the initial years. Further, potential changes to the infrastructure required to support air ambulance operations will require accompanying capital funding.

5.1.3 Provincial Support: Alberta Community Partnership

The Alberta Community Partnership is provided by the Province with the objective of improving the viability and long-term sustainability of municipalities through new or enhanced regional municipal services, capacity building, and more effective intermunicipal relations. An average of $23.9M has been allocated to Alberta Community Partnership annually between 2014 and 2023, with program funding set at $15.4M in the 2023/24 cycle. A cumulative total of $214.8M has been distributed through the Alberta Community Partnership since 2014/15. During this period, $7.4M in funding has been provided to community airport operators, including:

- $6.3M in capital projects to extend the primary runway at Red Deer Regional Airport and rehabilitate the airfield lighting system at Slave Lake Airport; and
- $1.1M for eight master plans, feasibility studies, governance reviews, and business plans.

Alberta Community Partnership funding promotes cooperation between municipalities on airport projects of regional importance, including support for planning exercises through the Intermunicipal Collaboration stream and major capital projects of provincial significance through the Strategic Initiatives mechanism. While airport-related projects have only represented 3% of total funds distributed since 2014, the continuation of this program is viewed as being of value to airport operators.

5.1.4 Federal Support: Airports Capital Assistance Program

ACAP is a federal funding program administered by Transport Canada that supports safety-related infrastructure projects at certified airports supporting between 1,000 and 525,000 scheduled passengers per year. Three streams are used for applications:

Priority 1: Aircraft Rescue and Fire Fighting equipment and the rehabilitation of airside infrastructure, such as primary runways, taxiways, aprons, lighting systems, and visual aids;

Priority 2: Heavy maintenance equipment acquisitions; and

Priority 3: Projects to improve the safety of terminal buildings.

ACAP is generally 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. $38M has been allocated by the federal government to ACAP annually since 2001, except for two years of temporary increases during the COVID-19 pandemic. Over $1.26B has been invested across 1,268 projects at 201 airports since 1995.

National advocacy efforts regarding ACAP are led by Regional and Community Airports Canada, with calls for action also established by entities such as the Airport Management Council of Ontario, Atlantic Canada Airports Association, British Columbia Aviation Council, Manitoba Aviation Council, Canadian Airports Council, Réseau québécois des aéroports, and the Saskatchewan Aviation Council. Analyses of ACAP's suitability have been completed, with the conclusion being that its annual allocation of $38M is insufficient due to:

- The increasing number of eligible airports, which has grown from 71 facilities in 1995 to approximately 200 airports in 2024;
- The number of capital assets formerly maintained by Transport Canada reaching the ends of their useful service lives approximately 30 years following the divestiture of these airports;
- The allocation not keeping pace with inflation or increasing construction costs; and
- The financial strain borne by airports during the COVID-19 pandemic and the slower return of air carrier operations, passenger levels, and revenues at community airports.

5.2 Year-Round Air Ambulance Access

One of the core roles served by community airports is supporting patient transfers by the AHS air ambulance program. Providing timely year-round access to higher level of care facilities is especially important for rural and small urban communities and is part of the broader provincial strategy for the healthcare system. Community airport operators recognize the importance of their facilities being available for 24/7/365 access by air ambulance operators but face many infrastructure and operational challenges in ensuring that this usability can be achieved.

Year-Round Air Ambulance Access

- Winter 2022-23: Fixed-wing air ambulance services suspended at three community airports (Ponoka, Spirit River, Two Hills)
- Challenges include inadequate runway lengths and widths, lighting, instrument procedures, weather reporting, and maintenance standards
- Infrastructure improvements to improve access are capital intensive and may reach multiple millions of dollars
- Findings and recommendations from Alberta Health's Air Ambulance Landing Site Analysis Study are expected in 2024

The challenges faced by airport operators in supporting year-round access were exemplified in the winter of 2022-23. In November 2022, AHS announced that operations would be paused at three community airports (Ponoka, Spirit River, and Two Hills) due to concerns regarding their runway lengths and widths, winter maintenance service levels, and pilot experience. Although intercommunity patient transfers continued to be completed by STARS and ground ambulances, the degradation in service levels through the cessation of fixed-wing air ambulance access generated considerable concerns at each community. The reliance on ground ambulances for extended transfers is hindered by the shortage of paramedic crews and ambulances, as well as the temporary removal of these assets from local service for the duration of the transfer.

Ponoka Airport (left), Two Hills Airport (centre), and Spirit River Airport (right)

Operating a safe and effective air ambulance program year-round requires, among other factors:

- The availability of suitable airport infrastructure, such as runways, taxiways, lighting, and Instrument Flight Procedures;
- The maintenance of airport infrastructure, such as the repainting of markings, pavement repairs and crack sealing, lighting maintenance, obstacle removal, and snow clearing; and
- The communication of airport conditions to aircrews to inform their decision-making process.

Each mission request and "go / no-go" decision are evaluated by air ambulance crews on a case-by-case basis, considering each of the aforementioned factors alongside matters such as weather and aircraft capabilities. For example, a smaller community airport with a 3,000 ft. runway that is suitable for a transfer mission on a day with favourable weather and dry airfield pavements can become a "no-go" if weather conditions degrade, the runway is contaminated with snow or ice, or where airfield lighting systems are unavailable.

In the Final Report of the Alberta EMS Provincial Advisory Committee, the study notes that landing sites in disrepair or that do not conform to federal standards cannot be used by the air ambulance program, and that factors such as knowledge gaps, operational costs, and maintenance standards can result in some sites becoming unavailable. For unsuitable landing sites, fixed-wing air ambulance service may be withdrawn, with patients to be moved by road or rotary-wing aircraft. The study's recommendations, accepted by the Minister of Health in May 2022, included the direction that the Province will work with municipalities and partners *"…on continuity strategies to keep air ambulance landing sites operational and to enhance landing sites that are critical for air ambulance services."*

In June 2023, Alberta Health initiated an Air Ambulance Landing Site Analysis Study to catalogue and assess landing sites used in the air ambulance program and identify recommendations to ensure the continued usability of these facilities. Based on information provided by Alberta Health, potential outcomes from this study may include the establishment of minimum and preferred infrastructure and operational capabilities for airports supporting air ambulance services, including recommendations for improvement for facilities that are deficient relative to these standards. The timing of the release of the Province's study is unavailable but is expected to occur in 2024.

5.2.1 Airport Infrastructure

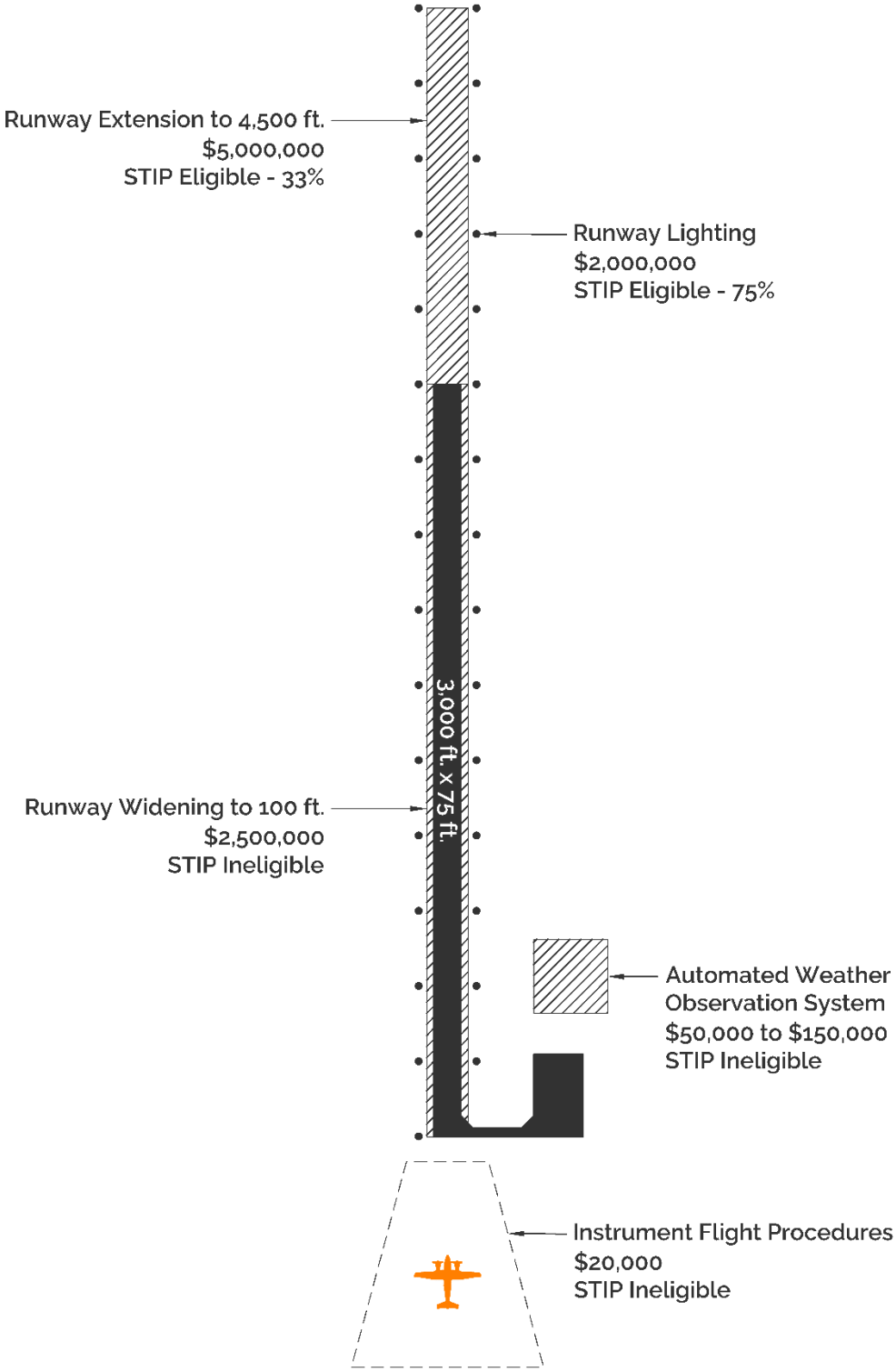
Across Alberta's 93 community airports, several deficiencies are evident in the airport infrastructure and services available to support fixed-wing air ambulance operations:

- **Runway Length:** 19% of airports have a runway length of 3,000 ft. or less which limits aircraft operations, and 75% of facilities have runways with lengths less than the preferred 4,500 ft. The costs of extending a 3,000 ft. x 100 ft. runway to 4,500 ft. are estimated at $5.0M[7];
- **Runway Width:** Over 60% of community airports have runways narrower than the preferred width of 100 ft. Widening a 3,000 ft. x 75 ft. runway to 100 ft. could cost an estimated $2.5M;
- **Airfield Lighting:** 17% of airports do not have airfield lighting, precluding operations during hours of darkness and not providing a visual cue that can be used in periods of reduced visibility. The capital expenses of installing lighting are estimated at $2.0M;
- **Instrument Flight Procedures:** 45% of airports do not have Instrument Flight Procedures, limiting aircraft access on days with unfavourable weather conditions. Procedures can be developed for approximately $20,000; and
- **Weather Reporting:** 76% of airports do not have published weather observation and reporting services. Depending on the capabilities of the selected system, costs for an Automated Weather Observation System can range between $50,000 and $150,000.

Other deficiencies that may affect operations include the specifications of the primary taxiway and apron, the condition of airfield pavements, and safety-related visual aids such as wind direction indicators. The Rough Order of Magnitude costs associated with select improvements for optimizing a representative community airport for fixed-wing air ambulance access are shown in Figure 5.3. In the scenario shown in Figure 5.3 where extensive airport upgrades are required, total capital costs could approach $10M.

[7] Cost estimates are provided at the Rough Order of Magnitude level of detail. Actual project requirements and costs per community airport are subject to detailed assessment and engineering design.

Figure 5.3 - Representative Airport Infrastructure Works for Improved Air Ambulance Access



Note: Cost estimates are provided at the Rough Order of Magnitude level of detail. Actual project requirements and costs per community airport are subject to detailed assessment and engineering design.

The costs associated with achieving minimum and preferred infrastructure specifications may exceed millions of dollars per community airport, with detailed engineering design and costing exercises required to assess the requirements of each facility. It is expected that most community airport operators, particularly smaller municipalities and not-for-profit entities, will not have the financial resources to complete these upgrades and will require external support. As noted in Section 5.1.2:

- Select non-municipal airport operators are ineligible for STIP;
- Historical STIP allocation levels will be insufficient to cover the influx of funding requests expected if minimum infrastructure requirements are increased for air ambulance service;
- Projects such as Instrument Flight Procedures and weather systems are ineligible; and
- The Province only contributes 33% of eligible costs for runway extensions.

Consulted community airport operators were consistently committed to providing the infrastructure levels required for the fixed-wing air ambulance program as the importance of such services cannot be understated; however, these improvements cannot be made without improved external support.

5.2.2 Airport Operations

From an operations perspective, 20% of surveyed airports identified that they have limitations with completing winter maintenance to support air ambulance operations due to the lack of suitable staff, while 12% of respondents identified that they lack the equipment required, a STIP ineligible expense. At airports that do perform winter maintenance, a recurring issue is the limited availability of staff to complete runway condition reporting and snow clearing outside of normal business hours (e.g., for overnight air ambulance flights). As noted in Section 2.4.2, winter maintenance is provided by dedicated airport crews at only 18% of surveyed registered aerodromes, with clearing completed by non-airport crews on a priority basis at 50% of registered aerodromes. At 31% of registered aerodromes, winter maintenance is completed on a low priority basis, or not at all.

5.3 Financial Performance and Municipal Fiscal Pressures

5.3.1 Airport Revenue Generation

While community airports operate with the goal of being financially viable, the ability for these facilities to generate sufficient operating revenues is limited. **Only 6% of airports self-reported as being financially viable from an operating and capital perspective**, with the remaining 94% of community airports requiring external assistance (i.e., municipal, provincial, and federal funding). This challenge is compounded by the limited ability for airports to significantly increase operating revenues, with two thirds of surveyed operators identifying that their revenues are stable year-over-year. Although opportunities for growth exist and are being pursued by community airports across Alberta, the ability to raise sufficient revenues to self-fund operating and capital expenses is hindered by the:

- Financially intensive nature of providing and maintaining safe airfield infrastructure and limited ability to decrease expenses while meeting regulatory and level of service requirements;
- Lower volume nature of operations at community airports;
- Competition across competitively similar airports for new growth;
- Limited ability for airport users to pay fees high enough for airport to recoup operating costs;
- Lack of consistently recorded data on aircraft movements at most community airports and associated difficulties with billing and revenue generation; and
- Significant initial investments required to attract new growth, such as new taxiways, aprons, roadways, and municipal services.

5.3.2 Municipal Fiscal Pressures

The operating and capital financial challenges experienced by community airports are compounded by the widespread fiscal pressures faced by municipalities across the province that own and fund over four fifths of the studied facilities. Local governments manage over $100B in assets and maintain 60% of public infrastructure in Alberta. Key challenges faced by municipalities include the:

- Downloading of public services from the provincial and federal levels;
- Increasing expenses associated with providing public services;
- Limited ability to generate new forms of revenue; and
- For the primary revenue sources used by municipalities (i.e., property taxes), ratepayers contend with their own financial pressures that limit their ability to accept tax increases.

These financial pressures are reflected in the December 2023 request by Alberta Municipalities for the Province to increase annual funding through the Local Government Fiscal Framework by approximately $1B amid a $30B municipal infrastructure deficit. 88% of surveyed community airports identified that the continuation of municipal financial support is moderately or extremely important, highlighting the dependency of these facilities on local funding. This operating and capital funding dependency, when combined with the financial pressures faced by municipalities, constitutes a significant challenge for community airports.

5.4 Regional Air Service Vulnerability

The sustainability of the regional passenger air service market affects the airports supporting such services (Fort Chipewyan, High Level, Lethbridge, and Medicine Hat), as well as for other communities that formerly received such flights or that aspire for new connectivity. Over the past two decades, several community airports have had their scheduled passenger services terminated, including Lloydminster, Peace River, Rainbow Lake, and Red Deer. Other markets, such as Lethbridge and Medicine Hat, have experienced decreased air service levels in terms of the number of airlines operating and flight frequencies.

Scheduled passenger air services are an important asset for intercommunity connectivity with associated economic and social benefits and are major sources of operating revenues (e.g., airport improvement fees, landing fees, and passenger parking revenues). Despite their importance, the viability of these routes has been under threat in recent years amid a broader trend of regional air service vulnerability across numerous markets in Canada due to forces such as:

- Industry-wide pilot hiring requirements and the decreased output of commercially licensed pilots. Demand for pilots and aircraft maintenance engineers has led to staffing challenges becoming prevalent at regional operators such as Jazz Aviation, WestJet Encore, and Pacific Coastal Airlines, limiting the ability for airlines to maintain services in all markets;
- Slower recoveries of passenger volumes at community airports following the unprecedent impacts of the COVID-19 pandemic;
- Passenger “leakage” by road to the four primary commercial service airports: Calgary, Edmonton, Fort McMurray, and Grande Prairie;
- Aging regional aircraft fleets and lack of suitable airliners in the sub-50 seat bracket that historically have been well-suited to smaller markets; and
- The challenging economics of regional services, with operating costs (e.g., crew, fuel, maintenance, airport infrastructure) spread over limited passenger loads versus the economies of scale realized on larger aircraft serving busier and higher yielding route pairings.

Recognizing these air service vulnerabilities, airport operators proactively undertake initiatives to support incumbent carriers and attract new operators. Air service development efforts encompass a broad range of strategies, including relationship-building with air carriers, market research, advertising, financial incentives, and in-kind contributions to ensure the success of a given airport and its airline(s). The reduction or loss of regional passenger air services will result in direct impacts in terms of connectivity, economic productivity, and community livability. Additional impacts would include a significant reduction in operating revenues, greater requirements for municipal financial subsidization, and the loss of eligibility for federal ACAP funding, with a corresponding increase in the request for capital financial support from the Province.

5.5 Flightpath Protection and Land Use Incompatibility

Land uses in the vicinity of airports have direct impacts on aviation safety and the current and future usability of these facilities; for example:

- Natural and fabricated obstacles near airports can interfere with aircraft arrival, departure, and traffic circuit paths and protected Obstacle Limitation Surfaces, resulting in impacts to runway lengths, Instrument Flight Procedures, aircraft maneuvering, and airport availability;
- The development of noise-sensitive land uses near airports, such as residential dwellings, can result in noise complaints and public pressure for restricting aircraft operations; and
- Certain land uses can cause electronic interference with navigation and communication aids or result in restrictions to visibility.

In many cases, community airports are under increasing pressure to respond to new land uses in their vicinity due to urban development, renewable energy projects, and the unchecked growth of vegetation. Regulatory changes made by Transport Canada in recent years, through Advisory Circular 301-001 requiring registered aerodromes supported by Instrument Flight Procedures to increase their protection of three-dimensional Obstacle Limitation Surfaces, have resulted in numerous facilities being challenged to remove obstacles such as buildings and vegetation, leading to:

- Increased Minimum Descent Altitudes and visibilities;
- Decreased airport availability in inclement weather; and / or
- Procedures being transferred to the Restricted Canada Air Pilot and only being available to corporate and commercial operators under Subparts 604, 702, 703, 704, and 705 of the Canadian Aviation Regulations.

Multiple parties are involved in assessing new development near airports, including land use authorities, airport operators, NAV CANADA, Transport Canada, and regulatory bodies such as the Alberta Utilities Commission and Innovation, Science and Economic Development Canada. Neither NAV CANADA nor Transport Canada through their review processes have permitting or enforcement capabilities. A major challenge faced by airport operators is their requirement to protect lands in their vicinity from uses that would negatively impact aviation safety or operations with limited tools to do so. Airport Zoning Regulations are enacted under the authority of the Aeronautics Act to restrict obstacle heights and are the primary tool available to limit incompatible development given their federal standing. Operators of certified airports are eligible to request the enactment of Airport Zoning Regulations by the federal government, and three community airports hold such instruments.

Registered aerodromes are ineligible for Airport Zoning Regulations, challenging their ability to ensure that flightpaths are protected and that the regulatory requirements for facilities supporting Instrument Flight Procedures are met. Both in Alberta and nationally, this dynamic has led to instances whereby landowners near airports that refuse to remove obstacles negatively affect aircraft operations.

6 RECOMMENDATIONS TO ENSURE VIABILITY

With a detailed understanding of the value of Alberta's community airports from a public health, safety, and economic perspective as well as the most influential challenges affecting their long-term viability, a series of six recommendations is provided in Table 6.1. The six recommendations outline targeted actions that can be taken at the provincial and federal levels of government to address the challenges affecting community airport operators in Alberta.

Since 1999, STIP has allocated approximately $45.9M to airport operators in Alberta for airfield projects, and ACAP has directed approximately $1.3B to eligible airports across the country. Additional investments have been made by both levels of government through direct contributions and programs such as the Province's Alberta Community Partnership and Regional Airport Development Grant programs, and the federal Regional Air Transportation Initiative. These recommendations recognize the historical and ongoing support by the provincial and federal levels of government to the viability of community airports; with these contributions as a foundation, progressive changes can be made to enhance the economic and social value of community airports.

Table 6.1 - Recommendations Overview

Challenge	Recommendation
Infrastructure Degradation and Financial Supports: Section 5.1	1 – Strategic Transportation Infrastructure Program 2 – Community Airports Operating Assistance 3 – Airports Capital Assistance Program 4 – Alberta Community Partnership
Year-Round Air Ambulance Access: Section 5.2	
Financial Performance and Municipal Fiscal Pressures: Section 5.3	
Regional Air Service Vulnerability: Section 5.4	5 – Regional Air Service Working Group
Flightpath Protection and Land Use Incompatibility: Section 5.5	6 – Review of Airport Land Use Protections

CL215T airtanker arriving at Manning Municipal Airport

6.1 Recommendation 1 – Strategic Transportation Infrastructure Program

STIP has been an essential tool in ensuring the sustainability of community airports for over two decades – 82% of community airport operators identify the availability of external capital funding for infrastructure projects as being extremely important to their long-term viability. The continuation of STIP support is of paramount importance, with four sub-recommendations provided to better align the program with the needs of community airports as identified in Table 6.2.

By increasing the annual allocation to the Community Airports Program stream of STIP to a target of $15M and implementing the recommendations on applicant and project eligibility and cost sharing, Alberta will be positioned as one of the leading jurisdictions nationally in supporting critical airport infrastructure. These actions will bolster the strength of Alberta's aviation sector and result in direct benefits to residents, businesses, and provincial agencies such as Alberta Health Services and Alberta Wildfire.

Table 6.2 - Strategic Transportation Infrastructure Program Recommendations

Applicant Eligibility
Expansion of applicant eligibility to include non-municipal community airport operators, including: • Private organizations; • Charitable societies; and • Non-government operating authorities and agencies.
Project Eligibility
Expansion of eligible capital projects to include: • Airfield maintenance equipment; • Vertically guided Instrument Flight Procedures; • Automated Weather Observation Systems and weather cameras; • Aviation fuel systems; • Perimeter fencing and access controls; • Terminal buildings and equipment storage; • Secondary airfield infrastructure, such as crosswind runways and taxiways; • Projects to address climate vulnerability; and • Periodic major asset management expenses, such as crack sealing, pavement repairs, line painting, and obstacle removal.
Cost Sharing Structure
Implementation of a revised Provincial cost sharing structure: • Minimum Provincial cost sharing established at 75% for all eligible projects; and • Eligibility for additional Provincial proportional contributions above 75% based on project merits and applicant needs – for example, additional funding for runway projects that directly address air ambulance or wildfire suppression operations.
Annual Funding Allocation
Increase in the annual funding available through STIP for the Community Airports Program from a historical average of $2.7M to a target of $15M per year. A higher allocation above the $15M recommendation may be required in the initial years following the implementation of the recommended changes to STIP to account for the anticipated influx of applications stemming from historically unfunded needs.

6.2 Recommendation 2 – Community Airports Operating Assistance

It is recommended that the Province introduces a new form of operating financial support to fund safe airport operations to suitable minimum service levels, complementing the capital support provided through STIP. An operating assistance program would enable community airports to improve their maintenance service levels through funding to support staffing, equipment use, training, and the acquisition of supplies such as airfield de-icing and anti-icing products. It is recommended that the Province introduces a structure for operating financial support that is based on each airport's:

1. Demonstrated financial need;
2. Operational use by the Province's air ambulance and wildfire suppression programs; and
3. Usage by aviation services that align with Provincial strategic objectives, such as flight training.

6.3 Recommendation 3 – Airports Capital Assistance Program

AAMA supports the call to action established by Regional Community Airports of Canada for the ACAP program to be increased from an annual allocation of $38M to $95M. AAMA will continue to support Regional Community Airports of Canada in its advocacy efforts pertaining to ACAP.

6.4 Recommendation 4 – Alberta Community Partnership

Alberta Community Partnership funding is a unique tool for community airports that benefit from intermunicipal collaboration to prepare planning studies and establish their strategic directions. The Strategic Initiatives funding stream, while used to a limited extent to-date by community airports, represents an important mechanism to fund airport projects of provincial significance. The continuation and appropriate funding of the Alberta Community Partnership is recommended.

6.5 Recommendation 5 – Regional Air Service Working Group

Resolving the air service vulnerabilities identified in Section 5.4 will require collaboration between community airport operators, air carriers, aligned entities such as local tourism and economic development entities, and the Province. It is recommended that this issue be identified in the mandate to the Minister of Transportation and Economic Corridors and that a collaborative working group be established to explore this issue in detail. This working group should have a clearly defined mandate to examine the state of the regional air carrier market in Alberta, challenges affecting the viability of these services, and suitable actions that can be taken in response. The Strategic Aviation Advisory Council may represent an appropriate forum for addressing this mandate but currently lacks representation from airport operators.

6.6 Recommendation 6 – Review of Airport Land Use Protections

It is recommended that Transport Canada initiate a review of the tools available to airport operators to ensure regulatory obligations and aviation safety are appropriately addressed through off-site development and natural growth. This review should include an emphasis on tools available to registered aerodrome operators that are ineligible to hold Airport Zoning Regulations. It is also recommended that an alignment review be completed of the Obstacle Limitation Surface requirements of Advisory Circular 301-001 and TP312 – Aerodrome Standards and Recommended Practices, and that further clarity be provided on the accuracy standards for building locations and elevations in aeronautical reviews.

Alberta's Community Airports:
Support for Long-Term Viability

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