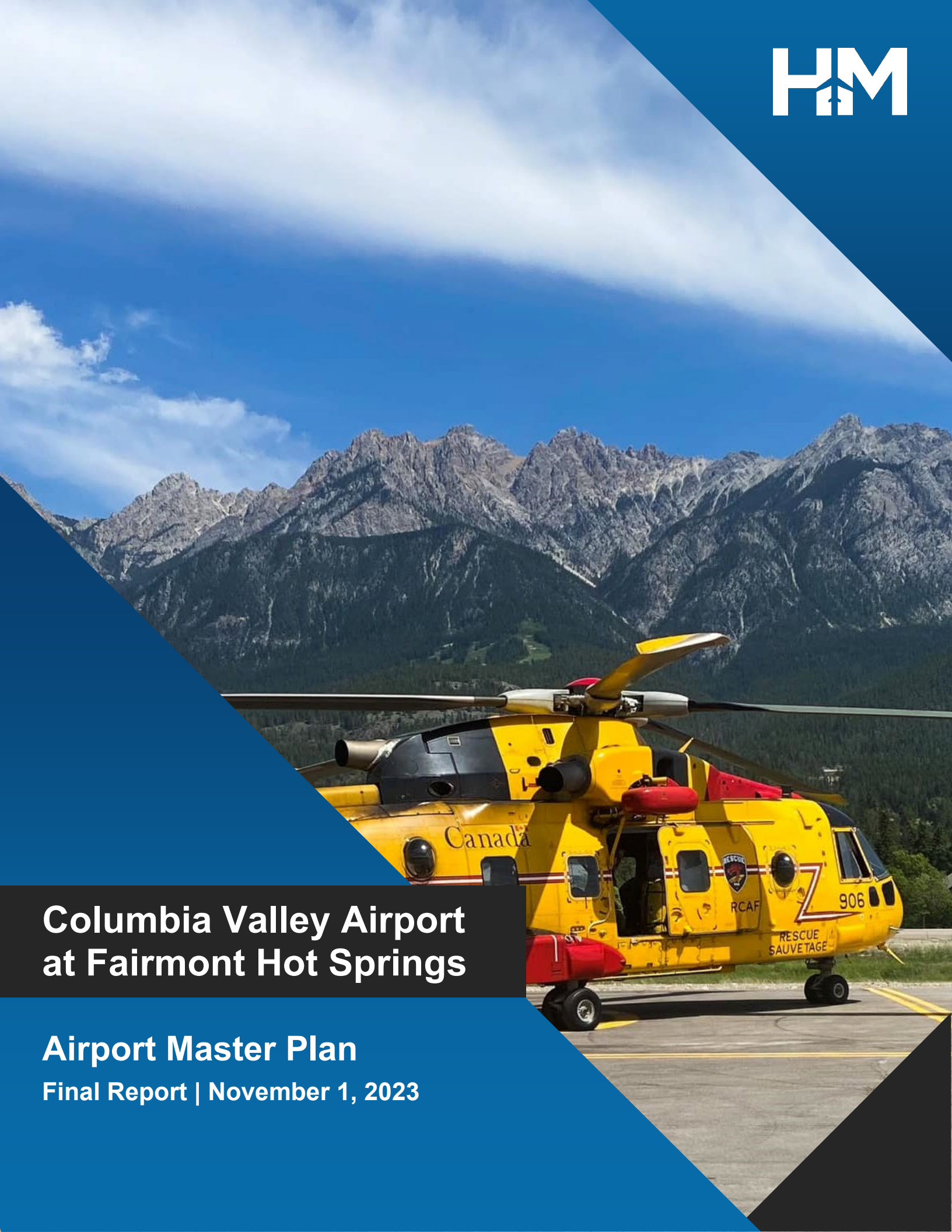

Columbia Valley Airport at Fairmont Hot Springs

Airport Master Plan

Final Report | November 1, 2023

Acknowledgements

Financial support for the preparation of the Columbia Valley Airport Master Plan was provided by the Province of British Columbia through the British Columbia Air Access Program and by the Columbia Basin Trust.

The planning process was overseen by a steering committee of the Columbia Valley Airport Society, comprised of Pascal van Dijk, Tex Deagnon, Hans Baeggli, and Mark Hendrickson. Throughout this Master Plan, photos captured by Ann Marie Deagnon are used with grateful appreciation.

The perspectives shared by interviewed stakeholders and respondents to the community survey are of significant value, and the time taken by each individual is thanked.

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1 INTRODUCTION

1.1 Background

Columbia Valley Airport (the "Airport") is located in the unincorporated resort community of Fairmont Hot Springs in Area F of the Regional District of East Kootenay (RDEK). The Airport opened on August 6, 1986 and today is overseen by the registered non-profit Columbia Valley Airport Society (CVAS or the "Airport Society").

The Vision of the Airport Society is to:

> *Develop the Columbia Valley Airport into a sustainable community asset that provides enhanced emergency response protection and growth opportunities for the Columbia Valley.*

The Airport Society's Mission is to:

> *Provide safe and efficient air accessibility to the Columbia Valley for residents of the region, emergency services and visitors.*

1.2 Project Objectives

CVAS retained HM Aero Aviation Consulting ("HM Aero") in April 2023 to prepare the Columbia Valley Airport Master Plan (the "Master Plan"). Financial support for the preparation of the Master Plan was provided by the Province of British Columbia through the British Columbia Air Access Program (BCAAP). The Master Plan was commissioned by the Airport Society to assist in achieving its Vision and Mission through the following objectives:

1. Clearly articulate the role, economic, and social value of the Airport to the region;
2. Gather and analyze community and stakeholder perspectives on the Airport;
3. Develop a recommended strategic direction that responds to the regional context and ensures the long-term viability of the Airport;
4. Outline required capital investments and create an orderly plan for future development;
5. Establish recommendations for governance, administration, and operations, including the long-term financial model for the Airport; and
6. Prepare a systematic implementation strategy to guide future action.

Wildfire operations in 2022

The analysis and recommendations of the Master Plan are structured across three periods:

1. Short-Term Planning Horizon: 2024-2028;
2. Medium-Term Planning Horizon: 2029-2033; and
3. Long-Term Planning Horizon: 2034-2043.

The Master Plan has been developed using all available information and in consideration of potential developments that may influence the prospects of the Airport in the future. As exemplified by the period of considerable change the Airport has gone through in the five years between 2019 and 2023, emergent forces will arise that affect the basis and assumptions that inform the Master Plan recommendations. Accordingly, flexibility will be required by CVAS in implementing the overarching vision of the Master Plan. The planning approach taken focuses on defined actions in the short and medium-term planning horizons while preserving flexibility to meet potential opportunities in the long-term planning horizon. Recommendations in the long-term planning horizon are fewer in number with the understanding that a comprehensive review of the Master Plan and potential updates will be required to meet the needs of that period.

1.3 Stakeholder and Community Engagement

1.3.1 Stakeholder Engagement

Input from stakeholders was collected and analyzed as part of the planning process. Consultation meetings were convened in-person, by phone, and videoconference with 13 stakeholder groups:

- AirSprint;
- Alberta Health Services;
- Angel Flight East Kootenay;
- British Columbia Emergency Health Services (BCEHS);
- British Columbia Wildfire Service (BCWS);
- Carson Air;
- Columbia Valley Chamber of Commerce;
- Fairmont Hot Springs Resort (FHSR);
- Flight Fuels;
- Panorama Mountain Resort;
- RDEK – Area F;
- Riverside Golf Estates Ltd.; and
- Strata Group.

1.3.2 Community Engagement

A community information session was hosted on June 6, 2023 with representatives from HM Aero and the Airport Society at the Columbia Valley Chamber of Commerce in Invermere. The information session was attended by between 10 and 20 community members.

Input from the community was facilitated through an online survey that was available from June 23, 2023 to July 21, 2023 (Appendix B). The survey was advertised by CVAS through its email list, social media, and print advertising in the Columbia Valley Pioneer. A total of 164 responses were received, with the majority of respondents located in East Kootenay Area F (76% of all responses), such as Fairmont Hot Springs, Invermere, Windermere, and Canal Flats. The remaining respondents were located in East Kootenay Area G (12% of respondents), Alberta (6%), elsewhere in British Columbia (5%), and in Manitoba (1%). Survey participants self-identified as responding as a:

- Resident or household representative (80%);
- Pilot, aircraft owner, or routine user of the Airport (15%); and
- Representative of a business or organization (5%).

2 AIRPORT PROFILE

2.1 Airport Overview

The Airport is operated as a public use registered aerodrome and is available 365 days per year, 24 hours per day. The current site plan of the Airport is shown in Figure 2.1. Detailed discussion on the condition and future requirements of each asset and service is provided in Section 6.1.

The airfield is comprised of the following assets:

- Runway 16-34;
- Taxiways A, B, and C;
- Aprons I and II;
- Illuminated Wind Direction Indicators at the Runway 16 and 34 thresholds;
- Runway edge, threshold, and end lighting for Runway 16-34 as well as Precision Approach Path Indicators;
- Edge lighting for Taxiways A and B;
- Edge lighting for Apron I;
- An aerodrome beacon; and
- Unilluminated mandatory instruction and information signs.

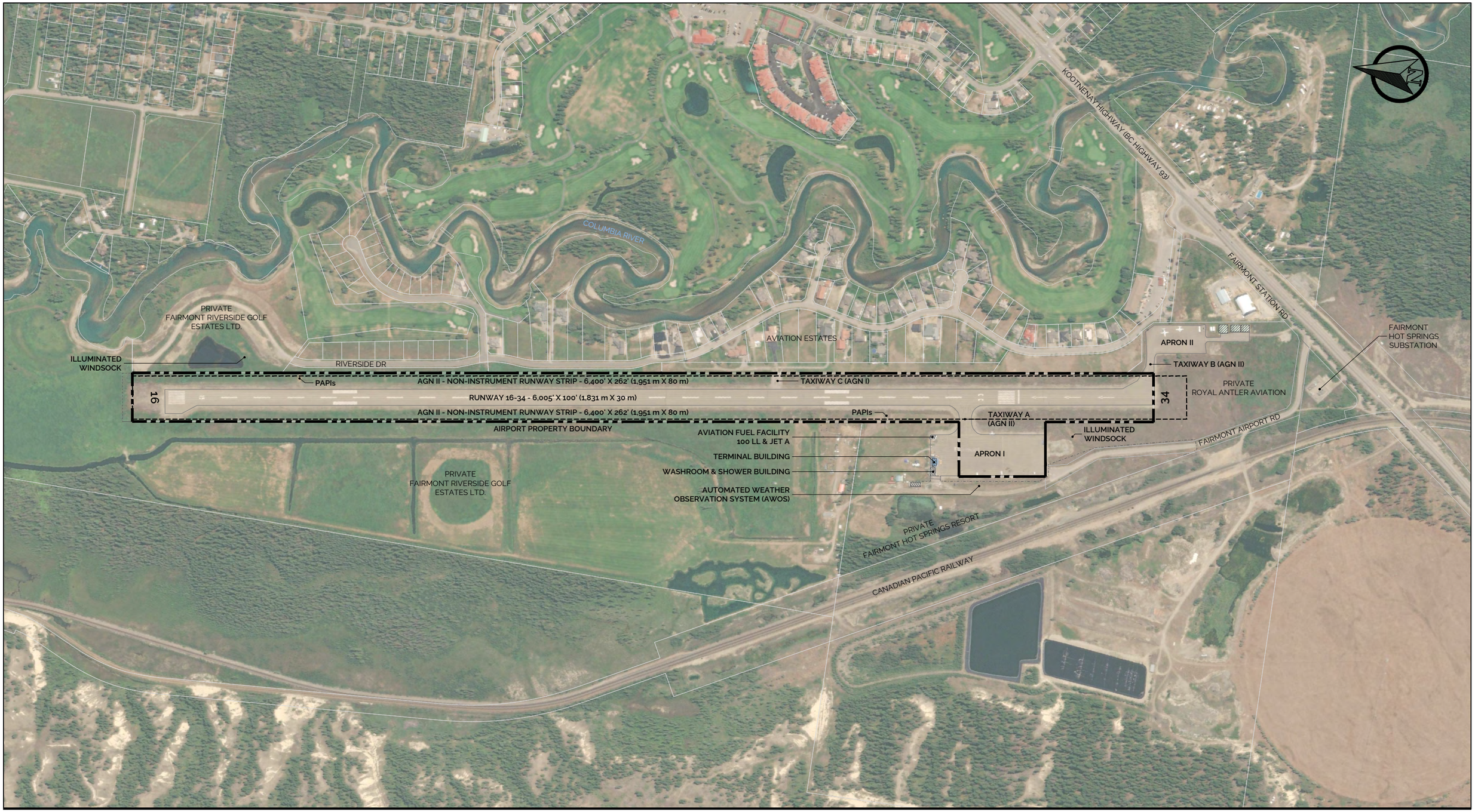
Support services available to aircraft operators and users of the Airport include:

- Jet A-1 and 100 Low Lead ("jet fuel" and "avgas" respectively) stored in above-ground tanks at the northern edge of Apron I;
- An Automated Weather Observation System (AWOS) located adjacent to Apron I;
- Instrument Flight Procedures;
- Aircraft parking and tie-downs; and
- A office building and washroom facilities.

While the operations of the Airport are under the oversight of the CVAS, three parties are involved in the ownership of operational lands:

- CVAS owns the lands containing the majority of the airfield, including Runway 16-34, Taxiway A, and parts of Taxiway B, Taxiway C, and Apron I;
- FHSR owns the lands occupied by the northern portion of Apron I, including the office building and fuel tanks, as well as the grass infield to the north used for surge rotary-wing parking and occupied by part of the Runway 34 Precision Approach Path Indicator system; and
- Royal Antler Aviation owns the lands occupied by Apron II, Taxiway C, the Runway 16 end lights, and abutting Apron I at its southern edge.

Fairmont Riverside Golf Estates Ltd. owns the neighbouring non-operational lands west of Runway 16-34.



COLUMBIA VALLEY AIRPORT AT FAIRMONT HOT SPRINGS
AIRPORT MASTER PLAN

FIGURE 2.1 - SITE PLAN

NOVEMBER 2023

0 150 300
Meters

*FOR PLANNING PURPOSES ONLY

2.2 Users, Social, and Economic Impacts

Section 2.2 reviews the primary users of the Airport and enumerates the social and economic benefits that CVAS enables through the support of these operations. As a public use facility, the Airport is available to meet the requirements of all entities with a need to operate in the area and for whom the facility's infrastructure and services are suitable for their intended purposes.

2.2.1 Air Ambulance Patient Transfers

BCEHS oversees the British Columbia Ambulance Service that is responsible for providing emergency medical response services throughout British Columbia. The fixed-wing and rotary-wing air ambulance programs are delivered by contracted air carriers. As of 2023, the next 10-year contracts for rotary-wing and fixed-wing services will be fulfilled by Ascent Helicopters and Carson Air, respectively. The Beechcraft King Air 360 will be introduced as the new fixed-wing platform moving forward, replacing the historical use of the Beechcraft King Air 300, King Air 350, and 1900. Alberta Health Services also deploys its fixed-wing air ambulance assets to the Airport when requested by BCEHS using the Beechcraft King Air series of aircraft. Alberta Health Services typically operates at the Airport between two and four times per year when requested by BCEHS.

As shown in Figure 2.2, the Airport has supported an increasing number of air ambulance flights between 2019 and 2022. An average of 51 air ambulance flights have occurred at the Airport per year between 2020 and 2022, or approximately one flight per week. As of late October 2023, 49 air ambulance flights have operated at the Airport in 2023 and full-year data may see mission numbers meet or exceed those of 2021 and 2022.

Air ambulance missions operate year-round as shown in Figure 2.3, subject to patient requirements and the ability to complete the mission successfully (e.g., considering weather and operational considerations).

Figure 2.2 - Air Ambulance Missions (January 2018 to October 2023)

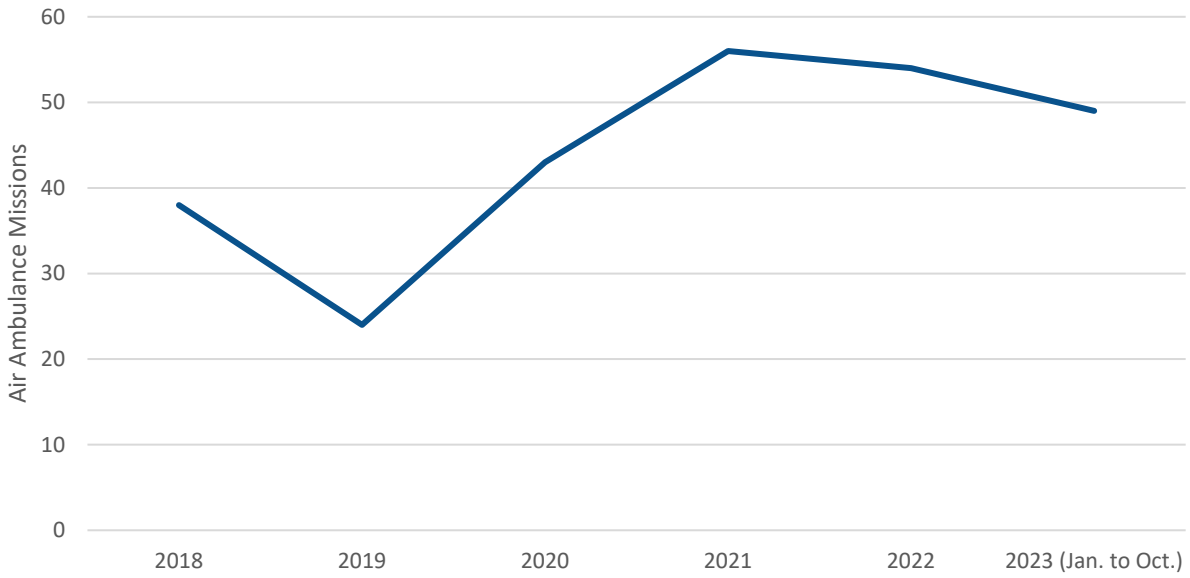
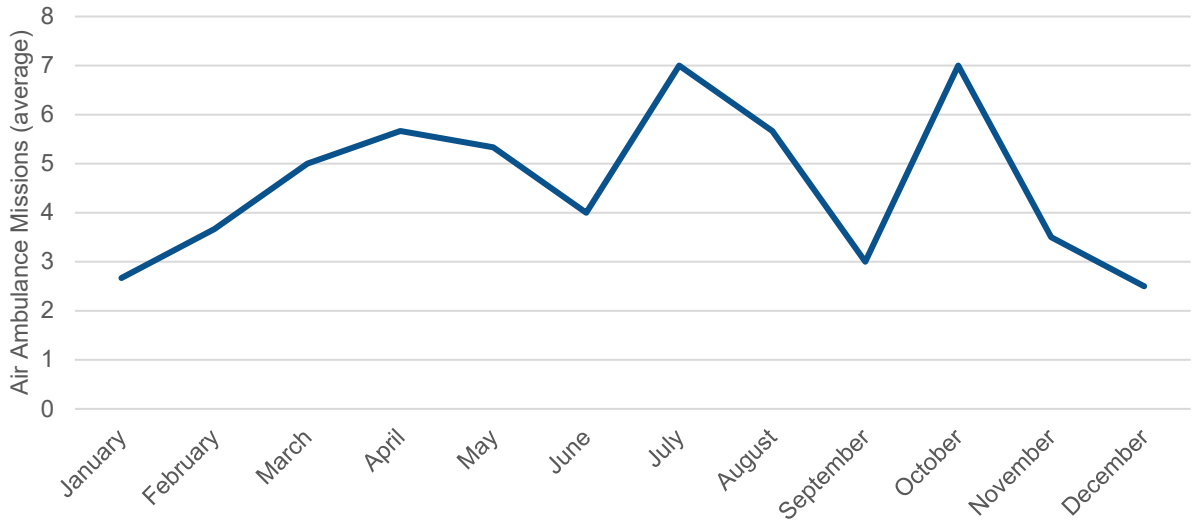


Figure 2.3 - Average Monthly Air Ambulance Missions (January 2021 to October 2023)



The closest hospital to the Airport is the Invermere & District Hospital, serving the catchment area of Spillimacheen to Canal Flats. Based on a letter of support authored in February 2020, the Invermere & District Hospital serves over 10,000 annual emergency department visits. The East Kootenay Regional Hospital in Cranbrook is the closest referral centre for higher level of care patients; however, critically ill or trauma patients routinely require transfers to Level One facilities further away in locations such as Kelowna and Vancouver. Due to the distance by road to these facilities and the potential for highway access to be obstructed due to weather, natural hazards, construction, or accidents, air ambulance operations are essential in providing timely access to higher level of care facilities.

The operational value of the Airport for air ambulance transfers is enhanced by several factors that improve its year-round availability, including:

- The 6,000 ft. runway. The Airport is routinely used instead of Invermere Airport due to the longer runway length available and minimal takeoff and landing performance penalties;
- Lighting to support nighttime operations. The Airport is one of two facilities in the Columbia Valley with such capabilities, the other being Canadian Rockies International Airport;
- The Instrument Flight Procedures that permit arrivals and departures in Instrument Meteorological Conditions; and
- Year-round maintenance, including snow clearing in the winter.

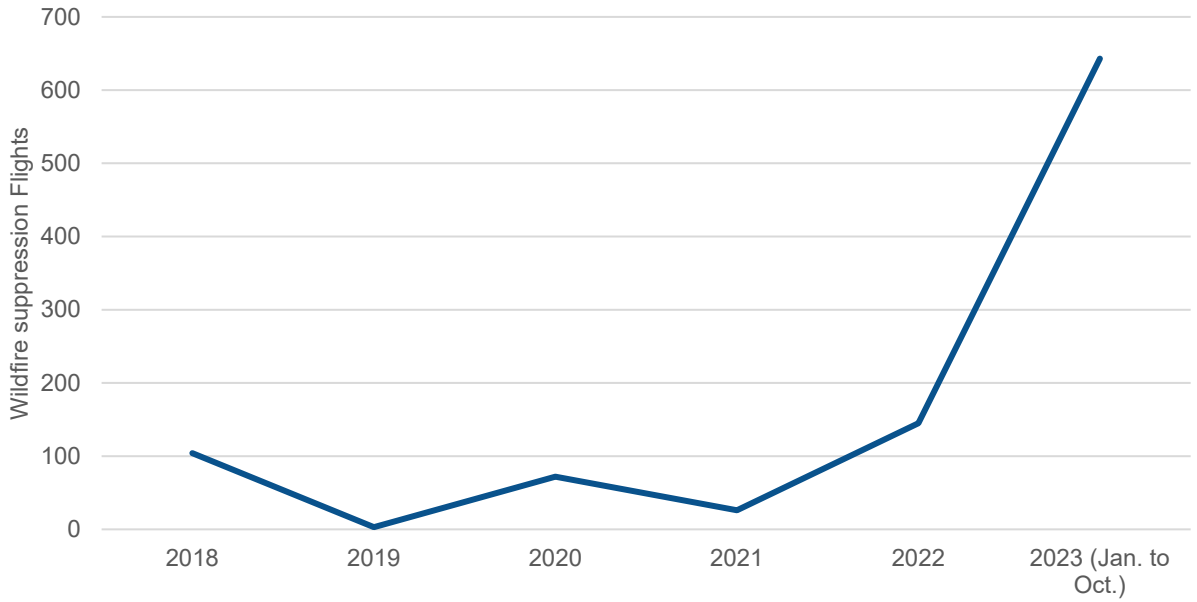
BCEHS air ambulance aircraft parked on Apron I

2.2.2 Wildfire Suppression Operations

BCWS is the provincial entity responsible for wildfire suppression. Contracted fixed-wing and rotary-wing air carriers are an essential tool used by the BCWS in meeting its operational requirements, with aircraft used for wildfire detection and observation, crew and equipment transportation, and water and retardant application. The Airport and Columbia Valley are located within the Southeast Fire Centre, headquartered in Castlegar.

The Airport is activated on an as-required basis in response to wildfire suppression operations in the region. This is demonstrated in the annual fluctuations in the number of wildfire suppression flights shown in Figure 2.4. In years with less wildfire activity in the region such as 2019 and 2021, the Airport is used in a reduced or minimal capacity by BCWS. Significant increases in operations were observed in 2018, 2020, 2022, and 2023 in response to major wildfires in the area, with a record high number of flights (643) logged in 2023.

Figure 2.4 - Wildfire Suppression Flights (January 2018 to October 2023)



The availability of the Airport permits more effective wildfire suppression operations in the Columbia Valley and the surrounding region, a capability of particular importance given the considerable amount of wildland-urban interface areas and remote areas that are less accessible to ground-based response efforts. Based on inputs from BCWS, operational advantages of the Airport include:

- The runway length permitting operations by heavy ground-based air tankers, such as the Lockheed L-188 Electra and Canadair CL-215 and CL-415;
- The large size of Apron I facilitates refuelling, servicing, and parking for larger fixed-wing airtankers and heavy-lift helicopters, such as the Sikorsky S-61 and S-64 Skycrane;
- Crew rest facilities in the office building;
- Refuelling facilities; and
- Its proximity to lakes suitable for water scooping by airtankers.

In addition to direct wildfire response efforts in the Columbia Valley, the Airport serves as a reliever to the airtanker base in Cranbrook located at Canadian Rockies International Airport. When the apron and parking facilities in Cranbrook are at capacity, aircraft are commonly repositioned to the Airport.

Wildfire suppression Sikorsky S-64 Skycrane

2.2.3 Royal Canadian Air Force Operations

The Royal Canadian Air Force (RCAF) is a recurring user of the Airport, with between one and six flights handled per year over the past six years (Table 2.1). The Airport has been used in several capacities by the RCAF, including:

- Fuel stops for transiting aircraft, such as the Comox-based CH-149 Cormorant search and rescue helicopter;
- Search and rescue parachute training by the CC-130 Hercules; and
- Cross-country training by aircraft such as the Beechcraft King Air.

Table 2.1 - Royal Canadian Air Force Flights (January 2018 to October 2023)

2018	2019	2020	2021	2022	2023 (Jan. to Oct.)
5	5	6	1	2	5

2.2.4 Emergency Management and Disaster Response

The Airport is an emergency management and disaster response asset to the Columbia Valley and is identified in the East Kootenay Emergency Management Plan as a designated evacuation route for the Columbia Valley, with this operational value accentuated when road access is not possible. The role(s) that may be served by the Airport will vary based on the circumstances of a given emergency or natural disaster and may include:

- Supporting reconnaissance flights;
- Transporting emergency personnel, resources, and freight into the community;
- Community or group-level evacuation efforts; and
- Supporting the deployment of aviation resources of supporting agencies, such as BCEHS and the RCAF.

Aside from wildfire suppression operations, the Airport has not been activated in a large-scale emergency management or disaster response capability in recent years. However, the Airport has unique capabilities to support such operations, including its 6,000 ft. runway suitable for military airlift resources (e.g., the CC-130 Hercules) and large apron. As discussed further in Section 3, the range of natural hazards in the Columbia Valley, the potential for their worsening as a result of climate change, and the limitations of road access in the region mean that preserving the emergency management capabilities of the Airport is of paramount importance for disaster response.

RCAF CC-130 Hercules

2.2.5 Intercommunity Access

The Airport serves as a gateway to the Columbia Valley for private, chartered, and fractionally owned aircraft, providing time efficient access and an alternative to travelling by road. As shown in Table 2.2, an average of approximately 300 business and recreational flights were recorded annually between 2018 and 2022, and an average of 1,200 travellers (including crew and passengers) used the Airport per year. These statistics do not capture the proportion of travellers staying in the Columbia Valley or the number of nights stayed but illustrate the high-level scale of such operations.

Table 2.2 - Intercommunity Access by Air (2018-2022)

	2018	2019	2020	2021	2022	2023 (Jan. to Oct.)
Business and Recreational Flights	330	375	489	207	238	272
Travellers (Crew and Passengers)	947	813	2,352	869	985	1,991

AirSprint, Canada's largest fractional aircraft ownership program, operates into the Airport approximately 30 times per year. The majority of AirSprint's clientele using the Airport are travelling to second homes in the Columbia Valley from their primary residences in Alberta. The Airport is also routinely used by chartered and privately owned turboprop and turbofan aircraft visiting the region, as well as smaller general aviation aircraft.

The facilitation of intercommunity travel by air supports the functioning of the regional tourism economy by providing time effective access to resorts and second homes. Although the number of travellers arriving into the Columbia Valley by air is a fraction of the broader total arriving by road, this role contributes to the Airport's economic value to the region.

Bombardier Challenger 300 arriving on a charter flight

2.2.6 Commercial Aerial Work and Flight Training

The Airport is not a permanent base of operations for any commercial operators. The facility is used for refuelling and staging on an occasional basis by operators such as Alpine Helicopters, Babin Air, and Glacier Helicopters. Flight Training Units based at other airports, such as Mount Royal University and the Calgary Flying Club, also use the Airport for cross-country and mountain training.

2.2.7 Recreational Use

The Airport is used on a routine basis by small general aviation aircraft operated for recreational purposes, including airplanes, helicopters, and gliders. Consideration is being given to the creation of a local flying club or Canadian Owners and Pilots Association Flight to strengthen the area's flying community.

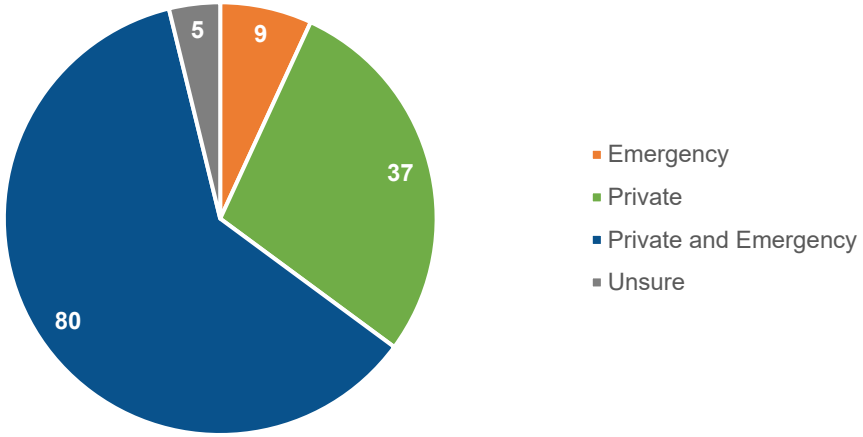
2.3 Community Understanding and Perspectives

The online Master Plan survey is used to gauge community perspectives regarding the Airport. Due to the survey sample size (164 responses) and potential response bias with individuals with a preexisting knowledge or interest in the Airport being more likely to respond, the transferability of these results to the catchment area population more broadly cannot be definitively stated. To assist in better understanding the views of individuals without a vested interest in or detailed knowledge of the Airport, this section focusses on respondents that identify as a resident or business / organization representative and does not include pilots or users of the Airport. On awareness:

- 99% of respondents were aware that there is an airport in Fairmont Hot Springs;
- 97% of respondents knew where the Airport is located;
- 83% of respondents knew how and where to access the Airport; and
- 64% of respondents thought the Airport is open to use by the public.

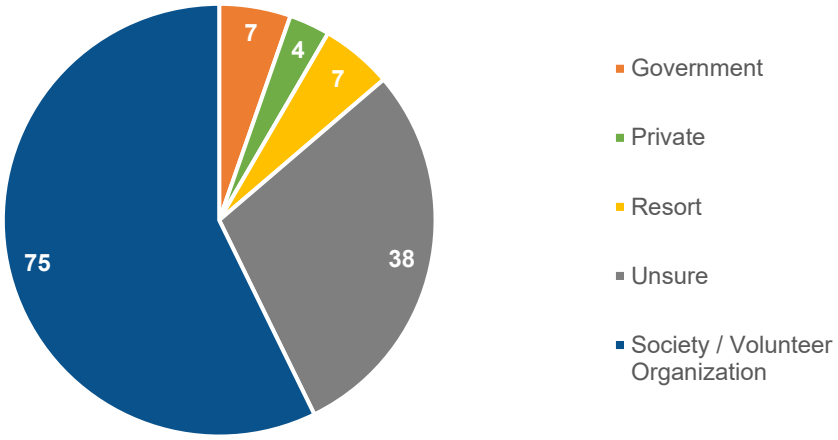
Taking these statistics together, the survey respondents demonstrate very good to excellent awareness of the presence of the Airport, its location, and how to access the facility. However, one third of respondents do not believe that the Airport is available for public use. To further explore this, an open-ended question asking respondents who they think the main users of the Airport are was posed, with the responses classified by HM Aero. As shown in Figure 2.5, 4% of respondents were unsure, while 7% believed the Airport is for emergency use only. 61% of respondents identified a combination of private and emergency users. Notably, 28% of respondents identified only private users (e.g., general aviation pilots, charter aircraft) as being the main users of the Airport, aligning with the approximately one third of respondents that believe the Airport is not available for public use.

Figure 2.5 - Survey Respondent Views on Primary Airport User Types



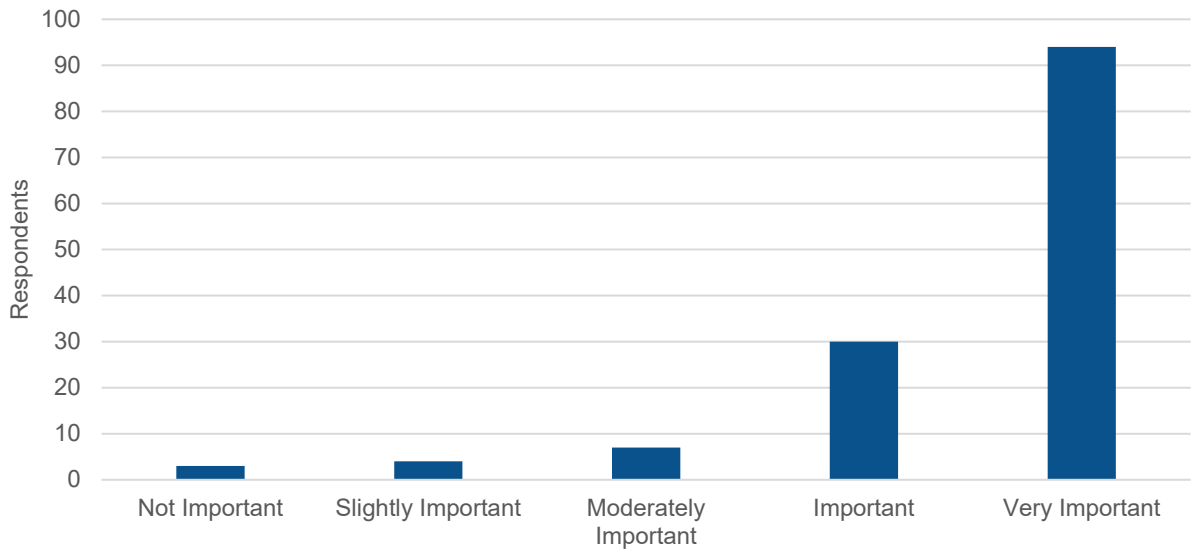
Survey respondents were also asked to identify who they believe operates the Airport. As shown in Figure 2.6, 57% of respondents identified that the Airport is run by the CVAS specifically or by a volunteer group or society in general terms. Approximately one third of respondents were unsure who operates the Airport, 5% identified FHSR, 5% identified the municipal or provincial government, and 3% believed it is privately operated.

Figure 2.6 - Survey Respondent Understanding of Airport Operator



Generally positive valuations of the importance of the Airport were assigned by survey respondents, as shown in Figure 2.7. 5% of respondents identified that the Airport is “not important” or “slightly important” to them, with an additional 5% seeing the Airport as being “moderately important.” The remaining 90% of respondents stated that the Airport is “important” or “very important” in their view.

Figure 2.7 - Survey Respondent Views on Importance of Airport



To understand how respondents’ views on the importance of the Airport are influenced by the users it serves, respondents were asked to assign a valuation to each group (Table 2.3). Based on the proportion of respondents that value a given user group as “important” or “very important”, the strongest valuations were assigned to wildfire suppression (99% of respondents), air ambulance (98%), and search and rescue (93%) services. Law enforcement was viewed as a priority by approximately three quarters (76%) of respondents, with air access for business and tourism selected by approximately two thirds (69%) of individuals. Flight training and recreational flying were viewed as being important or very important by approximately one in two respondents (58% and 52% of respondents, respectively).

Table 2.3 - Survey Respondent Views on Importance of Aviation Services

Airport User Group	Not Important	Slightly Important	Moderately Important	Important	Very Important
Wildfire Suppression	<1%	<1%		5%	94%
Air Ambulance		1%	1%	10%	88%
Search and Rescue	1%	1%	5%	6%	87%
Law Enforcement	4%	4%	16%	22%	54%
Business and Tourism Access	5%	7%	19%	32%	37%
Flight Training	5%	10%	27%	26%	32%
Recreational Flying	8%	12%	28%	26%	26%

As noted previously, the community engagement survey predominantly represented the perspectives of residents and businesses in Area F (76% of all responses) and Area G (12% of respondents). Through a review of the views shared by resident and business survey respondents, the following conclusions are made:

- Awareness of the presence and location of the Airport is generally high;
- Approximately one third of respondents were not aware that the Airport is a public use facility. This aligns with the 28% of respondents who identified the facility's primary users to be private individuals, groups, and businesses, omitting the public services supported at the Airport;
- 57% of respondents were aware that the Airport is run by a volunteer society, either in general terms or through specific awareness of CVAS;
- 90% of respondents see the Airport as being important or very important to them. This valuation is driven by the emergency response operations (wildfire, air ambulance, and search and rescue) supported at the Airport; and
- The Airport's private roles, including business and tourism access, flight training, and recreational aviation still received predominantly positive valuations but at a lower proportion compared to its emergency management role.

2.4 Financial Performance

2.4.1 Operating Revenues and Governmental Support

Operating revenues are collected through three primary sources: landing fees, parking fees, and fuel sale commissions. Operating revenues have ranged between $11,000 and $39,000 annually between 2018 and 2022, averaging $30,000 annually across this period (Table 2.4). As these types of revenues vary with activity levels (i.e., the number of aircraft arrivals, the amount of fuel sold), variability is exhibited year-over-year with the utilization of the Airport. The most significant variable in the Airport's operating revenues, is the extent of wildfire suppression operations. In years with significant wildfire operations, landing fees and fuel surcharges increase with resulting improvements to operating revenues.

Table 2.4 - Airport Revenues (2018-2022)

Revenue Category	2018	2019	2020	2021	2022
Landing Fees	$3,997	$3,590	$8,068	$4,378	$17,339
Fuel Sale Commissions	$30,205	$6,834	$27,737	$15,041	$10,137
Parking Fees	$0	$672	$649	$2,955	$6,710
Other	$0	$0	$3,020	$4,492	$2,670
Operating Revenues	**$34,202**	**$11,096**	**$39,474**	**$26,866**	**$36,856**
Amortization of Deferred Capital Contributions	$0	$0	$0	$5,262	$15,872
Provincial Grants and Donations Note 1	$0	$0	$7,545	$159,102	$42,826
RDEK Operating Support	$0	$0	$60,000	$60,000	$60,000
Total Revenues	**$34,202**	**$11,096**	**$107,019**	**$251,230**	**$155,554**

Note 1 – Grant revenues included:

- $90,000 in provincial airport pandemic relief funding in 2021
- $242,000 in provincial Community Economic Recovery Infrastructure Program funding in 2021 for the micro surfacing of the runway. These funds have been amortized by CVAS over a five year period.

In addition to revenues directly associated with aircraft operations, CVAS benefits from grant-based financial support from the Province of British Columbia, donations from individuals and businesses, and operating support from the RDEK. A total of $209,473 in grant funding and private donations (by AirSprint for the replacement of the AWOS) has been provided between 2020 and 2022. An additional $64,000 in provincial support through BCAAP was announced in 2023 to fund the construction of a new washroom facility and the preparation of the Airport Master Plan.

Following the 2019 announcement that FHSR would cease funding the operations of the Airport in 2020, the RDEK has provided $60,000 in annual operating funding through the Columbia Valley Economic Development Service. Funding through the Economic Development Service is requested on an annual basis and has been essential is sustaining the operations of the Airport.

2.4.2 Operating Expenses

Expenses associated with the operation and maintenance of the Airport are recorded across 15 categories, as shown in Table 2.5. Prior to FHSR ceasing its funding of the Airport, expenses averaged $210,000 annually, with the wages and benefits of staff being the largest cost. Following the cessation of funding by FHSR in 2020 and the termination of the paid staff by FHSR, expenses were reduced by approximately $80,000 through the transition to a volunteer model. For 2021 and 2022, operating expenses excluding repairs and maintenance and amortization have averaged $53,000 per year. Costs associated with capital repairs and maintenance were $135,000 in 2021 and $31,000 in 2022, associated with a large scale pavement repair project.

Table 2.5 - Airport Expenses (2018-2022)

Expense Category	2018	2019	2020	2021	2022
Amortization	$25,530	$25,530	$25,530	$32,132	$43,314
Repairs and Maintenance	$29,428	$19,146	$5,874	$134,676	$30,694
Insurance, Licences, and Dues	$15,578	$17,656	$18,957	$20,779	$17,205
Telephone and Utilities	$35,296	$31,399	$23,065	$15,017	$10,206
Supplies	$5,347	$7,721	$605	$3,020	$7,564
Professional Fees	$40	$15	$4,303	$6,355	$6,624
Consulting	$456	$0	$7,376	$4,788	$4,518
Fuel	$4,400	$3,351	$2,548	$1,401	$2,605
Advertising and Promotion	$4,989	$2,469	$154	$154	$2,484
Office and Miscellaneous	$5,719	$4,664	$1,128	$1,425	$1,299
Interest and Bank Charges	$148	$217	$431	$83	$279
Travel	$1,553	$0	$0	$0	$95
Bad Debt	$0	$0	$0	$387	$0
Training	$9,758	$0	$0	$0	$0
Wages and Benefits	$89,157	$81,093	$25,414	$0	$0
Total Expenses	**$227,399**	**$193,261**	**$115,385**	**$220,217**	**$126,887**

2.4.3 Financial Position

As shown in Table 2.6, FHSR was solely responsible for supporting the $182,000 to $193,000 operating deficit in its final two years of financial involvement in the Airport. The Airport's operating deficit decreased in 2020 to $8,000 before improving to an average operating surplus of $30,000 in 2021 and 2022. These surpluses are largely due to the capital and operating financial support provided by the provincial and regional levels of government and higher than anticipated revenues from operations (e.g., fuel commissions and fees during wildlife operations). Without the $60,000 in operating support provided by the RDEK in 2020, 2021, and 2022, the Airport's deficit in these years would have been $68,000, $30,000, and $31,000, respectively. The Airport's long-term financial model and requirements for external financial support are assessed in Section 8.

Operating surpluses are reinvested into a Capital Reserve Fund to support future project implementation; as described in Section 8.1.3, capital expenses will increase in the short and medium-term planning horizons necessitating a robust Capital Reserve Fund.

Table 2.6 - Airport Financial Position (2018-2022)

	2018	2019	2020	2021	2022
Operating Revenues	$34,202	$11,096	$39,474	$26,866	$36,856
Amortization of deferred capital contributions	$0	$0	$0	$5,262	$15,872
Provincial Grants and Donations	$0	$0	$7,545	$159,102	$42,826
RDEK Operating Support	$0	$0	$60,000	$60,000	$60,000
Total Revenues	$34,202	$11,096	$107,019	$251,230	$155,554
Total Expenses	$227,399	$193,261	$115,385	$220,217	$126,887
Financial Position	**-$193,197**	**-$182,165**	**-$8,366**	**$31,013**	**$28,667**
Financial Position, Excluding RDEK Operating Support	**-$193,197**	**-$182,165**	**-$68,366**	**-$28,987**	**-$31,333**

3 EXTERNAL CONTEXT ASSESSMENT

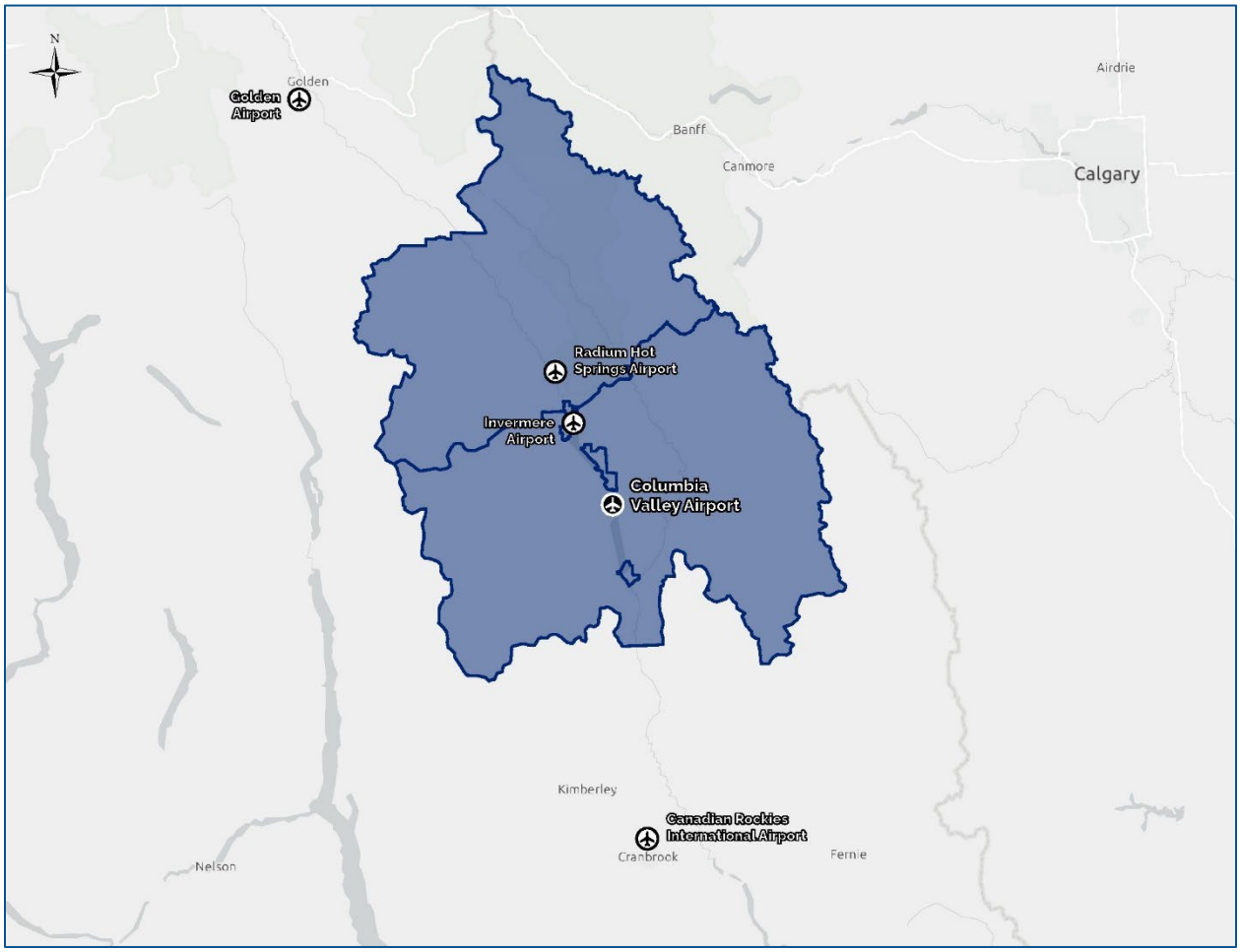
Section 3 examines how contextual forces that are external to the Airport influence demand for aviation services and the role of the facility. The Airport's external context is examined through three themes:

1. The effects of the catchment area's population changes and economic composition;
2. How regional transportation access influences demand; and
3. The risks posed by natural hazards and the long-term outlook as a result of climate change.

3.1 Catchment Area Population and Economy

The definition of the Airport's catchment area is a tool to conceptualize the region that it most directly serves. The composition of a catchment area can then be analyzed as far as it influences demand for aviation services by residents and businesses. The catchment area of the Airport is defined as the Columbia Valley, encompassing the following census subdivisions: East Kootenay F, East Kootenay G, Invermere, Canal Flats, Radium Hot Springs, Columbia Lake 3 (Akisqnuk First Nation), and Shuswap Band. Columbia Valley Airport is one of three aerodromes serving the catchment area, in addition to Invermere Airport and Radium Hot Springs Airport (Figure 3.1).

Figure 3.1 - Airport Catchment Area



The population of the catchment area decreased from approximately 9,300 residents in 2006 to 8,900 residents in 2011 (Table 3.1). However, the population recovered and grew with the 2016 census, increasing to approximately 9,500 residents and reaching 11,700 residents in 2021. The 2021 population represents a 23% growth rate compared to 2016 and a 26% increase versus 2006. Based on consultations with the Columbia Valley Chamber of Commerce, the catchment area is seeing a large increase in new construction for second homeowners (primarily coming from Alberta), as well as an increased number of residents choosing the region as their permanent place of residence. In addition to the permanent residents of the catchment area, the summer population increases significantly with seasonal residents. Based on data published by Columbia Valley Community Economic Development, the population of the catchment area increases by approximately 12,000 residents in the summer to an estimated 23,000 individuals.

This population trend is reflected in the growth in the number of private dwellings in the catchment area, as summarized in Table 3.2. In 2016, 7,818 private dwellings were located in the catchment area. This increased by 17% in 2021, reaching 9,114 private dwellings. Similarly, the number of private dwellings occupied permanently by residents (i.e., year-round residences) increased by 27% between 2016 and 2021 from 4,102 dwellings to 5,227 dwellings.

Table 3.1 - Catchment Area Population (2006-2021)

Year	Census Subdivision							Catchment Area	
	East Kootenay F	East Kootenay G	Invermere	Radium Hot Springs	Canal Flats	Akisqnuk First Nation	Shuswap Band	Total	Change
2021	3,521	1,654	3,917	1,339	802	149	319	**11,701**	**23%**
2016	2,726	1,467	3,391	776	668	140	314	**9,482**	**6%**
2011	2,635	1,412	2,955	777	715	131	293	**8,918**	**-4%**
2006	2,939	1,563	3,002	735	700	153	169	**9,261**	

Table 3.2 - Catchment Area Dwellings (2016-2021)

Year	Private Dwellings	Change	Private Dwellings Occupied by Usual Residents	Change
2021	9,114	17%	5,227	27%
2016	7,818		4,102	

The tourism sector is the largest employer in the catchment area, anchored by attractions such as the Panorama Mountain, Fairmont Hot Springs, Radium, and Copper Point Resorts. The largest proportion of visitors to the Columbia Valley come from Calgary and southern Alberta (80% of all visitors), followed by Edmonton (10%), and individuals from elsewhere in British Columbia, Saskatchewan, Manitoba, and internationally. Per Columbia Valley Community Economic Development, recreational property owners are identified as the most significant prospect for new resident and investment attraction in Columbia Valley. Surveying completed by the organization identified a potential for 25% to 70% population growth and 50% to 100% workforce growth to come from recreational property owners intending to spend more time in the Columbia Valley. Increased adoption of working from home and individuals reconsidering their place of residence during the COVID-19 pandemic is partially attributable for the robust growth in population experienced recently in the catchment area. The quality of life available in the region combined with its access to Calgary by road is understood to be driving demand by new residents.

3.2 Regional Transportation Access

A key consideration in assessing the contextual demand for air services is the availability and quality of transportation options to and from the catchment area. Access into the Columbia Valley for personal, commercial, and emergency transportation purposes is facilitated through two main highways:

- Highway 95 provides access from Radium Hot Springs northwards to Golden and Highway 1, facilitating onward travel to Calgary to the east and major destinations such as Kelowna and Kamloops to the west; and
- Highway 93 enters the catchment area at Radium Hot Springs and connects from Highway 1. Highway 93 provides access between the main communities of the catchment area and onwards to Cranbrook, Highway 3, and the United States border.

The driving distances and times to major destinations in Alberta and British Columbia are shown in Table 3.3. Intercommunity travel in optimal driving conditions is associated with multi-hour journeys over extended distances. Inclement weather, construction, accidents, and other conditions routinely increase these travel times and in exceptional circumstances such as natural hazards or severe accidents, one of the two highways to the catchment area may be closed temporarily. The challenges associated with road access positively influences demand for emergency air services where time is of the essence (e.g., air ambulance patient transfers), as well as air travel by individuals with access to private, chartered, or fractionally owned aircraft for whom the travel time by road is a deterrent.

Table 3.3 - Catchment Area Driving Distances and Times

Destination	Driving Distance	Driving Time
Cranbrook	110 km	1h15m
Calgary	310 km	3h20m
Kelowna	490 km	5h45m
Edmonton	590 km	6h00m
Vancouver	850 km	8h40m

Two other airports are located within the boundaries of the catchment area: Invermere Airport and Radium Hot Springs Airport. Invermere Airport supports aircraft operations with a 3,000 ft. paved and non-illuminated runway. Avgas is available for purchase with prior notice, and the facility is maintained on a limited basis in the winter. The airport is extensively used for gliding, general aviation, and commercial rotary-wing operations. The facility also supports limited levels of air ambulance and rotary-wing wildfire suppression operations. The Invermere Airport lands are owned by multiple families of the Shuswap Band and leased to the operator, Babin Air, on a year to year renewal basis.

Radium Hot Springs Airport is a privately owned facility with a 2,600 ft. turf runway. The facility is not winter maintained, has no fuel services, and is not lit or supported by Instrument Flight Procedures. Prior permission is required, and the use of the airport is typically limited to recreational general aviation aircraft.

The nearest airports with scheduled passenger air services are Canadian Rockies International Airport (1h15m drive) and Calgary International Airport (3h20m drive):

- Canadian Rockies International Airport is located in Cranbrook and is served multiple times daily by Air Canada to Vancouver and WestJet to Calgary and Vancouver. 139,000 passengers used the Canadian Rockies International Airport in 2022; and
- Calgary International Airport is the fourth busiest passenger airport in Canada, handling approximately 14M passengers in 2022. Calgary supports dozens of direct flights throughout Canada, the United States, and internationally and is the primary commercial service airport for Alberta. Shuttle services are available between Panorama Mountain Resort and Calgary International Airport.

3.3 Environmental and Climate-Related Influences

The Airport's future role and user base is influenced by a series of environmental forces:

- The mountainous geography of the Columbia Valley, combined with its distance to major centres, leads to extended travel times by road. Travelling by air can decrease trip times by multiple hours and is of particular value for emergency-related operations as well as individuals with the financial resources to travel by air;
- Access by road is susceptible to disruption due to natural hazards. Heavy snowfall, avalanches, and washouts from extreme precipitation have the potential to disrupt access via Highways 93 and 95, temporarily limiting access to the Columbia Valley; and
- The seasonal hazards posed by wildfires represent a considerable risk due to the extensive amounts of vulnerable wildland-urban interface zones in the Columbia Valley. The extensive exposure of human life, communities, and critical infrastructure to wildfire hazards necessitates timely access to emergency response capabilities.

For the latter two environmental influences, the effects of climate change are being experienced and are expected to increase in the future. Research completed by the Province of British Columbia through its 2019 Preliminary Strategic Climate Risk Assessment for British Columbia has identified that the risk of natural hazards that could impact areas such as the Columbia Valley are expected to increase, including severe wildfire seasons, extreme precipitation, landslides, and flooding.

Wildfire suppression birddog parked on Apron I

3.4 External Context Assessment Findings

The following external forces constitute primary influences on the Airport's long-term role:

- **Population Growth:** As the number of residents in the catchment area grows, demand for medical services is expected to increase with a resultant need for air ambulance operations. The aging population may also increase demand for access to facilities with higher levels of medical care. Continued growth in the number of second homeowners from Alberta may increase demand for travel by private, chartered, and fractionally owned aircraft;
- **Road Access:** The limitations of access into the Columbia Valley by road, including the reliance on two highways and extended travel times to major destinations and service centres in BC and Alberta, will continue to necessitate the use of air services for time-sensitive emergency management operations (e.g., air ambulance patient transfers, community-level responses to natural disasters). This friction of distance also positively influences demand for private, chartered, and fractionally owned aircraft for individuals with the financial resources and identified need. However, the majority of visitors from Calgary and southern Alberta, which represent the largest market for tourists to the Columbia Valley, choose to drive due to this being less expensive and still within a reasonable travel time;
- **Regional Airports:** Aviation demand in the catchment area is met through three facilities: Columbia Valley Airport, Invermere Airport, and Radium Hot Springs Airport. Of these facilities, Columbia Valley Airport offers operational advantages including its more capable airfield, lighting, Instrument Flight Procedures, and year-round maintenance. However, the attraction of potential users is split primarily between the Airport and Invermere;
- **Passenger Service Airports:** Travellers in the Columbia Valley have access by road to Calgary International Airport, one of Canada's largest airline markets; and Cranbrook for regional connectivity to Calgary and Vancouver. Leakage to both airports (i.e., individuals choosing either facility instead of Columbia Valley due to superior pricing, schedules, destinations, etc.) would influence the viability of scheduled passenger services occurring at the Airport;
- **Natural Hazards:** Wildfires, flooding, extreme precipitation, landslides, and other natural hazards can present a myriad of challenges including limiting or denying road access and threatening human life and property. Aviation assets are used to effectively respond to the threats posed by many natural hazards; and
- **Climate Change:** The effects of climate change are being experienced in 2023 and are expected to increase in the coming years. The risk posed by the types of natural hazards that currently impact the Columbia Valley is modelled to increase in the future, with a resultant need for effective emergency response capabilities.

4 NEW DEVELOPMENT OPPORTUNITIES

Building on the current activities that occur at the Airport documented in Section 2.2, consideration is given to the attraction of new types of users that will result in additional revenue generation, economic impacts, and / or social benefits to the Columbia Valley. The following discussions are in addition to the continuation or expansion of existing user groups identified previously in Section 2.2. Where applicable, unmet requirements or areas for improvement to further the success of these users will be identified in Section 6.1. This includes:

- Air ambulance operations;
- Wildfire suppression operations;
- RCAF training;
- Emergency management and disaster response;
- Private and charter aircraft access;
- Itinerant commercial aerial work and flight training;
- Recreational use; and
- Private residential-aviation development at Aviation Estates.

Development and growth opportunities profiled herein have been identified through the stakeholder and community engagement process, HM Aero's research, and the typical roles of regional airports serving comparable catchment areas.

It should be noted that approximately 5% of respondents engaged through the community survey identified a preference for no or limited growth to occur at the Airport. Reasons cited by respondents with these perspectives included concerns about the environmental impacts of air travel, perceptions that the Airport doesn't serve the needs of the broader community, and / or that significant growth may detrimentally change the character of the Columbia Valley.

Beechcraft King Air departing Runway 16

4.1 Private Hangar Development

4.1.1 Overview

Airports across Canada support the development of aircraft storage hangars used for private and commercial aircraft. Two aircraft hangars are located on the privately owned Apron II lands with an additional hangar under construction, and approximately 20 private hangars are located to the north at Invermere Airport. Airports may support hangar development by constructing the facilities themselves and renting out storage space, or by leasing development lots for private hangar construction.

The development of private hangars and resultant increase in the number of aircraft based at the Airport will increase its overall utilization and generate operating revenues through land lease payments and fuel sales. At an annual lease rate of $4.00 per m^2, a 625 m^2 private leasehold lot would generate $2,500 in land lease revenues per year. Opening lands for private hangars may also represent an opportunity for small-scale aviation commercial businesses to locate at the Airport, such as independent Aircraft Maintenance Engineers.

4.1.2 Viability and Outlook

Demand for private hangars in the Columbia Valley was repeatedly cited through both the stakeholder consultation and online survey processes. While Invermere has historically accommodated this demand, additional land for growth is limited, tenants are on year-to-year leases, and there is uncertainty regarding the long-term future of the facility. Therefore, Columbia Valley Airport may be well positioned to support the development of new private and commercial hangars.

The Airport Development Plan outlines a concept for the accommodation of leasehold private hangar development lots on Apron I in a manner that is compatible with peak wildfire suppression operations. The preparation and advertising of leasehold private hangar development opportunities is recommended to commence in the short-term planning horizon.

4.2 Based Aerial Work and Air Taxi Operators

4.2.1 Overview

Aerial work encompasses a range of commercial activities performed under subpart 702 of the Canadian Aviation Regulations, such as sightseeing, construction support, transporting materials and supplies, infrastructure inspection, ski lodge support, forestry, photography, wildfire suppression, and other roles. Air taxi operations under subpart 703 of the Canadian Aviation Regulations includes the provision of unscheduled transportation services by smaller single-engine aircraft, multi-engine aircraft with nine passengers or less, and select multi-engine helicopters. Aerial work and air taxi operators are commonplace throughout British Columbia

The Airport has suitable facilities for serving as a base for fixed-wing and rotary-wing aerial work and air taxi operators, although the capacity of Apron I is restricted during wildfire suppression operations. The establishment of a base would yield financial benefits through land lease revenues, with economic value including additional local employment and the support of regional economic sectors of importance.

4.2.2 Viability and Outlook

128 entities in British Columbia are identified in Transport Canada's database as being approved aerial operators, with 129 entities providing air taxi services. Nearby examples include Glacier Helicopters and Bighorn Helicopters in Invermere; Alpine Helicopters, Kicking Horse Aviation, and Whitetooth Helicopters in Golden; and Babin Air and Eclipse Helicopters in Cranbrook. While demand in the Columbia Valley for aerial work and air taxi services cannot be definitively identified, several of the aforementioned companies have been in operation for extended periods, although new entrants have been limited to Kicking Horse Aviation in 2020.

The timing of a commercial aerial work or air taxi operator becoming based at the Airport is uncertain and will be dependent on a prospective company identifying sufficient demand in the Columbia Valley to support a base of operations and operational value in the Airport being the preferred location. The Airport Development Plan includes lands for the potential development of rotary-wing commercial operators in the infield north of Apron I, making productive use of land that would not otherwise be suitable for development requiring taxiway access. A small-scale fixed-wing aerial work or air taxi operator could be accommodated in the private hangar lands described in Section 4.1.

4.3 Scheduled Passenger Air Services

4.3.1 Overview

A recurring theme cited in approximately one third of survey responses was the desire for scheduled passenger air services to be available in the Columbia Valley to destinations such as Calgary and Vancouver. As noted in Section 3.2, the closest airports supporting scheduled passenger services are Canadian Rockies International Airport and Calgary International Airport, located 1h15m and 3h20m away by road, respectively. The commencement of scheduled passenger air services linking the Columbia Valley to one or more destinations would significantly improve intercommunity access for residents and visitors and broaden the Airport's social and economic value. If between 1,000 and 49,999 scheduled passengers are served annually for three or more years, the facility would also qualify for Airports Capital Assistance Program funding, with 100% of the costs of major airfield rehabilitation and mobile equipment projects eligible for federal grant support. Landing fees, parking fees, and Passenger Facility Fees would also represent a source of operating revenues.

4.3.2 Viability and Outlook

There are three prerequisite factors that must be satisfied for scheduled passenger services to be supported at the Airport:

1. **Business Case:** Air carriers closely consider the business case for each destination and whether a route has the revenue potential necessary to justify the use of its limited resources. The Airport serves a modestly sized catchment area of 11,000 residents, increasing to 23,000 residents in the summer. The region also benefits from strong visitor levels due to its year-round tourism attractions. Demand for intra or interprovincial regional air services is aided by the distances and challenges associated with road access assessed previously. Challenges from a business case perspective include:

    a. The costs of regional air travel typically exceed those of travelling by road, limiting the use of such services to passengers with the financial resources and sufficiently high value of time to justify purchasing a ticket. As an example, one way fares between Trail and Vancouver on Pacific Coastal Airlines typically range between $200 and $300. Fares between Cranbrook and Vancouver or Calgary range between $100 and $200;

    b. Regional air carriers contend with low passenger volumes per flight, deploying 18, 34, or 78-seat aircraft depending on the market size. Higher costs per available seat mile challenge route economics, leading to higher fares;

c. Pilot shortages in the past few years have been particularly challenging at regional air carriers as major airlines such as WestJet and Air Canada have generated strong upward flow with resulting reduced staffing at regional operators. Pacific Coastal Airlines, for example, suspended its Vancouver-Cranbrook service in March 2023 due to staffing challenges. Similarly, both Air Canada and WestJet have faced challenges with staffing their regional operations (Air Canada Express and WestJet Encore / Link), forcing schedule cutbacks or the delayed resumption of new services;

d. Aircraft commonly deployed in regional operations such as the 18-seat Beechcraft 1900 and 34-seat Saab 340 are aging with limited replacement options on the market, affecting serviceability and their operating economics; and

e. The Columbia Valley passenger market will continue to experience leakage to flights using Cranbrook and Calgary where such services better align with traveller schedules, pricing, or preferred carrier. Inter-airport leakage challenges the viability of services at the Airport.

2. **Certification:** The Airport is currently operated as a registered aerodrome, as opposed to being a Transport Canada-certified airport. A certified airport is an aerodrome for which an Airport Certificate has been issued by the Minister of Transport. The Airport Certificate confirms that all facilities meet prescribed infrastructure and safety standards. To obtain and maintain this certificate, an airport must also possess a series of operational plans that address matters such as processes and procedures, snow removal, emergency responses, safety management, and wildlife control.

   Certification is a prerequisite to supporting scheduled passenger air services. Initial costs of infrastructure improvements, the preparation of operational manuals, and Transport Canada approvals will likely be significant. In addition, higher operating expenses will be incurred as a result of providing operations and maintenance to a certified standard, and the Airport will be subject to recurring auditing and new regulatory obligations on occasion.

3. **Operational Capabilities:** The reliable availability of the Airport is essential to providing the business environment within which a scheduled passenger air carrier may succeed. Operational capabilities would need to include:

   a. Year-round maintenance would be essential, with winter snow and ice clearing being of particular importance;

   b. A ground handling service provider would need to open operations at the Airport for passenger processing, baggage handling, and aircraft servicing;

   c. The replacement of the office building would be required as the current facility is insufficient for outbound and inbound passenger handling and air carrier operations;

   d. An expanded passenger vehicle parking area; and

   e. Canadian Air Transport Security Authority pre-board passenger and baggage screening if flights are departing secured. At other regional airports in British Columbia such as Trail, this requirement is waived if flights depart unsecured.

An example of provincial regional services is the Pacific Coastal Airlines operation at Trail. Pacific Coastal has provided service to Trail since 2006 to Vancouver. Approximately 22,000 passengers are supported annually, and a new 4,200 ft^2 terminal building was opened in November 2017 to better meet passenger demand.

Without a detailed catchment area passenger demand study and consultations to gauge the interest of prospective air carriers, the viability of scheduled passenger air services commencing at the Airport to a regional destination such as Vancouver or Calgary cannot reliably be assessed. However, the numerous competing short-term priorities for capital and operating funds and the attention of the Board, combined with the considerable level of effort associated with meeting the certification and operational capability elements of supporting scheduled services will likely mean that the earliest period for the potential attainment of this opportunity is the medium to long-term planning horizon.

As the Board progresses through the medium-term planning horizon, consideration may be given to initiating a passenger demand and air service feasibility study that accounts for the catchment area size, travel demand, and regional air service landscape at that time.

4.4 Search and Rescue Operations Base

4.4.1 Overview

The Airport serves a critical emergency management role in supporting air ambulance and wildfire suppression operations, RCAF training, and in a disaster preparedness capacity. Columbia Valley Search and Rescue is the volunteer-based entity responsible for ground and inland water search and rescue, swiftwater rescue, organized avalanche response, rope rescue, and mountain rescue. Columbia Valley Search and Rescue is based 15 minutes to the north at the Windermere Fire Hall and responds to emergencies throughout the Columbia valley, with its aviation response capabilities provided by Glacier Helicopters from Invermere Airport.

Columbia Valley Search and Rescue is reportedly exploring options for a new base of operations. Based on the priorities of search and rescue organizations based elsewhere in British Columbia (e.g., Golden and District Search and Rescue), operational value may be found by collocating their base with their aerial lift provider at an airport. Additional benefits would include the facilitation of direct transfers to BCEHS air ambulance aircraft, as well as integrated training with emergency management agencies such as the RCAF.

4.4.2 Viability and Outlook

Columbia Valley Search and Rescue was contacted as part of the Master Plan process but could not be reached to further explore this opportunity. Suitable lands are available at the Airport to facilitate the development of a search and rescue base by Columbia Valley Search and Rescue or another organization. It is possible that the fulfillment of this opportunity may require the attraction of a rotary-wing aerial work provider to the Airport first, as documented in Section 4.2. Further exploration with Columbia Valley Search and Rescue will be required to ascertain whether this opportunity is best located at the Airport.

4.5 Flight Training

4.5.1 Overview

Flying in mountainous terrain requires specialized training for pilots to be able to operate safely, with Flight Training Units throughout British Columbia and Alberta providing courses in this subject matter for pilots. The Airport is used by aircraft based at other facilities for cross-country training, whereby pilots learn navigation skills for travelling between airports. The mountainous context of the Columbia Valley and the numerous tourism amenities of Fairmont Hot Springs and the broader area may position the Airport as a unique location for intensive mountain flying training camps in the summer hosted by independent Certified Flight Instructors or Flight Training Units.

4.5.2 Viability and Outlook

The Airport is suitable facility for hosting mountain flight training and benefits from the numerous accommodation options, restaurants, and other amenities that would position the Columbia Valley as a desirous choice for pilots seeking such education. Further outreach with prospective Certified Flight Instructors or Flight Training Units will be required to ascertain the viability of this opportunity.

The attraction of a based fixed-wing or rotary-wing Flight Training Unit has not been identified as an opportunity for further exploration. The higher level of aircraft movements associated with circuit training (i.e., repeated take-offs, landings, and overflights) is a common source of concern for residential dwellings located near airports and can pose unique frustrations compared to other less frequent forms of aircraft operations. Although noise concerns are not understood to be voiced frequently from the residents to the east, significantly increasing aircraft movements through flight training may strain landowner acceptance. The limited size of the catchment area may also indicate a small potential market.

4.6 Non-Aviation Uses

4.6.1 Overview

Consultations with stakeholders have identified potential interest in non-aviation self-storage, outdoor storage (e.g., boats, RVs), and industrial uses on vacant lands at the Airport. Demand in the region for enclosed storage has reportedly led to numerous hangars at Invermere Airport being used for non-aviation purposes. The attraction of such uses would diversify the Airport's revenue streams by introducing stable non-aeronautical sources of earnings and are compatible with the noise impacts of aircraft operations.

4.6.2 Viability and Outlook

Although the Airport represents an appropriate location for non-aviation development (e.g., outdoor storage and industrial uses), this opportunity is not advanced for further consideration by CVAS. No surplus lands are currently owned by CVAS that could accommodate such uses, with future large-scale development requiring land acquisition from FHSR or lease agreements as documented in Section 6.4. In public materials released following the acquisition of FHSR by Aldesta in 2023, the indication was provided that FHSR may be exploring the use of vacant lands adjacent to the Airport for light industrial uses, such as storage and transportation. Accordingly, non-aviation land development by CVAS would be contingent on the acquisition of land from FHSR, and this plan may not be amenable to FHSR if it directly competes with its plans for revenue diversification. Given the need to preserve strong relationships with FHSR to accomplish other core objectives of the Master Plan (e.g., land acquisition, addressing the encumbrances on title), this opportunity is not advanced for further consideration.

5 RECOMMENDED STRATEGIC DIRECTION

As identified in Section 1, the Vision of the Airport Society is to:

> *Develop the Columbia Valley Airport into a sustainable community asset that provides enhanced emergency response protection and growth opportunities for the Columbia Valley.*

The Airport Society's Mission is to:

> *Provide safe and efficient air accessibility to the Columbia Valley for residents of the region, emergency services and visitors.*

The Vision and Mission Statements are reflective of the Airport's current use, economic and social value provided to the Columbia Valley, and the priorities shared by the community through the surveying process. Based on the Vision and Mission Statements and the development and growth opportunities identified in Section 4, Table 5.1 outlines the role of the Airport in 2023 and the way this role may expand in the future.

Table 5.1 - Current and Potential Future Airport Role

Current Airport Role (2023)	Potential Airport Role Expansion	
	Short to Medium-Term (2024-2034)	Long-Term (2034-2043)
1. Air ambulance support 2. Wildfire suppression operations 3. Emergency management and disaster response 4. Intercommunity access for tourism, business, and second homeowners 5. Non-based commercial aerial work and flight training 6. Recreational use	1. Air ambulance support 2. Wildfire suppression operations 3. Emergency management and disaster response 4. Intercommunity access for tourism, business, and second homeowners 5. Non-based commercial aerial work and flight training 6. Recreational use 7. **Private hangar development** 8. **Based aerial work and air taxi operators** 9. **Based flight training** 10. **Search and Rescue base**	1. Air ambulance support 2. Wildfire suppression operations 3. Emergency management and disaster response 4. Intercommunity access for tourism, business, and second homeowners 5. Non-based commercial aerial work and flight training 6. Recreational use 7. Private hangar development 8. Based aerial work and air taxi operators 9. Based flight training 10. Search and Rescue base 11. **Scheduled passenger air services**

Based on the Vision, Mission, and Role Statements, the following guiding principles have been developed to evaluate options and inform the preparation of the recommendations of the Master Plan:

1. The continuation of the Airport's emergency management role is of paramount importance. This includes supporting wildfire suppression, air ambulance, search and rescue, and other emergency-related uses. Ensuring the Airport is operationally capable to support these core users is an essential priority;
2. Opportunities for aeronautical growth should be explored where doing so is complimentary to, or not in conflict with, the Airport's primary emergency management role and will increase its economic impacts, social benefits, and / or operating revenues;
3. Federal standards for certified airports will be implemented where possible in the design of new or replacement airfield infrastructure and development in the interest of maximizing aviation safety and preserving the ability to secure certification in the future; and
4. Recommendations and their associated timelines will be reflective of the implementation capacity of CVAS in terms of both its financial, Board, and volunteer resources.

AirSprint Cessna Citation on departure

6 AIRPORT DEVELOPMENT PLAN

6.1 Infrastructure and Service Conditions and Requirements

6.1.1 Runway 16-34

The specifications of Runway 16-34 are identified in Table 6.1. The length and width of Runway 16-34 is suitable for the year-round operation of the Airport's primary users, including current and potential future wildfire suppression air tankers, BCEHS air ambulance aircraft, and turboprop and turbofan aircraft operated for private and charter purposes. The need to extend or widen Runway 16-34 has not been identified within the horizons of the Master Plan. While the Pavement Load Rating of the runway is not reported, the pavement structure is understood to have been designed to accommodate the Boeing 737 and is sufficient based on historical operations for higher Aircraft Load Ratings such as the Canadair CL-415 (5.7) and Lockheed L-188 Electra (8.7).

Table 6.1 - Runway System Specifications

	Runway 16-34
Length	6,005 ft. (1,830 m)
Width	100 ft. (30 m)
Aircraft Group Number	II
Level of Service	Non-Instrument
Surface Type	Asphalt
Condition (June 2023)	Poor

Runway 16-34 was constructed in 1986. The last rehabilitation to the runway consisted of a micro surfacing treatment that commenced in 2021 and was completed in 2022. Runway 16-34 was observed to be in fair condition based on a visual assessment in June 2023, with evidence of longitudinal cracking along the paving lanes and limited transverse cracking. However, while the pavement surface appears to be in fair condition based on a visual assessment, a review of aerial imagery from 2019 to 2021 showing the pre-micro surfacing pavement suggests that the pavement structure is experiencing uniformly distributed high severity discrete cracking and is in poor condition. CVAS has also reported that the micro surfacing is degrading at the runway thresholds where aircraft with higher pavement loading are completing 180° turns. Although micro surfacing has served as a cost effective option for short-term repairs, this treatment will not address underlying pavement faults and will decrease in its effectiveness with the continued degradation of the runway.

Runway 16 threshold (left) and typical transverse and longitudinal cracking (right)

It is recommended that a detailed geotechnical investigation be completed in 2024 to verify the condition of the pavement structure with an accompanying preliminary engineering design to be completed for the preferred rehabilitation option (e.g., overlay, partial depth mill and pave, full asphalt removal and repaving). This process will allow for the determination of the most appropriate rehabilitation strategy, the recommended implementation year, and a more accurate cost estimate to inform the pursuit of external funding.

6.1.2 Taxiway System

Taxiway A connects Runway 16-34 to Apron I. The width of Taxiway A is suitable for the full range of current and anticipated future users of Apron I (Table 6.2). Similar to Runway 16-34, Taxiway A was observed to be in fair condition; however, further review of aerial imagery suggests the surface is in poor condition with discrete and block cracking throughout. Taxiway A should be included in the recommended geotechnical investigation program in 2024, with the aim of rehabilitating the surface according to the recommendations of this investigation.

Taxiway B connects Apron II to the Runway 34 threshold. The width of Taxiway B is suitable for the full range of corporate turbofan and turboprop aircraft that are anticipated to be the design aircraft for this asset following the opening of the Fixed-Base Operator under construction. Taxiway B was observed to be in fair condition in 2023 with evidence of limited transverse and longitudinal cracking, most of which have been sealed, as well as isolated vegetation growth. It is anticipated that the rehabilitation of Taxiway B will be required in the medium-term planning horizon.

Taxiway C connects Runway 16-34 to the off-Airport properties of Aviation Estates. Taxiway C was constructed to provide access to single-engine general aviation aircraft and gliders and was observed to be in good condition in 2023. Given the limited use of Taxiway C and minimal loading on the pavement surface, rehabilitation is not anticipated to be required within the Master Plan horizon assuming that routine crack sealing and pavement repairs are completed as required.

Table 6.2 - Taxiway System Specifications

	Taxiway A	Taxiway B	Taxiway C
Width	72 ft. (22 m)	46 ft. (14 m)	66 ft. (20 m)
Aircraft Group Number	II	II	I
Surface Type	Asphalt	Asphalt	Asphalt / Gravel
Condition (June 2023)	Poor	Fair	Good
Ownership (See Section 6.4.1)	CVAS	CVAS / Royal Antler Aviation	CVAS / Private

Taxiway A – Apron I intersection

6.1.3 Apron System

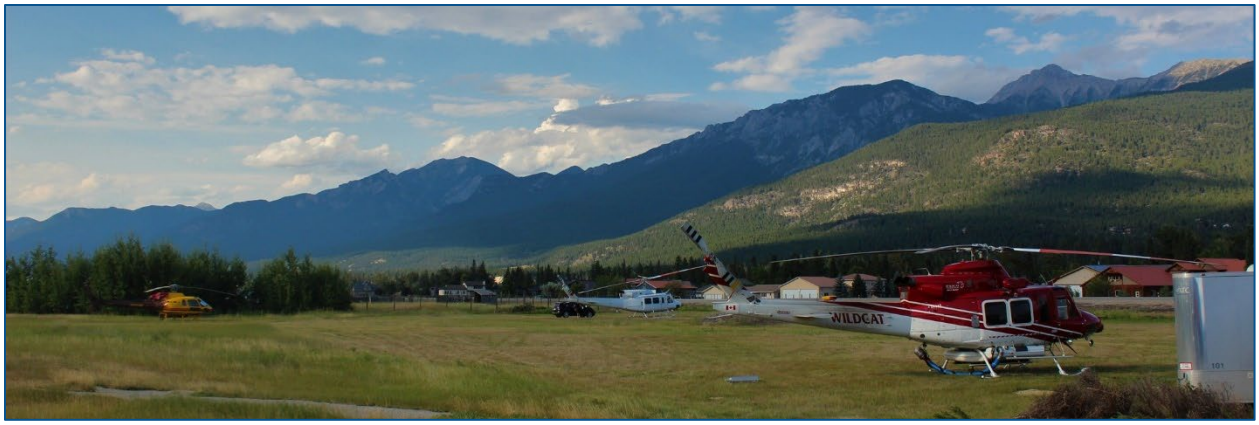
The specifications of the Airport's two aprons and grass infield parking area are provided in Table 6.3. Apron I was observed to be in fair condition in 2023, with the most recent treatment being a micro surfacing project in 2022. Similar to Taxiway A and Runway 16-34, aerial imagery suggests the pavement surface is in poor condition and may be nearing the end of its service life. As noted with respect to Runway 16-34, the micro surfacing treatment recently applied to Apron I has been damaged by heavier trucks and aircraft and the long-term effectiveness of this treatment will be limited with the continued degradation of the pavement surface. It is recommended that Apron I be included in the 2024 geotechnical investigation program to determine the rehabilitation strategy for implementation during the short-term planning horizon.

Table 6.3 - Apron System Specifications

	Apron I	Apron II	Area North of Apron I
Length	689 ft. (210 m)	344 ft. (105 m)	328 ft. (100 m)
Width	230 ft. (70 m)	164 ft. (50 m)	197 ft. (60 m)
Surface Type	Asphalt	Asphalt	Turf
Condition (June 2023)	Poor	Not Evaluated	Not Evaluated
Ownership (See Section 6.4.1)	CVAS / FHSR	Royal Antler Aviation	FHSR

The maximum aircraft parking capacity of Apron I is rarely used throughout the year with the exception of during peak wildfire suppression operations. During periods where fixed-wing and / or rotary-wing wildfire suppression groups are based at the Airport, Apron I is extensively used for parking and servicing. Apron I has accommodated aircraft mixes such as a group of four CL-415 airtankers and an accompanying birddog, the Lockheed L-188 Electra, and heavy-lift helicopters such as the Sikorsky S-61 and S-64 Skycrane. The capacity of Apron I during wildfire operations is also useful for the mobile supporting infrastructure required, including fuel trucks, mobile retardant mixing and loading facilities, and servicing trailers. Apron I is anticipated to continue to be routinely activated for large-scale wildfire suppression operations across the Master Plan horizons, and the preservation of its capabilities for larger fixed-wing and rotary-wing response aircraft is viewed as being a key priority.

Apron I overview, facing north



Wildfire operations on the infield north of Apron I

While not formally designated as an apron, the grass infield immediately north of Apron I owned by FHSR is also used during wildfire suppression operations for light and medium rotary-wing aircraft parking. The surface and topography of this area makes it well-suited for such users during drier periods, and approval is granted by the FHSR on an as-required basis.

Apron II will be used to support a variety of aircraft using the Fixed-Base Operator under construction when completed. The size of Apron II is suitable for parking multiple single and twin-engine turboprop and turbofan aircraft commonly used for charter and private purposes. As Apron II is wholly located on privately owned lands, its future expansion, reconfiguration, and / or rehabilitation and associated costs are the responsibility of the landowner.

6.1.4 Airfield Lighting System and Visual Navigation Aids

The airfield lighting system consists of:

- Illuminated Wind Direction Indicators at the Runway 16 and 34 thresholds;
- Runway edge, threshold, and end lighting for Runway 16-34;
- Precision Approach Path Indicators for Runways 16 and 34;
- Runway End Indicator Lights for Runways 16 and 34;
- Edge lighting for Taxiways A and B;
- Edge lighting for Apron I;
- An aerodrome beacon; and
- Aircraft Radio Control of Aerodrome Lighting.

The airfield lighting system is supported by a network of pull pits and wiring conduits. With the exception of the beacon (replaced in 2017) and Runway End Indicator Lights (replaced in 2021), the airfield lighting system has not undergone a major rehabilitation or replacement project since its original installation in 1986. Consultations with CVAS have indicated concerns regarding the future maintenance and usability of this system. A recent three-month system failure was reported by CVAS, and although further failures have not been experienced to-date and proactive maintenance is completed to extend the useful service life of the various components, the airfield lighting system exceeds the typical life expectancy for lighting components of 25 years by over a decade. Although the system may continue to function properly for an indeterminate period, it has exceeded its useful service life and additional maintenance challenges and failures are reasonably be expected to occur.

This system assists in maximizing the Airport's 24-hour, 365 day per year operational capabilities and is particularly important from an air ambulance and emergency management access perspective. This is of value given that the Canadian Rockies International Airport is the only other facility in the Columbia Valley capable of supporting nighttime operations – other nearby airports such as Golden, Invermere, and Sparwood do not have this capability. The timing of the replacement of the airfield lighting system will be dependent on its continued maintenance and pace of degradation, and this project is assumed to be required in the short-term planning horizon. The preparation of a detailed condition assessment and preliminary engineering design for the airfield lighting replacement project is recommended in the short-term planning horizon to allow for a more detailed cost estimate to be completed and to equip CVAS with the materials needed to apply for grant funding.

6.1.5 Off-Site Visual Navigation Aids

Three hazard beacons are located in the vicinity of the Airport to the west, southwest, and southeast. These beacons are provided to enhance flight safety at night by identifying the hazardous terrain near the Airport. The hazard beacons last had their electronic systems and batteries replaced in 2019. The hazard beacons are anticipated to require replacement in the long-term planning horizon.

6.1.6 Instrument Flight Procedures and Electronic Navigation Aids

Aircraft operations in Instrument Meteorological Conditions are supported through GPS-based Instrument Flight Procedures published in the Restricted Canada Air Pilot:

- RNAV (GNSS) A supports approaches to Runway 34 and circling approaches to Runway 16. The Minimum Descent Altitude is 2,479 ft. Above Ground Level and the procedure has a minimum visibility of 3 Statute Miles; and
- RNAV (GNSS) 34 supports approaches to Runway 34, with a Minimum Descent Altitude of 501 ft. Above Ground Level and minimum visibility of 1 ½ Statute Miles.

Instrument departure procedures are also published. The availability in Instrument Meteorological Conditions provided by these procedures is of significant operational value to air ambulance, corporate, and charter operators, particularly through the 500 ft. Minimum Descent Altitude of the RNAV (GNSS) 34 procedure. Consultations with corporate operators indicated that an improved RNAV procedure to Runway 16 with a lower Minimum Descent Altitude would be of value.

The Airport's Instrument Flight Procedures are scheduled for updates in January 2024 which, pending regulatory approvals, will result in the following procedures being available:

- RNAV (GNSS) RWY 16, supporting approaches to Runway 16 with a Minimum Descent Altitude of 1,203 ft. Above Ground Level and minimum visibility of 3 Statute Miles;
- RNAV (GNSS) X RWY 34 supporting approaches to Runway 34, with a Minimum Descent Altitude of 500 ft. Above Ground Level and minimum visibility of 1 ½ Statute Miles;
- RNAV (GNSS) Y RWY 34 supporting approaches to Runway 34, with a Minimum Descent Altitude of 1,845 ft. Above Ground Level and minimum visibility of 3 Statute Miles; and
- RNAV (GNSS) Z RWY 34 supporting approaches to Runway 34, with a Minimum Descent Altitude of 2,345 ft. Above Ground Level and minimum visibility of 3 Statute Miles.

6.1.7 Weather Observation and Reporting

An AWOS is located adjacent to Apron I that reports the temperature, dew point, altimeter setting, visibility, and winds. Weather reporting can be retrieved by pilots by phone or using the AWOS frequency (122.975 MHz). The AWOS provides an altimeter setting source for pilots using the Instrument Flight Procedures and is a useful tool for flight planning. A webcam affixed to the office building provides a visual overview of local conditions online. The AWOS was replaced in 2022 with the financial support of AirSprint and is reported to be in good condition. The replacement of the AWOS is not anticipated to be required within the Master Plan horizons, aside from routine component maintenance. To improve the information on cloud base heights available to aircraft operators, it is recommended that a ceilometer be added in the short-term planning horizon.

6.1.8 Office Building and Washroom Facilities

An ATCO office trailer is located on the northern edge of Apron I and provides space for CVAS volunteers, pilots, and passengers. The ATCO trailer was built in 1977 and was observed to be in fair condition as of 2023, having undergone a recent painting and aesthetic improvement project. While limited in size, the office building functions appropriately for the Airport's current and anticipated future end users. Capital projects are anticipated to be limited to routine maintenance and upkeep in the short and medium-term horizons, with replacement anticipated in the long-term horizon.

If scheduled passenger air services are explored as a viable opportunity in the medium or long-term planning horizons, the office building will not provide the capabilities for passenger processing and air carrier administrative space required. Detailed requirements for a terminal building replacement project may be developed if the viability of scheduled air services is explored in the future.

A new standalone washroom and shower facility was installed adjacent to the office building in the summer of 2023 with BCAAP funding. Aside from recurring maintenance and upkeep projects, major capital projects for the washroom facility are not anticipated to be required across the Master Plan horizons.

Office building (left) and washroom facility during installation (right)

6.1.9 Aircraft Refuelling and Ground Handling Services

Aircraft Refuelling

Jet fuel and avgas refuelling services are provided at the northern edge of Apron I from two above-ground storage tanks. The jet and avgas fuelling facilities are owned by Edmonton-based Flight Fuels Inc., with this company responsible for fuel deliveries and infrastructure servicing. Fuel flowage fees are charged by CVAS at $0.05 per L for avgas, $0.15 per L for jet fuel (wildfire aircraft), and $0.20 per L for jet fuel (non-wildfire aircraft).

The inability for pilots to refuel their own aircraft due to the lack of a cardlock self-serve system is a limitation, as this requires CVAS volunteers to attend to aircraft when fuelling is required. Consultations with Flight Fuels indicate that the company is planning to install a self-serve cardlock system in late 2023 or early 2024; after that point, CVAS volunteers will no longer be required to provide into-aircraft fuelling services. This project is subject to the acquisition of the lands north of Apron I planned to be completed in 2023 or 2024, as identified in Section 6.4.1. Future upgrades and replacements to the jet fuel and avgas facilities will be the responsibility of Flight Fuels, at their discretion.

Ground Handling Services

Other than the fuelling services provided from Apron I, minimal handling services are available to itinerant aircraft operators. Work is currently underway by the private owner of the Apron II lands for the development of a Fixed-Base Operator that is understood to be targeted at meeting the needs of corporate and private users. The services to be provided by this Fixed-Base Operator are not publicly shared, but this project may increase the handling services available to itinerant and based aircraft.

From a ground handling perspective, the main limitation is the unavailability of aircraft de-icing, with this constraint cited by both corporate and air ambulance operators. While offering de-icing services would provide an operational improvement for BCEHS air ambulance services and in doing so align with the Airport's recommended strategic direction (Section 5), the provision of this service requires specialized application equipment and, of particular importance, the availability of appropriately trained ground crews. Effective initial and recurring seasonal training is a cornerstone of a safely executed aircraft de-icing service being provided. Additional liability is also borne given the safety-related implications of improperly completed de-icing. Despite the considerable operational expertise held by the volunteers of CVAS, integrating de-icing capabilities as a service offered is not recommended.

6.1.10 Airport Maintenance Capabilities

The maintenance equipment fleet of the CVAS includes a 1985 snowplow truck, a fertilizer spreader for the application of salt, airfield de-icer, All Terrain Vehicle, flail mower, and miscellaneous small tools and equipment. Deficiencies have not been identified with the maintenance fleet, including the plow truck despite its age and outdoor storage given its limited annual utilization and moderate climate.

From a maintenance equipment fleet perspective, winter operations are typically the most demanding in terms of the resources required. The limited number of snowfall days (typically 20 or less in a year) and snowfalls per event have meant that CVAS has historically been able to provide an acceptable level of service using the sole plow truck without other equipment such as loaders, blowers, or runway sweepers. Unless scheduled passenger air services are commenced at the Airport requiring higher levels of winter maintenance, it is expected that winter operations can continue to be provided through a plow truck with no need to expand the fleet. The replacement year for the plow truck is assumed to occur during the medium-term planning horizon, depending on the continued maintenance of this asset and its utilization. It is recommended that opportunities be explored for the acquisition of more modern surplus units through the formation of relationships with nearby airports, such as Canadian Rockies International Airport and West Kootenay Regional Airport.

Maintenance equipment is currently stored outdoors, such as the plow truck, or in a semi-enclosed sprung structure and the awning of the office building. Spare parts are stored in a shipping container that forms the northern portion of the office building. A small maintenance garage is located on FHSR owned lands to the north of Apron I that includes space for parts storage and small repairs. The size of the maintenance garage is insufficient for the plow truck and several other units of the maintenance fleet. The construction of a maintenance garage for the enclosed, and potentially climate-controlled, storage of the maintenance equipment fleet would improve the longevity of these assets and working conditions. Due to competing capital priorities in the short and medium-term planning horizons, it is anticipated that this project may not be financially possible until the medium-term planning horizon.

Airport plow truck parked on Apron I

6.1.11 Access Controls and Servicing

Airfield Perimeter Fencing

The perimeter of the airfield is enclosed through chain link and elk fencing. The perimeter fencing was observed to be in fair condition in 2023 and is not expected to require replacement until the long-term planning horizon, assuming periodic repairs are completed as needed. No deficiencies were reported with the Airport's person and vehicle access gates, and replacements are assumed to be completed concurrent with the fencing project in the long-term planning horizon.

Servicing

Water to the office building and washroom facility is provided through a well located north of Apron I, with a depth of 35 ft. and a reported capacity of 250 gallons per minute. A condition assessment completed on behalf of CVAS in 2020 identified that while the condition of the well is unknown, that there were no reported operational challenges with the system. However, more recent concerns about the adequacy of the water supply have been raised by CVAS, including:

- The inadequacy of flows to the new washroom and shower facilities;
- Limited water availability for washing aircraft, particularly during the wildfire season; and
- The lack of fire hydrants to support a response to an on-Airport fire.

A preliminary order of magnitude cost estimate was prepared in August 2023 for the extension of water services from the Fairmont Hot Springs Utilities line in the subdivision to the east. A 200 mm watermain could be extended to provide potable water supply to the office building and washroom and to provide appropriate fire flows. It is recommended that this project by implemented in the short-term planning horizon to improve fire response capabilities at the Airport, which will be important with the planned development of new private and commercial leasehold lots. Opportunities for cost sharing may be explored with FHSR to support their non-aviation industrial growth plans being considered around the Airport.

A septic tank with a 3,000 gallon capacity and field system support the requirements of the office building and washroom facility. No issues regarding the functioning of the septic system have been reported by CVAS, and it is anticipated that the requirements of the office building and washroom facility, as well as future commercial leasehold tenants, can be met through private systems.

6.2 Development Constraints Analysis

6.2.1 Land Ownership

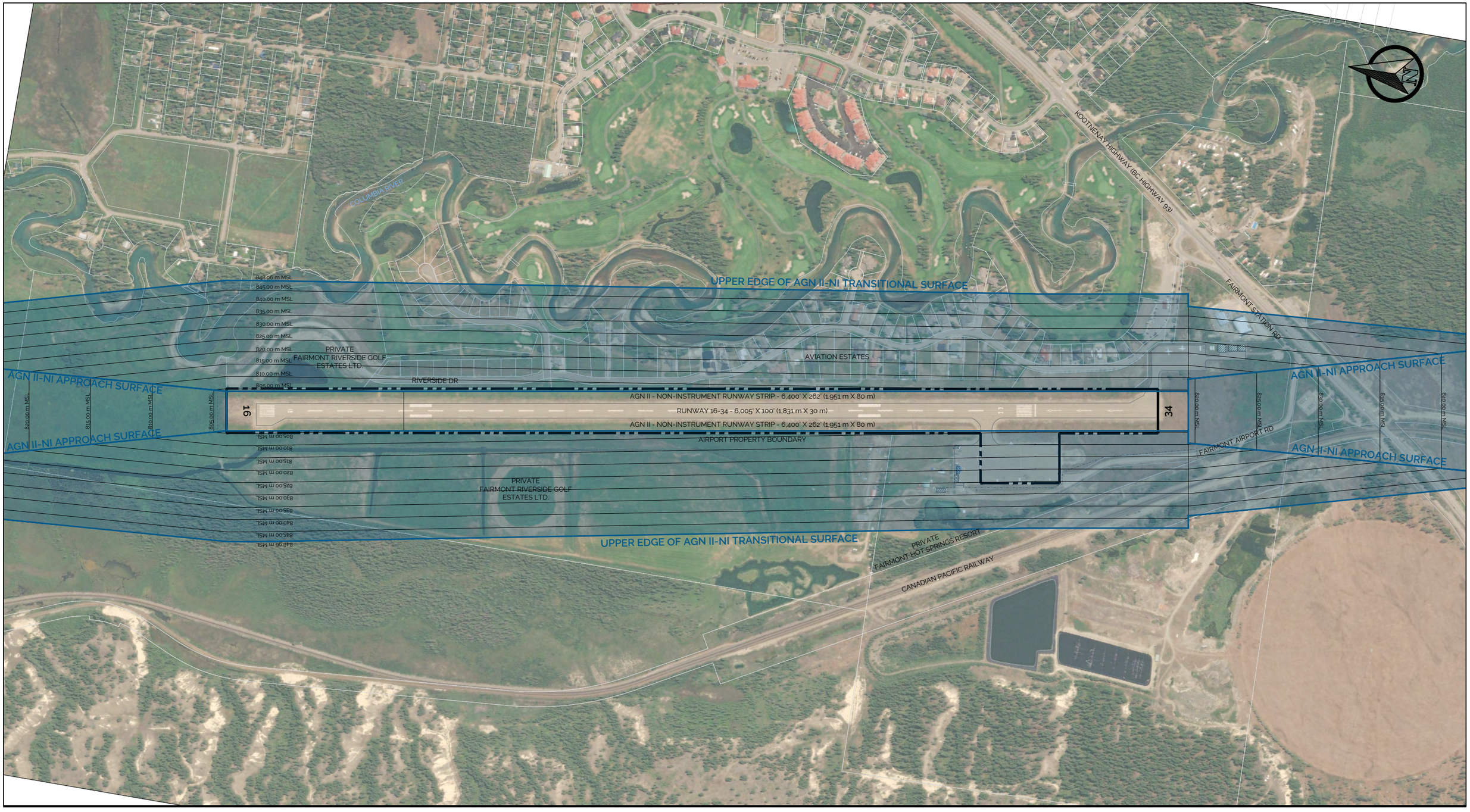
As identified in Section 2.1 and shown in Figure 2.1, land ownership is an influential factor for the Master Plan. Limited lands owned by CVAS are available for development, with the majority of the CVAS lands occupied by the airfield (i.e., Runway 16-34, Taxiway A, part of Apron I). This matter is addressed further in Section 6.4.

6.2.2 Obstacle Limitation Surfaces

Obstacle Limitation Surfaces are three-dimensional planes that protect the airspace around Runway 16-34. As Runway 16-34 supports Instrument Flight Procedures, Advisory Circular 301-001 (Issue No. 5) requires the protection of Obstacle Limitation Surfaces. Runway 16-34 is designated as an AGN II – Non-Instrument facility pursuant to its Advisory Circular 301-001 attestation. This designation is considered to be appropriate across the Master Plan horizons given the aircraft fleet mix anticipated to use the Airport. The Obstacle Limitation Surface specifications are included in Table 6.4 and depicted visually in Figure 6.1.

Table 6.4 - Obstacle Limitation Surface Specifications

Specification	Runway 16-34
Aircraft Group Number	II
Level of Service	Non-Instrument
Runway Strip Width (minimum width each side of runway centreline)	40 m
Runway Strip length (minimum length before threshold / beyond end of runway)	60 m
Approach Surfaces	
Length of inner edge (each side of centreline)	40 m
Distance from threshold	60 m
Divergence	10%
Length	2,500 m
Slope	4%
Transitional Surfaces	
Slope	20%



COLUMBIA VALLEY AIRPORT AT FAIRMONT HOT SPRINGS
AIRPORT MASTER PLAN

FIGURE 6.1 - OBSTACLE LIMITATION SURFACES

NOVEMBER 2023

0 200 400 Meters

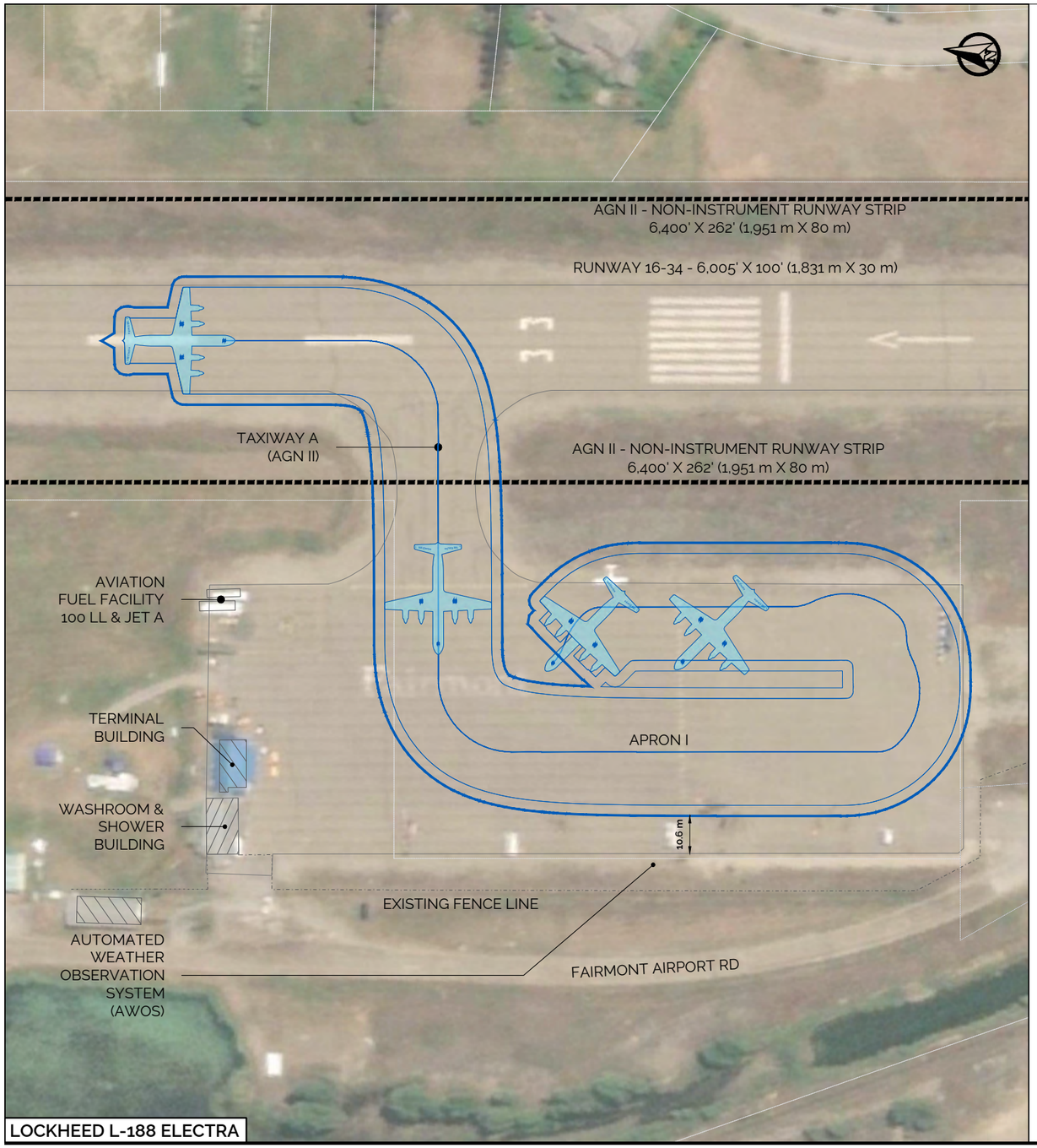
*FOR PLANNING PURPOSES ONLY

6.2.3 Wildfire Suppression Apron I Operations

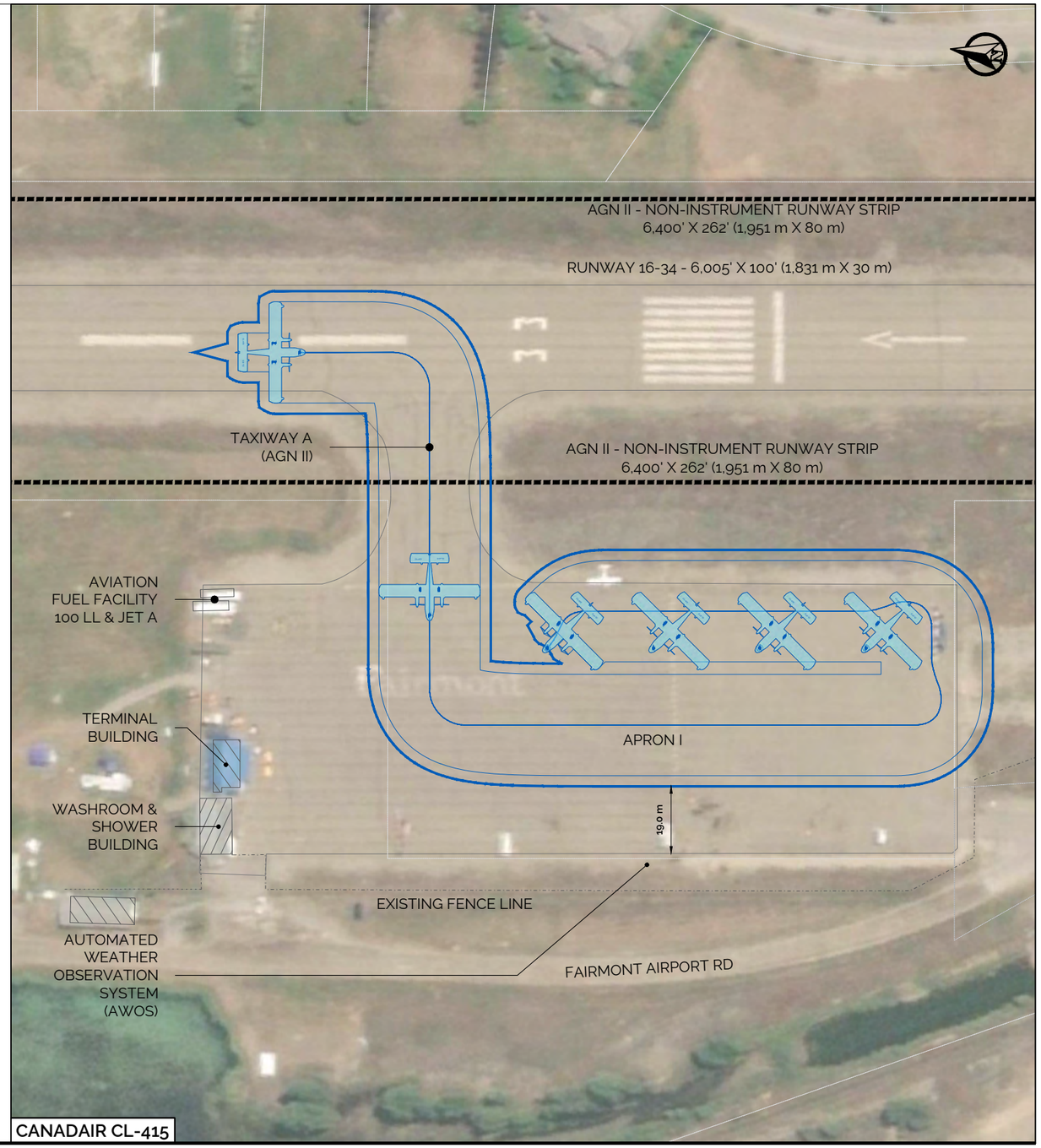
At close to 15,000 m^2, Apron I affords considerable flexibility in the range of aircraft types that can be handled at the Airport. As identified in Section 6.1.3, the maximum aircraft parking capacity of Apron I is rarely used throughout the year with the exception of during peak wildfire suppression operations. Apron I is anticipated to continue to be routinely activated for large-scale wildfire suppression operations across the Master Plan horizons, and the preservation of its capabilities for larger fixed-wing and rotary-wing response aircraft is viewed as being a key priority that is consistent with the Recommended Strategic Direction.

Figure 6.2 shows the areas of Apron I that require protection to handle historical and anticipated future operations by larger fixed-wing wildfire suppression aircraft from a ground maneuvering and parking standpoint. Although future wildfire suppression operations will vary in their scale and aircraft types used and will only occur on a seasonal basis, this capability will be protected through the Airport Development Plan.

Amphibious air tanker group parked along the eastern boundary of Apron I



LOCKHEED L-188 ELECTRA



CANADAIR CL-415

COLUMBIA VALLEY AIRPORT AT FAIRMONT HOT SPRINGS
AIRPORT MASTER PLAN

FIGURE 6.2 - WILDFIRE SUPPRESSION APRON CONSTRAINTS

NOVEMBER 2023

0 40 80 Meters

*FOR PLANNING PURPOSES ONLY

6.2.4 Site Topography

The topography of the site will influence the location and form of future development. The lands west of Apron I decrease in elevation by approximately 3 ft. to 5 ft. to Fairmont Airport Road, as shown below. The grass infield north of Apron I and west of Runway 16-34 similarly exhibits a negative change in elevation, limiting the ability for these lands to be integrated with Apron I through a taxiway.

Grade change from Fairmont Airport Road (left) to Apron I (right)

Change in grade from Apron I (right) to the infield to the north (left)

6.2.5 Residential Land Use Context

The residential development context to the east introduces a land use compatibility consideration that, while not directly shaping the on-site development of the Airport, may affect community support for significant levels of growth. Community concern with aircraft noise has not been a recurring theme through stakeholder or community consultations, including during seasonal peaks in wildfire operations when activity is at the highest levels. However, annoyance is a risk that could result in diminished support for select types of activities (e.g., the repeated noise of aircraft completing circuits).

6.3 Airport Development Plan

The Airport Development Plan is shown in Figure 6.3, identifying future airside development lands as well as lands reserved for aircraft operations.

6.3.1 Development Lands

Based on the identification of potential demand for private aircraft hangars and the establishment of the base of operations for one or more fixed-wing and / or rotary-wing aerial work and air taxi providers, the Airport Development Plan identifies the layout for new leasehold lots in two areas:

- The western edge of Apron I includes seven 20 m x 20 m (400 m^2) lots suitable for smaller private and commercial operators. Due to the topography in this area and the need to maintain an appropriate setback from wildfire suppression operations, leasehold premises will require retaining walls and fill to bring the western portion of each lot up to the grade of Apron I; and
- The infield north of Apron I includes three 40 m x 60 m (2,400 m^2) lots intended for larger commercial operators. Due to the change in grade from Runway 16-34 and the challenges in providing taxiway access, this area will be limited to rotary-wing operators.

As summarized in Table 6.5, a total of 10 lots could be made available for development with a cumulative leasable area of 10,000 m^2.

Table 6.5 - Development Lands Summary

Development Area	Intended Uses	Typical Lot Size	Number of Lots	Total Developable Area
Apron I – West	Private aircraft hangars Small-scale fixed-wing and rotary-wing aerial work and air taxi operators	400 m^2	7	2,800 m^2
Apron I – North	Medium-scale rotary-wing aerial work and air taxi operators	2,400 m^2	3	7,200 m^2
		Total	**10**	**10,000 m^2**

6.3.2 Operational Capabilities

The Airport Development Plan preserves the eastern side of Apron I for continued use in larger scale fixed-wing (e.g., Lockheed L-188, Canadair CL-415, Dash 8-400) and rotary-wing (e.g., Sikorsky S-61 and S-64) wildfire suppression operations. Preserving this operational capability also enables use by aircraft such as the CC-130 Hercules during emergency management and disaster response efforts, as well as continued use by the Airport's full range of single and multi-engine piston, turboprop, and turbofan aircraft operators.

Light and medium rotary-wing wildfire suppression operators are planned to continue to be facilitated in the infield north of Apron I. If these lands become unavailable through future development, additional capacity for these operators is designated south of Apron I and west of the Runway 34 displaced threshold – it is expected that the ground conditions in this area are suitable for this intended use, pending seasonal mowing and removing larger areas of vegetation.

No expansions to the airfield infrastructure are integrated as part of the Airport Development Plan, as the existing runway, taxiways, and aprons are expected to meet the long-term needs of the Airport across the Master Plan horizons.

TAXIWAY B (AGN II)

AIRPORT PROPERTY BOUNDARY

AGN II - NON-INSTRUMENT RUNWAY STRIP - 6,400' X 262' (1,951 m X 80 m)

RUNWAY 16-34 - 6,005' X 100' (1,831 m X 30 m)

16

34

PRIVATE
ROYAL ANTLER AVIATION

PAPIs

TAXIWAY A (AGN II)

AGN II - NON-INSTRUMENT RUNWAY STRIP - 6,400' X 262' (1,951 m X 80 m)

WILDFIRE ROTARY-WING
PARKING RESERVE
(PRE-DEVELOPMENT)

ILLUMINATED
WINDSOCK

APRON I

40 m X 60 m
2,400 m² (TYP.)

WILDFIRE ROTARY-WING
PARKING RESERVE

20 m X 20 m
400 m² (TYP.)

FAIRMONT AIRPORT RD

PRIVATE
FAIRMONT HOT SPRINGS RESORT

CANADIAN PACIFIC RAILWAY

COLUMBIA VALLEY AIRPORT SOCIETY

PRIVATE PROPERTIES (FIGURE 6.4)
- NEGOTIATIONS WITH COLUMBIA VALLEY AIRPORT SOCIETY IN PROGRESS

FUTURE AIRSIDE DEVELOPMENT LOT

COLUMBIA VALLEY AIRPORT AT FAIRMONT HOT SPRINGS
AIRPORT MASTER PLAN

FIGURE 6.3 - AIRPORT DEVELOPMENT PLAN

NOVEMBER 2023

0 40 80 Meters

*FOR PLANNING PURPOSES ONLY

6.4 Land Ownership

6.4.1 Expansion of CVAS Land Ownership or Oversight

Four areas of privately owned land are recommended for transition to the oversight of CVAS, as summarized in Table 6.6, shown in Figure 6.4, and described in descending order of priority below:

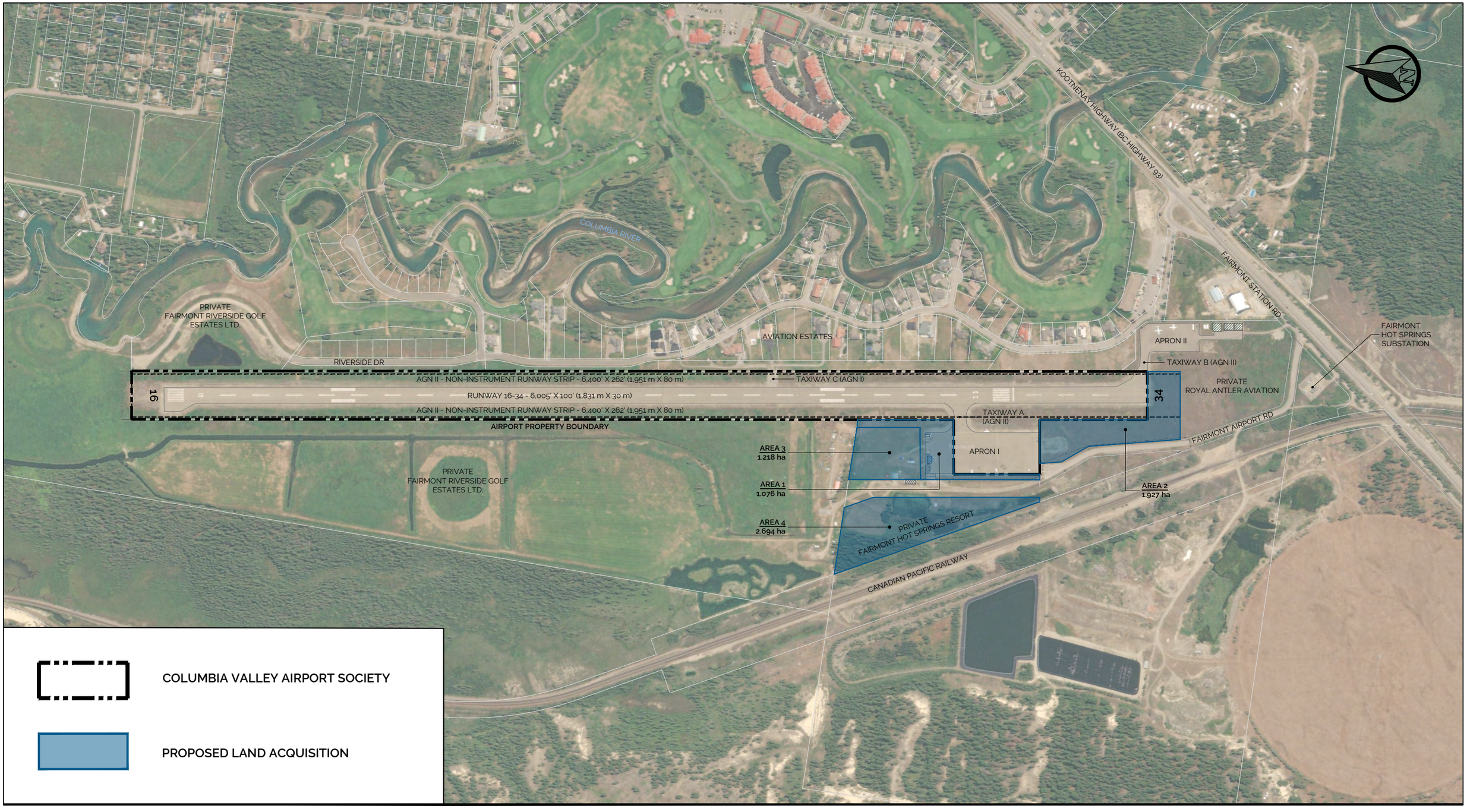
1. Area 1 – This 1.076-ha area is owned by FHSR and includes a small corridor west of the Apron I fence line and the portion of Apron I containing the washroom, office building, and fuel facility. An agreement has been reached between FHSR and CVAS for the acquisition of these lands on a fee simple basis, with this deal to close in Q4 2023 or Q1 2024.
2. Area 2 – This 1.927-ha area is owned by Royal Antler Aviation and includes the Runway 34 end lights, 60 m pre-threshold area, and infield south of Apron I containing the Wind Direction Indicator and reserved for potential use by wildfire suppression rotary-wing aircraft.

   It is recommended that negotiations with the landowner commence in the short-term planning horizon for the transition of these lands through purchase and sale, if within the financial capacity of CVAS. If such an agreement cannot be reached, consideration may be given to a long-term lease agreement or an easement in favour of CVAS to ensure continued access for maintenance purposes.
3. Area 3 – This 1.218-ha area is owned by FHSR and includes the grass infield used for rotary-wing parking and is occupied by several derelict buildings. This area is identified in the Airport Development Plan for continued use by rotary-wing operators and potential development through three leasehold lots.

   It is recommended that purchase and sale negotiations commence in the short-term planning horizon. If an agreement cannot be reached within the financial capacity of CVAS, consideration may be given to a long-term lease agreement that formalizes the seasonal use of this area for wildfire rotary-wing aircraft and potentially includes revenue sharing clauses for FHSR and CVAS for future leasehold development.
4. Area 4 – This 2.694-ha area west of Apron I outside of the perimeter fence is owned by FHSR. This area is the lowest priority for acquisition but may be required for non-aviation operational purposes, such as vehicle parking or a maintenance garage.

Table 6.6 - Recommended Land Ownership Strategy

Area	Size	Recommendation / Status
1	1.076-ha	Purchase and sale agreement in progress, expected finalization in Q4 2023 or Q1 2024
2	1.927-ha	Recommended in the short-term planning horizon through: 1. Purchase and sale 2. Lease agreement 3. Easement
3	1.218-ha	Recommended in the short-term planning horizon through: 1. Purchase and sale 2. Lease agreement
4	2.694-ha	Recommended in the short-term planning horizon through: 1. Purchase and sale 2. Lease agreement



COLUMBIA VALLEY AIRPORT AT FAIRMONT HOT SPRINGS
AIRPORT MASTER PLAN

FIGURE 6.4 - LAND OWNERSHIP PLAN

NOVEMBER 2023

0 150 300 Meters

*FOR PLANNING PURPOSES ONLY

6.4.2 Encumbrances on Title

A mortgage was registered in 2001 establishing CVAS as the borrower and FHSR as the lender. The mortgage applies to the entirety of the CVAS lands and was established with a principal of $2,086,850. The amount due to FHSR is secured by the property on an interest free basis with no specific terms of repayment. The mortgage establishes CVAS as being indebted to FHSR and includes several covenants among its terms, such as:

- The mortgage becoming due with the winding up of the Airport Society or its insolvency;
- Requiring that the Airport be known as the Fairmont Airport on all official government references and publications, and that "Fairmont" be included in the same line as an alternative name in all other purposes if used;
- Providing FHSR with architectural design approval authority over new development;
- Limiting the ability of CVAS to sell, exchange, or dispose of the mortgaged premises; and
- Requiring at least two seats on the Board for FHSR.

The mortgage agreement establishes CVAS as being indebted to FHSR and creates dependency on its continued support. A representative of FHSR was consulted as part of the planning process. In the view of this individual, the purpose of the mortgage is to protect FHSR's interest in ensuring the long-term availability of the Airport and ensure that it isn't closed, sold, or redeveloped for other purposes. While the mortgage casts material uncertainty on the Airport Society's ability to continue as identified by its auditors, the interviewed representative of FHSR did not see it in this perspective and instead saw the mortgage as a tool to ensure the Airport's long-term continuation.

Notwithstanding the foregoing, addressing this encumbrance is identified as an area of focus given the position of indebtedness CVAS is in through it, potential challenges with securing financing, and several conditions noted above that may not align with the objectives or strategy of the Airport Society. CVAS will not be in a financial position to address the principal sum of the mortgage across the Master Plan horizons due to its limited revenue generation and numerous high priority capital projects. Accordingly, three options are recommended for exploration between FHSR and CVAS in the short-term planning horizon:

1. That consideration be given by the new ownership of FHSR to the outright release of the mortgage on title out of the recognition of the Airport's value, the aligned views of CVAS and FHSR in ensuring the long-term availability of the facility as an airport, and by implementing appropriate mechanisms for FHSR's ongoing involvement in the future of the Airport (i.e., through its continued role on the Board of Directors as the governing body);
2. If the mortgage will not be released outright, that it be released conditionally on a restrictive covenant being registered to ensure the long-term operation of the site as an airport; and
3. If the first and second options are unsuccessful, that specific requirements of concern implemented through the mortgage be renegotiated between FHSR and CVAS while the mortgage continues to apply.

6.4.3 Access and Maintenance Agreements

The privately owned lands occupied by part of Taxiway B and Apron II are a functional part of the Airport. However, an agreement has not been established between CVAS and the landowner delineating the responsibilities of each party on matters such as winter maintenance, access to CVAS lands, and the distribution of costs for capital projects. The establishment of such an agreement is recommended in the short-term planning horizon and may accompany land ownership negotiations for Area 2 as recommended previously.

7 GOVERNANCE AND OPERATIONS

Of equal importance to the Airport's physical infrastructure and development is the model that guides the manner in which the facility is managed and operated. Four dimensions of this topic are explored through the Master Plan:

1. The Airport's status as a registered aerodrome or certified airport and the associated federal regulatory obligations that must be met;
2. The governance of the Airport, or how authority, direction, and control of the organization is exercised to ensure a defined setoff purposes are achieved at a strategic level;
3. The Airport's management, or how the strategic direction of its governing body is translated to direct action; and
4. The manner in which the facility is operated and maintained on a daily basis.

7.1 Regulatory Status

7.1.1 Current Conditions

There are two regulatory classes of airports: registered aerodromes and certified airports. An aerodrome is defined by Transport Canada within the Aeronautics Act as:

> *Any area of land, water (including the frozen surface thereof) or other supporting surface used, designed, prepared, equipped or set apart for use either in whole or in part for the arrival, departure, movement or servicing of aircraft and includes any buildings, installations and equipment situated thereon or associated therewith.*

The Airport is currently classified as a registered aerodrome and is subject to the standards of Subpart 301 of the Canadian Aviation Regulations. The regulatory obligations imposed through Subpart 301 of the CARs are fairly limited, and include the following primary requirements:

- The aerodrome may be subject to periodic inspection by Transport Canada;
- Aerodrome data shall be submitted for publication in the Canada Flight Supplement and be kept current;
- Wind direction indicators are to be provided, and shall be illuminated as the Airport is used at night;
- Runway and taxiway edge lighting is to be provided, as the Airport is used at night;
- Unauthorized airfield access and interference with navigation aids is to be limited;
- Unrestrained birds and animals are prohibited within the Airport's boundary;
- Unauthorized firearm use is prohibited;
- Smoking and open flames are prohibited on and adjacent to aprons, or where a fire hazard could otherwise be created; and
- The Airport is required to protect its Obstacle Limitation Surfaces pursuant to Advisory Circular 301-001 as it supports Instrument Flight Procedures (Section 6.2.2).

A certified airport is an aerodrome for which an Airport Certificate has been issued by the Minister of Transport confirming that all aerodrome facilities meet prescribed infrastructure and safety standards. Certification is required in three instances:

1. The aerodrome supports scheduled passenger air services;
2. The aerodrome is located in a built-up area; or
3. The aerodrome is otherwise required to be certified on the basis of the public interest.

To obtain and maintain this certificate, the Airport would be required to develop a series of operational documents and procedures, including but not limited to an Airport Operations Manual, Emergency Response Plan, Wildlife Control Plan, Winter Maintenance Plan, and Safety Management System. The infrastructure of the Airport would also need to be constructed to the standards of the current edition of TP312 – Aerodrome Standards and Recommended Practices. Summarized generally, certified airports must meet a greater breadth of regulatory obligations versus registered aerodromes in both their operations and infrastructure. It is understood that the design of the airfield was originally completed pursuant to TP312 3rd Edition; however, a comprehensive assessment would be required to identify gaps and costs associated with meeting TP312 5th Edition (or future editions).

7.1.2 Priorities

Informed by the CVAS Vision and Mission Statements, the consideration of alternative regulatory statuses for the Airport is informed by the following priorities:

- Per the Mission Statement, safety is of paramount importance both to air travellers and residents of the region. The most appropriate regulatory status is one that maximizes the safety of the Airport and the surrounding region;
- The Airport's long-term sustainability as a community asset shall be ensured. Instances where the inability to meet federal regulatory obligations will threaten the Airport's future shall be minimized;
- Growth opportunities that may require a change in regulatory status shall have careful consideration applied; and
- Practicality shall be applied in considering alternative regulatory statuses, with the limited financial resources of CVAS also influencing the model chosen.

7.1.3 Recommendations

The current operation of the Airport as a registered aerodrome as opposed to a certified airport provides CVAS with considerable discretion and flexibility in the manner in which it operates the facility and is not subject to extensive regulatory obligations. As the Airport does not support scheduled passenger air services and has not been prescribed to seek certification on the basis of the public interest, certification is not currently a requirement. However:

- The Airport is located in close proximity to the residential community to the east, with numerous dwellings located immediately east of the airfield and approved plans for additional growth. The interpretation could be made that the Airport is located within a built-up area by Transport Canada, necessitating certification to permit continued operations; and
- As identified in Section 4.3, while scheduled passenger air services are not foreseen as a growth opportunity for the Airport in the short or medium-term planning horizons, evolving market conditions could increase the likelihood of such services in the long-term planning horizon. Certification would be a prerequisite to attaining these services in the future if supported by a viable business case.

Taking both points together, the continued operation of the Airport as a registered aerodrome is identified as the most appropriate strategy in the short and medium-term planning horizons, particularly under current conditions whereby the facility is maintained through the volunteers of CVAS. Unless required based on a Transport Canada determination that the Airport is located within a built-up area or a high value expression of interest by a scheduled passenger air service provider, seeking certification is not recommended.

Notwithstanding the foregoing, the proximity of Fairmont Hot Springs to the Airport and the potential determination that the facility is located within a built-up area in the future means that it is advisable to taken proactive steps to preserve the flexibility to attain certification if ever required. Therefore:

- All airfield infrastructure rehabilitation and replacement projects are recommended to be designed in accordance with the most current edition of TP312 – Aerodrome Standards and Recommended Practices. By ensuring voluntary compliance with TP312 during lifecycle capital projects (e.g., the replacement of the airfield lighting system and the rehabilitation of the runway and taxiways), future capital costs associated with meeting certified standards will be reduced if this requirement is ever imposed; and
- The Airport can proactively enhance its operations by developing standardized plans and procedures in voluntarily alignment with certified standards where practicable. By doing so, the change in the level of effort associated with meeting the full operational obligations of a certified airport will be minimizing, easing the transition process. Proactively enhancing operational processes is also consistent with the Airport's Vision and Mission Statements and is advisable from a best practices standpoint. This recommendation is documented further in Section 7.3.

By taking proactive steps to integrate certified standards on a voluntary basis, CVAS will benefit from flexibility by preserving the option of seeking certification to attract scheduled passenger air services if the opportunity arises; as well as incremental operational improvement and safety.

7.2 Governance Model

7.2.1 Current Conditions

The Airport is governed by the registered non-profit CVAS, consisting of a volunteer Board of Directors. Board meetings are typically convened on a monthly basis or as required. The Board consists of no fewer than three and up to 11 members across two classes of members: regular members and special members. FHSR is the sole special member of the Airport Society and has all the rights, obligations, benefits, and duties of a regular member. In addition, FHSR is entitled to appoint up to three directors to represent its interests and at all times carries a voting weight of one third (33.3%) of total voting rights of the Board.

Recruitment is completed as required with two primary considerations:

1. The Board is required to geographically represent the five local jurisdictions of the Columbia Valley: Canal Flats, Invermere, Radium, Area F, and Area G; and
2. A skills matrix is provided as part of the application form to guide the selection of candidates based on their competencies aligning with the needs of the Airport Society.

Several changes to the governance structure were made in 2020 by CVAS with the assistance of Granite River Consulting in response to the RDEK's requirements for financial support, including the election of a new Board that represents the Columbia Valley geographically, the development of a skills matrix to recruit qualified Board members, and the registration of updated bylaws.

7.2.2 Priorities

From a governance perspective, the following priorities have been identified:

- Effective governance necessitates a range of skillsets, including airport operations, financial management, business development, community and government relations, law, and other matters. The recruitment of Board members on the basis of their skills and competencies of value is of prime importance;
- As the Airport is an asset to the Columbia Valley and recommended to become a RDEK service area of this region (Section 8.2), Board members should provide geographic representation where possible. However, geographic representation should be secondary to recruitment on the basis of skills and competencies;
- The recommended formation of a Columbia Valley Airport Service Area, documented further in Section 8.2, will integrate the RDEK in the long-term future of the facility with an associated financial involvement. The Airport's governance model should integrate representation from the RDEK to accompany this financial support; and
- Volunteerism at the Board level has been pivotal to the Airport's continued availability since 2020 and will likely continue to be required across the horizons of the Master Plan. Board member burnout, retention, and recruitment represents a risk that may be partially reduced through the transition of management and operational tasks from the Board, with their role instead focused on strategic-level oversight and initiatives.

7.2.3 Recommendations

The continued governance of the Airport by the CVAS is anticipated to be the most appropriate model across the short, medium, and long-term planning horizons, provided that the recommended management and operational model changes identified in Section 7.3 are implemented to minimize the overlap of the Board between governance and direct management / operations. Volunteerism is viewed as one of the greatest strengths of CVAS and will continue to be foundational to the long-term success of the Airport. However, Board recruitment, burnout, and retention represent threats that cannot easily be addressed through the Master Plan aside from the recommendation of a management and operational structure that reduces the Board's obligations.

To facilitate the priorities identified in Section 7.2.2, the following changes to the structure of CVAS are recommended in the short-term planning horizon, likely timed to be concurrent with the implementation of the Columbia Valley Airport Service documented in Section 8.2:

- That the Airport Society internally reviews its skills matrix versus the needs that have been demonstrated to-date in the Board's functioning since 2020, with updates made if required and select skills elevated in their importance for recruitment;
- That flexibility be integrated in the Board member recruitment process for skills-based recruitment to be prioritized above geographic representation in the event that a qualified candidate with a skillset of need to the Board cannot be found in an eligible geographic area;
- Coincident with the negotiations with FHSR regarding the encumbrances on title identified in Section 6.4.2, that consideration be given to updating FHSR's special member status to reduce its share of voting rights (e.g., from 33.3% to 20%) and Board members (e.g., from three to two). This change would reflect the anticipated future interest in the Airport by FHSR but be reflective of its cessation of financial involvement in the facility; and
- That special member status be afforded to the RDEK, including a minimum of two members on the Board (e.g., Areas F and G directors) and voting rights of 20%.

7.3 Management and Operations Model

7.3.1 Current Conditions

The Airport is available on a 24 hour per day, 365 day per year basis. Operational processes are documented in an Airport Operations Manual that is a legacy document from the period of FHSR's ownership of the facility and operations by permanent employees. The Airport Operations Manual documents the historical administration of the Airport, its specifications, airside facilities and services, and operational plans and procedures, including winter maintenance, grass maintenance, wildlife control, and emergency responses.

Operational tasks are completed by the registered volunteers of the CVAS under the oversight of the Volunteer Operations Director (a member of the Board). The Volunteer Operations Director currently fulfills the majority of the typical responsibilities of an Airport Operations Manager and is directly involved in the facility's year-round maintenance. As of 2023, 25 volunteers are registered to support the Airport Society, including four Board members. Formal roles are not identified for volunteers, but individuals typically take on responsibilities (e.g., winter maintenance, airfield inspections, fuelling, upkeep projects in the office building) according to their respective skillsets and interests.

Snow clearing on Runway 16-34

7.3.2 Priorities

The operations of the Airport are guided by the following priorities as identified in the CVAS Vision and Mission Statements and through stakeholder consultations:

- Safety is of paramount importance. This includes the safety of volunteers conducting operational tasks, as well as the provision of a safe airfield environment for aircraft operators;
- Operations shall be completed in accordance with the Airport's federal regulatory obligations;
- From an operational level of service perspective, ensuring maximum (i.e., 24-7) availability of the Airport is of particular importance for air ambulance and wildfire suppression operators. This objective guides winter maintenance standards to permit unrestricted access by air ambulance operators; and
- Proactive maintenance is accomplished to maximize the useful service life of the Airport's assets, ensure the safe availability of the airfield and supporting services, and limit significant capital expenditures.

7.3.3 Recommendations

Short-Term Planning Horizon

Based on the anticipated financial resources of the Airport Society in the short-term planning horizon, the continuation of the volunteer-based management and operations model is expected. The planned installation of a cardlock fuelling system by Flight Fuels in 2023 or early 2024 will reduce the workload of the volunteers by negating the need for individuals to be at the Airport for refuelling calls. Accordingly, duties will become focussed on airfield maintenance and operations in alignment with the broader Mission of CVAS (i.e., not acting as a Fixed-Base Operator). Volunteer recruitment and training is expected to be an ongoing process, with retention of equal importance. Strategies for volunteer retention (e.g., appreciation events, discount programs with local businesses) transcends the scope of the Master Plan but are viewed as a priority.

A threat to the Airport's future viability is the concentration of operational knowledge (e.g., winter maintenance, airfield infrastructure repairs, aircraft ground handling) among a subset of volunteers with extensive experience. The value of the of significant amounts of time and effort provided to CVAS by these volunteers cannot be overstated; however, the loss of this expertise through volunteers leaving for a variety of reasons will hinder the effectiveness of operations. In the short-term planning horizon, it is recommended that this risk be mitigated through the comprehensive updating of all Airport manuals and operational procedures, including the:

- Airport operations manual;
- Winter maintenance plan;
- Infrastructure inspection and maintenance procedures;
- Emergency response plan;
- Daily inspection processes;
- Wildlife management plan; and
- Other required plans and processes.

By compiling operational knowledge held by individuals and the regulatory standards and best practices associated with airfield operations into a set of comprehensive manuals, the risk of the future loss of this knowledge will be reduced and volunteer training can be improved. Preparing the manuals in a manner that aligns with standards for certified airports also will reduce the level of effort if certification is pursued in the future, as documented in Section 7.1.3.

Under the priority of ensuring volunteer and aircraft operator safety, it is recommended that a simplified Safety Management System be implemented in the short-term planning horizon. Safety Management Systems assisting organizations with proactively identifying safety risks before they become bigger problems. Certified airports are subject to a regulatory requirement to maintain Safety Management Systems, and registered aerodromes may voluntarily implement such processes out of a best practices standpoint. Web-based tools tailored to registered aerodromes are available to combine the basic functions of a Safety Management System, including tracking and reporting by aircraft operators and volunteers, as well as other operational and management functions such as inspection reporting, wildlife observations, work orders, and other functions.

Medium / Long-Term Planning Horizons

As the Airport evolves in the medium and long-term planning horizons, the continued viability of the volunteer-based management and operations model will require evaluation on the basis of:

- Volunteer recruitment, retention, and availability;
- The success of the recommendations identified for the short-term planning horizon;
- The workload associated with meeting level of service objectives, particularly during winter operations;
- The Airport's user types and activity levels; and
- The operation of the facility as a registered aerodrome versus as a certified airport.

Transitioning to a non-volunteer based contracted operations model, whereby airfield operations and maintenance (e.g., daily inspections, winter maintenance) would be completed by a contracted individual or corporation, may be required in the medium or long-term planning horizons on the basis of one or more of the above triggers being met. The primary consideration with this model is the significant increase in operating expenditures that would be borne by CVAS – operational services for comparable regional airports may range from approximately $100,000 and higher depending on the staffing and service level provided.

If future weaknesses of the volunteer-based model warrant the implementation of third-party contracted operations, an opportunity for cost savings is the engagement of an on-Airport commercial entity that may be able to provide operational services at a lower cost as a secondary role to their core business line. A future Fixed-Base Operator or rotary-wing aerial work / air taxi provider based at the Airport may be able to provide contracted operational services through the surplus capacity of their staff (e.g., administrators, ground crews).

8 FINANCIAL OUTLOOK AND FUNDING MODEL

8.1 Operating and Capital Financial Outlook

A 10-year operating financial outlook has been completed, encompassing the short and medium-term planning horizons. This assessment does not include the amortization of deferred capital contributions under the category of operating revenues or amortization as an expense. Inflation is set at 2.5% annually in all estimates.

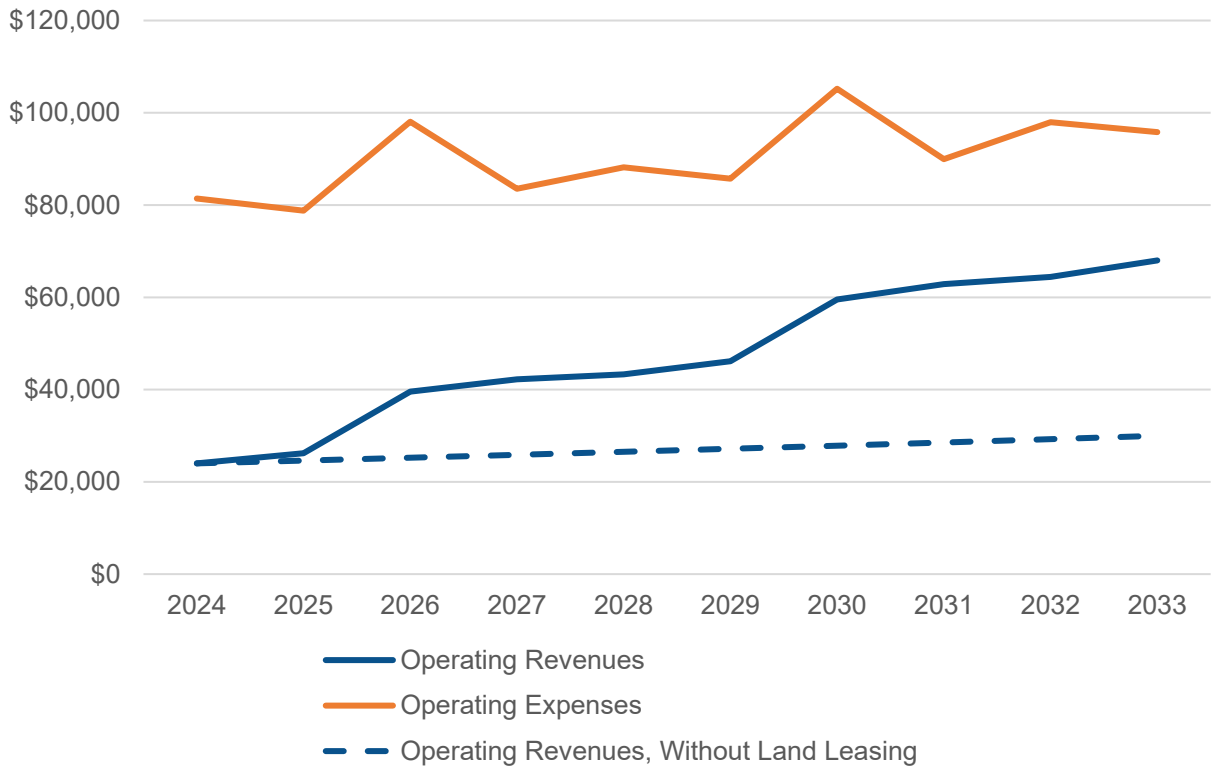
8.1.1 Operating Revenues

As described previously, wildfire suppression operations are a significant variable in operating revenues at the Airport. Using 2023 as an example, a cumulative total of $33,850 was budgeted for landing fees, fuel sale commissions, and parking fees. As of mid-September 2023, actual revenues reached $79,975 – a difference of approximately $46,000 versus the budgeted values. As the intent is to identify solutions for an ongoing operating funding model that will require external support from the RDEK, the variable highs in operating revenues are conservatively not modelled to represent a typical year (i.e., a “normal case” scenario). With respect to operating revenues, the following assumptions are made:

- Landing fees, parking fees, and fuel sale commissions in 2024 are set at a representative level for a year with lower wildlife operation levels and increase with inflation annually;
- “Other” revenues in 2024 are set at the 2020-2022 average and increase with inflation annually;
- The Apron I – West development area is opened for private hangar leasing in 2025. Unserviced lease rates are set at $4.00 per m^2 per year and increase with inflation annually. By the end of the medium-term planning horizon, six of the seven lots in this area are assumed to be absorbed; and
- The Apron I – North development area is opened for commercial tenants in 2025, with the first lot absorbed in 2026 and an additional lot absorbed in 2030. Serviced lease rates are set at $5.00 per m^2 in 2025 and increase with inflation annually.

Based on these assumptions, operating revenues are modelled to increase from approximately $24,000 in 2024 to $68,000 at the end of the medium-term planning horizon in 2033, driven primarily through new leasehold payments. Operating revenues from 2024 to 2033, including and excluding leasehold revenues, are shown in Figure 8.1. Actual revenues during years with increased wildfire suppression operations will likely increase significantly versus the estimates shown; however, the frequency of such years or the revenues accrued cannot reliably be estimated.

Figure 8.1 - Estimated Operating Revenues and Expenses (2024-2033)



8.1.2 Operating Expenses

The estimated operating expenses shown in Figure 8.1 are consistent with the recommendations made in Section 7.3 and the assumption that, in the short and medium-term planning horizons, operations will continue to be completed by volunteer efforts. Operating expenses are estimated at approximately $79,000 in 2024 and vary across the short and medium-term planning horizons, reaching $93,000 in 2033. The marked increases shown in 2026 and 2030 coincide with higher one-time costs associated with airfield paint markings. Assumptions used in the estimation of operating expenses are as follows:

- Advertising and promotion costs are set at $5,000 in 2024 and increase with inflation until 2027 in anticipation of more involved community outreach efforts leading to and following the request for the creation of an RDEK Columbia Valley Airport Service (Section 8.2.2). Expenses decrease in 2028 to $2,500 and subsequently increase with inflation;
- Costs associated with fuel, insurance, interest and bank charges, office items, professional fees, supplies, telephone and utilities,
- License fees increase in 2024 to an estimated $2,000 and subsequently increases with inflation;
- An annual budget of $4,000 is added for Safety Management System software and volunteer training, increasing with inflation in subsequent years;
- Airfield and building maintenance expenses are estimated at $16,000 in 2024. Crack sealing is assumed to be completed annually and repainting of airfield markings every four years; and
- Costs associated with the Instrument Flight Procedures are assumed at $4,000 per year and $9,000 every four years, increasing with inflation.

8.1.3 Capital Expenses

Section 8.1.3 identifies the capital projects recommended for the Airport related to the rehabilitation and replacement of existing infrastructure assets, as well as initiatives to support growth. The Capital Plan excludes minor expenses (e.g., the replacement of hand tools, computers, radios, etc.); maintenance projects such as crack sealing, line painting, the recertification of the Instrument Flight Procedures; and other recurring initiatives. These operating expenses are estimated in Section 8.1.2.

The recommended Capital Plan is shown in Table 8.1. Cost estimates are adjusted from the 2023 base estimate for inflation (set at 2.5%) in the recommended project implementation year. In total, $14,169,000 in capital projects are recommended across the 20-year Master Plan horizon, excluding land acquisition costs. The majority (86%) of expenses are allocated in the short-term planning horizon due to the recommended replacement of the airfield lighting system in 2026 and rehabilitation of the critical airside surfaces (Runway 16-34, Taxiway A, and Apron I) in 2027-2028. Given the magnitude of the electrical and pavement project costs, it is advisable that the recommended geotechnical investigation and preliminary design processes be completed early in 2024 to generate more detailed cost estimates and allow for the updating of the Master Plan.

Table 8.1 - Capital Plan

Short-Term	2024	2025	2026	2027	2028
Pavement Geotechnical Investigation and Preliminary Engineering Design	$60,000				
Lighting Replacement Preliminary Engineering Design	$20,000				
AWOS Ceilometer Addition	$51,000				
Watermain Extension Project	$236,000				
Airfield Lighting Replacement Note 1			$2,261,000		
Runway 16-34 Rehabilitation Note 1				$7,120,000	
Taxiway A and Apron I Rehabilitation Note 1					$2,384,000
Land Acquisition – Areas 1, 2, 3, and 4	To Be Determined – Section 6.4.1				
Medium-Term	**2029**	**2030**	**2031**	**2032**	**2033**
Taxiway B Pavement Rehabilitation		$145,000			
Plow Truck Replacement			$464,000		
Maintenance Garage			$448,000		
ATV and Flail Mower Replacement					$19,000
Long-Term	**2034**	**2035**	**2036**	**2037**	**2038**
Perimeter Fencing and Gate Replacement			$284,000		
Long-Term	**2039**	**2040**	**2041**	**2042**	**2043**
Office Building Replacement		$609,000			
Hazard Beacons Replacement				$43,000	
ATV and Flail Mower Replacement					$25,000

Note 1: The airfield lighting replacement and pavement rehabilitation projects will be refined through the preliminary engineering design processes recommended for completion in 2024. Pavement rehabilitation costs assume the full asphalt milling and repaving. Electrical costs assume all electrical and control components are replaced.

Note 2: The implementation year of all projects is subject to the financial capacity of CVAS. Projects are anticipated to be contingent on securing external financial support.

8.1.4 Estimated Financial Position

Based on the assumptions prepared of the Airport's operating revenues and expenses, the estimated operating financial position is shown in Table 8.2. The Airport's operating deficit is estimated to decrease gradually from approximately $57,000 in 2024 to $28,000, using the full set of operating revenue and expense assumptions prepared previously. Noting that demand for new leasehold lots at the Airport, particularly serviced commercial lots, is less predictable, Table 8.2 also includes a scenario with no lease revenues. In this scenario, the Airport's operating deficit varies annually with an overall trend of worsening from $57,000 in 2024 to $69,000 in 2032 and $66,000 in 2033.

Table 8.2 - Estimated Financial Position (2024-2033)

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Operating Deficit									
$57,419	$52,577	$58,499	$41,275	$44,891	$39,579	$45,690	$27,076	$33,510	$27,805
Operating Deficit, Without Land Lease Revenues									
$57,419	$54,177	$72,849	$57,665	$61,690	$58,564	$77,369	$61,403	$68,695	$65,819

Although actual revenues may be better than expected in certain years through peaks in wildfire suppression operations, organic growth of the Airport's other users, and stronger than expected leasehold lot absorption, operating expenses also have the potential to increase above the assumed levels. However, the consistent indication is that external operating financial support will be required across the short and medium-term planning horizon. Opportunities for such support are identified in Section 8.2.

The projects required for the rehabilitation of the Airport's critical infrastructure will result in an estimated total of $13,208,000 in capital expenses across the short and medium-term planning horizon. Given the position of CVAS in an operating deficit, these costs cannot be sustained internally and will require external support, as discussed in Section 8.3.

8.2 Operating Funding Model

8.2.1 Regional District – Columbia Valley Economic Development Service

The RDEK has provided operating support to CVAS through the Columbia Valley Economic Development Service since 2020. Funding has been secured by CVAS through annual requests to the RDEK Board. The Columbia Valley Economic Development Service has been a crucial tool to provide financial support following the discontinuation of funding by FHSR in 2020 and in the following years while CVAS has considered the Airport's long-term financial model.

Continued support from the RDEK is anticipated to be required across the Master Plan horizons. However, the primary limitation of the Columbia Valley Economic Development Service to fulfill this objective is the uncertainty posed by funding needing to be requested every year. The current RDEK Board has supported the objectives of CVAS and the Airport's future; however, the potential exists for changes in the wills of future Boards that may impact funding through this Service. Accordingly, the annual request of funding through the Columbia Valley Economic Development Service is recommended until the Columbia Valley Airport Service can be implemented in the short-term planning horizon (Section 8.2.2).

As documented in Section 8.2.2, the $60,000 in annual funding historically received through the Columbia Valley Economic Development Service has met the Airport's operating financial requirements and is anticipated to continue to do so. However, upcoming capital projects will necessitate that CVAS prepares a capital reserve fund beginning in 2024. Therefore, it is recommended that the possibility of the RDEK increasing its 2024+ contributions through the Economic Development Service to include the preparation of a capital reserve be explored with elected representatives and staff.

8.2.2 Regional District – Columbia Valley Airport Service

To ensure long-term stability in the operating funding of the Airport, the creation of the Columbia Valley Airport Service is recommended as a priority in the short-term planning horizon. The authority for regional districts to create service areas is established in Part 10 of the Local Government Act, with a service area being a tax that is levied on property owners for a specific purpose. Similar to the Columbia Valley Economic Development Service, the participants of the Columbia Valley Airport Service are recommended to be Electoral Areas F and G, the District of Invermere, Village of Canal Flats and Village of Radium Hot Springs, capturing the communities that most directly benefit from the emergency management, economic, and social impacts of the availability of the Airport.

Consideration was first given to the implementation of a Columbia Valley Airport Service through the July 31, 2020 Columbia Valley Airport Society Business Plan. The 2020 Business Plan targeted the creation of the service in 2024 or later and recommended that:

- Support from the RDEK Board be sought by CVAS;
- The geographic boundaries of the service encompass the communities of the Columbia Valley, as described above;
- Assessed property value be used as the method of taxation, as this was found to be the most equitable option;
- The allocation be set at $80,000 annually; and
- That a referendum be completed to seek electoral assent.

Based on the financial outlook of Section 8.1.4, the continued annual allocation of $60,000 is anticipated to be sufficient to meet the operating needs of CVAS across the short and medium-term planning horizons. However, the Airport Society's internal capital reserves will be insufficient to address the majority of the capital projects identified in Section 8.1.3. Although opportunities exist through the external funding sources documented in Section 8.3 to reduce the costs borne by CVAS, the unfunded shares of large-scale projects such as the rehabilitation of the airfield lighting system and pavements required in the short-term planning horizon will necessitate further financial support. Pending the completion of the recommended airfield pavement and electrical assessments and updated cost estimates in 2024, it is recommended that the annual funding total to be requested through a future Columbia Valley Airport Service be established with these costs integrated.

Preliminary discussions have been completed by the RDEK and CVAS on the topic of a Columbia Valley Airport Service, with support potentially in place from the Board to proceed. Consideration was given to the initiation of the referendum process in recent years; however, concern was noted regarding voter awareness and the timing of the service being posed among other competing priorities.

Based on the community perspectives gathered through the engagement survey process as described in Section 2.3, risks may be present in terms of awareness that the Airport is a public use facility and a key emergency management asset. One third of respondents did not believe that the Airport is available for public use, and 28% of respondents identified only private users (e.g., general aviation pilots, corporate and charter aircraft) as being the main users of the Airport. Additionally, approximately one third of respondents were unsure who operates the Airport, while 5% answered that it is run by FHSR, and 3% believed it is privately operated. Lack of clarity regarding who the operator may weaken support if the perception is that public funds are supporting a private entity.

Despite the foregoing challenges, 90% of respondents stated that the Airport is "important" or "very important" in their view, with the strongest valuations assigned to the Airport's wildfire suppression (99% of respondents), air ambulance (98%), and search and rescue (93%) services. This indicates that positive community valuations of the Airport may support a successful referendum if misconceptions that have the potential to weaken community support are addressed. Proactive public communication and education ahead of the Columbia Valley Airport Service referendum will therefore be of significant importance to maximize the likelihood of success.

Based on the foregoing, the establishment of the RDEK Columbia Valley Airport Service is recommended as one of the most significant priorities in the short-term planning horizon to create a structure for ongoing, stable base operating funding for the Airport. To allow sufficient time for heightened community education and communication efforts in the immediate term (i.e., 2024-2025), the referendum could be advanced in 2025 or 2026 depending on further inputs from the RDEK.

8.2.3 Corporate Sponsorship

Given the well-established emergency management and economic value of the Airport to the Columbia Valley, operating support may also be pursued through private and corporate sponsorship. Through the letters of support collected in early 2020 during the initial pursuit of financial support by CVAS, the value of the Airport was expressed by the Columbia Valley Chamber of Commerce, representing over 270 businesses in the region, as well as the Fairmont Business Association. Letters of support were also received from major businesses, such as Columbia Eagle Resort, Copper Point Resort, Gerard Developments, Greywolf Golf Course, and Panorama Mountain Resort. Additional support may be found through major employers such as Canfor, Canadian Pacific, and Teck Coal, as well as smaller businesses in the region.

Consistent with the recommendations of the 2020 Business Plan, the establishment of a corporate sponsorship program is viewed as an opportunity for the Airport to generate additional revenues to support its operations, in conjunction with the public support provided through the RDEK. The 2020 Business Plan recommended the following striated sponsorship structure which may be reevaluated pending discussions with prospective corporate supporters:

- Platinum: $5,000 annually;
- Gold: $1,000 annually;
- Silver: $500 annually;
- Bronze: $100 annually; and
- Community: $50 annually.

8.3 Capital Funding Model

8.3.1 Province of British Columbia – British Columbia Air Access Program

BCAAP is administered by the Province of British Columbia's Ministry of Transportation and Infrastructure, with the goal of supporting communities and enhancing the long-term potential of the aviation sector. Up to $2M will be provided to an applicant in a given year, with base provincial funding allocations determined according to the type of project as follows:

- 75% for airside projects (e.g., runways, taxiways) and core aviation infrastructure;
- 60% for transitional projects (e.g., terminal buildings, fencing, and gates);
- 50% for groundside projects (e.g., vehicle parking areas, access roads); and
- 75% for climate / environmental projects (e.g., greenhouse gas audits).

Applicants that meet certain eligibility criteria may allocated up to an additional 15% of provincial funding (up to 90% provincial funding), with considerations including whether the facility:

- Serves an Indigenous, isolated, rural, or remote community;
- Has limited revenue streams available;
- Has a greenhouse gas reduction plan and / or active transportation policies and infrastructure in place;
- Requires the project for medevac, wildfire suppression, or emergency response purposes;
- Requires the project in response to an extraordinary event, such as a natural disaster;
- Requires the project to correct a non-compliance with federal aviation regulations; and
- Requires the project for climate change mitigation or adaptation.

Funding intakes open annually in November with successful applications typically announced in the following spring. Table 8.3 identifies how BCAAP funding could support the capital projects identified in Section 8.1.3 based on the 2024/25 program guidelines and eligibility criteria. BCAAP funding has successfully been secured for numerous projects at the Airport in recent years. While the future of BCAAP is reliant on continued provincial funding, it is assumed that this grant opportunity will continue to be available to CVAS in the years ahead and serve as an essential tool for advancing capital projects.

Table 8.3 - British Columbia Air Access Program Funding Allocations

Project	Cost Estimate	Implementation	BCAAP Share
Pavement Geotechnical Investigation and Preliminary Engineering Design	$60,000	2024	Ineligible
Lighting Replacement Preliminary Engineering Design	$20,000	2024	Ineligible
AWOS Ceilometer Addition	$51,000	2024	75% to 90%
Potable Water Servicing	$236,000	2024	50% to 65%
Airfield Lighting Replacement	$2,206,000	2026	75% to 90% Note 1
Runway 16-34 Rehabilitation	$7,120,000	2027	75% to 90% Note 1
Taxiway A and Apron I Rehabilitation	$2,384,000	2028	75% to 90% Note 1
Land Acquisition – Areas 1, 2, and 3	To Be Determined	Short-Term	Ineligible
Taxiway B Pavement Rehabilitation	$145,000	2030	75% to 90%
Plow Truck Replacement	$464,000	2031	60% to 85%
Maintenance Garage	$448,000	2031	60% to 85%
ATV and Flail Mower Replacement	$19,000	2033	60% to 85%
Perimeter Fencing and Gate Replacement	$284,000	2036	60% to 85%
Office Building Replacement	$609,000	2040	60% to 85%
Hazard Beacons Replacement	$43,000	2042	75% to 90%
ATV and Flail Mower Replacement	$25,000	2043	60% to 85%

Note 1: BCAAP will contribute a maximum of $2,000,000 to a given airport in a single year.

Note 2: BCAAP eligibility has been assessed based on the 2024/25 program guidelines. Revisions may occur in the future, and eligibility should be reviewed on an annual basis.

8.3.2 Regional District – Discretionary Grants-in-Aid

The RDEK's Discretionary Grants-in-Aid program awards funding to registered non-profit organizations for projects that meeting community and public needs in the rural communities of the Electoral Areas. Discretionary Grants-in-Aid are provided for a single defined project to be carried out within two years, such as capital projects. Once an application is received, it will be referred to the Electoral Area Advisory Commissions for recommendation to the Electoral Area Director – in the case of the Airport, it is anticipated that this would be the Directors of Areas F and G. The recommendations from the Electoral Area Directors are then considered by the RDEK Board of Directors at their monthly Board meeting. The RDEK's 2023-2027 Financial Plan allocates approximately $38,000 annually to the Discretionary Grants-in-Aid program in Area F and $16,000 to Area G in the coming years, with these funds allocated across numerous priorities across each Electoral Area.

The RDEK's Discretionary Grants-in-Aid program is viewed as an opportunity to assist in two parts of the Airport's capital funding model:

- Supporting the implementation of smaller capital projects in combination with the Airport Society's internal financial reserves; and
- Advancing major capital projects (e.g., airfield pavement or lighting rehabilitation) by funding pre-project steps (e.g., geotechnical and topographic surveys, engineering designs) needed to apply for more suitable sources of external funding for project implementation costs. Table 8.4 illustrates how the Discretionary Grants-in-Aid program could be used as a tool for financial support to implement a BCAAP-eligible airfield rehabilitation project, such as the replacement of the airfield lighting system.

Table 8.4 - Sample Discretionary Grant-in-Aid Utilization

Funding Source	Preparatory Costs (e.g., condition survey, engineering design)	Implementation Costs (e.g., tendering, construction, activation)
British Columbia Air Access Program	0%	75%
Airport Society Financial Reserves	75%	25%
Discretionary Grant-in-Aid	25%	0%

8.3.3 Columbia Basin Trust – Land Acquisition Grant

The Land Acquisition Grant program is provided by the Columbia Basin Trust to assist with the acquisition of land, buildings, or land-based infrastructure for public purposes by non-profit organizations. Applicants are required to demonstrate that the:

- Acquisition will provide broad public benefit over the long-term;
- Applicant has a long history of successful program delivery, stable long-term funding and the capacity to manage a capital project; and
- Applicant has organizational capacity for long-term asset management.

The Columbia Basin Trust supports up to 60% of any individual acquisition to a maximum contribution of $750,000 per project. With reference to Section 6.4.1, the Land Acquisition Grant program may be an opportunity to facilitate the acquisition of Area 2, as this land is a functional part of the airfield and designated as a rotary-wing landing area. Area 3 may also be considered depending on further outreach with the Columbia Basin Trust; however, as these lands are intended for private development and leasing, this may be evaluated at a lower priority.

Consultations with the Columbia Basin Trust in 2023 have indicated a reluctance to fund airport operating costs and capital projects with the view that this is absolving governmental entities (i.e., municipalities, the province) from their obligation to fund such assets. Outreach by representatives of CVAS with the Columbia Basin Trust is recommended to further explore the potential for Land Acquisition Grant program to be used to assist in implementing the recommendations of Section 6.4.1, and it is expected that land acquisition proposals will require evaluation on a case by case basis.

8.3.4 Rural Economic Diversification and Infrastructure Program

The Rural Economic Diversification and Infrastructure Program is administered by the Province of British Columbia's Ministry of Jobs, Economic Development and Innovation and supports economic development projects that promote economic capacity building, economic diversification, resilience, clean economy opportunities, and infrastructure development. The 2024-25 program intake will run from July to October 2024 with successful projects to be announced in the spring of 2025. Funding is available through the following categories:

- **Economic Diversification – Development:** Up to $100,000 will be funded per project with 80% of eligible costs covered;
- **Economic Diversification – Implementation:** A maximum of $1,000,000 will be funded per project with 80% of eligible costs covered; and
- **Forest Impact Transition:** Supports economic recovery and transition in communities affected by impacts in the forest sector, with a maximum of $500,000 in funding per project with 100% of eligible costs covered.

Rural Economic Diversification and Infrastructure Program funding has successfully been leveraged through its 2022-23 intake for several airport projects across British Columbia, including the expansion of the Anahim Lake Airport terminal building ($531,000 through the Economic Diversification – Implementation stream), development lot grading at Merritt Airport ($500,000 through the Forest Impact Transition stream), and the preparation of industrial lands at Powell River Airport ($50,000 through the Forest Impact Transition stream). CVAS is an eligible applicant as a not-for-profit organization. Ahead of the 2024-25 intake, it is recommended that preliminary discussions be convened with the Province of British Columbia to identify suitable projects for submission through the Rural Economic Diversification and Infrastructure Program.

8.3.5 Corporate Support

Securing direct financial contributions from major corporations in the Columbia Valley for capital projects with a compelling emergency management benefit may represent an opportunity for leverage funding. Through direct outreach by CVAS, private corporations may be approached to secure contributions to minor and major capital projects.

9 IMPLEMENTATION STRATEGY

The completion of the Master Plan is a milestone in the ongoing efforts by CVAS to position the Airport as a sustainable community asset for the betterment of the Columbia Valley. The implementation of the recommendations made for the short, medium, and long-term planning horizons will assist in ensuring the Airport's long-term viability, economic contributions, and emergency management role.

The major recommendations of the Master Plan are summarized in implementation strategies for the short-term (Table 9.1) and medium-term (Table 9.2) planning horizons to guide internal planning and action by CVAS. The Master Plan will be reviewed on an annual basis to guide decision-making, and comprehensive reviews are recommended at the end of the short and medium-term planning horizons to address emergent forces and progress made during each period.

While not identified as an action item, community outreach and awareness building is a priority of strategic importance, given that the Airport is a community asset, is financially supported by the ratepayers of the Columbia Valley, and ongoing requests for financial support will be made. These efforts will be of particular necessity in the lead-up to the referendum for the creation of a Columbia Valley Airport Service given the challenges in community awareness identified in Section 2.3.

Table 9.1 - Implementation Strategy, Short-Term Planning Horizon

Year	Capital Projects	Governance and Operations	Funding Model	Other Initiatives
2024	• Pavement Geotechnical Investigation and Preliminary Engineering Design • Lighting Replacement Preliminary Engineering Design • AWOS Ceilometer Addition • Watermain Extension Project	• Comprehensive Review of Airport Operations Manual	• Initiation of Corporate Sponsorship Model • Columbia Valley Economic Development Service Funding	• British Columbia Aviation Council Membership • Land Acquisition Negotiations – Areas 1 and 2 • Resolution of FHSR Mortgage
2025		• Implementation of Safety Management System	• Corporate Sponsorship Funding • Columbia Valley Economic Development Service Funding • Columbia Valley Airport Service Referendum	• Apron II Access and Maintenance Agreement • Land Acquisition Negotiations – Area 3 • Private and commercial development lots opened for leasing
2026	• Airfield Lighting Replacement	• Updates to Board of Directors Structure	• Corporate Sponsorship Funding • Columbia Valley Airport Service Funding	• Land Acquisition Negotiations – Area 4
2027	• Runway 16-34 Rehabilitation			
2028	• Taxiway A and Apron I Rehabilitation			• Airport Master Plan Review

Table 9.2 - Implementation Strategy, Medium-Term Planning Horizon

Year	Capital Projects	Funding Model	Other Initiatives
2029		• Corporate Sponsorship Funding • Columbia Valley Airport Service Funding	
2030	• Taxiway B Pavement Rehabilitation		
2031	• Plow Truck Replacement • Maintenance Garage		
2032			
2033	• ATV and Flail Mower Replacement		• Passenger Air Service Demand and Feasibility Study • Airport Master Plan Review and Update

Guidance for the long-term planning horizon decreases given the considerable level of effort that will be required to accomplish the recommendations of the preceding years, major financial variables including the level of leasehold development and the long-term funding model established, and the evolution of the aviation sector influencing opportunities such as scheduled passenger air services. It is anticipated that the Master Plan will require updating at the end of the medium-term planning horizon to equip CVAS with a forward-looking vision for the long-term planning period.

Appendix A - Recommendations Summary

Capital Projects

2024 – Pavement Geotechnical Investigation and Preliminary Engineering Design: $60,000

2024 – Lighting Replacement Preliminary Engineering Design: $20,000

2024 – AWOS Ceilometer Addition: $51,000

2024 – Watermain Extension Project: $236,000

2026 – Airfield Lighting Replacement: $2,261,000

2027 – Runway 16-34 Rehabilitation: $7,120,000

2028 – Taxiway A and Apron I Rehabilitation: $2,384,000

Short-Term Planning Horizon – Land Acquisition, Areas 1, 2, 3, and 4 – Costs to be determined

2030 – Taxiway B Pavement Rehabilitation: $145,000

2031 – Plow Truck Replacement: $464,000

2031 – Maintenance Garage: $448,000

2033 – ATV and Flail Mower Replacement: $19,000

2036 – Perimeter Fencing and Gate Replacement: $284,000

2040 – Office Building Replacement: $609,000

2042 – Hazard Beacons Replacement: $43,000

2043 – ATV and Flail Mower Replacement: $25,000

Governance and Operations

2024 – Comprehensive Review of Airport Operations Manual

2025 – Implementation of Safety Management System

2026 – Updates to Board of Directors Structure

Funding Model

2024 – Corporate Sponsorship Funding, Columbia Valley Economic Development Service Funding

2025 – Corporate Sponsorship Funding, Columbia Valley Economic Development Service Funding

2025 – Columbia Valley Airport Service Referendum

2026+ – Corporate Sponsorship Funding, Columbia Valley Airport Service Funding

Other Initiatives

2024 – British Columbia Aviation Council Membership

2024 – Land Acquisition Negotiations, Areas 1 and 2

2024 – Resolution of FHSR Mortgage

2025 – Apron II Access and Maintenance Agreement

2025 – Land Acquisition Negotiations, Area 3

2025 – Private and Commercial Development Lots Opened for Leasing

2026 – Land Acquisition Negotiations, Area 4

2028 – Airport Master Plan Review

2033 – Passenger Air Service Demand and Feasibility Study

2033 – Airport Master Plan Review and Update

Appendix B - Master Plan Survey Questions

Columbia Valley Airport Master Plan

The Columbia Valley Airport Society (CVAS) has initiated the preparation of a 20-year Master Plan with HM Aero Aviation Consulting. The Master Plan will guide the progressive and orderly operation and development of this key regional aviation asset. Community engagement is an important component of the Columbia Valley Airport Master Plan. HM Aero and CVAS are collecting input from residents on their perspectives regarding the future of the airport. This information will be analyzed by the project team and used where applicable to inform the preparation of the Master Plan's recommendations.

Participation is voluntary and all answers will remain anonymous. The information collected will only be used by HM Aero and CVAS in the context of the Columbia Valley Airport Master Plan and associated Airport-related initiatives. Questions can be directed to:
Pascal van Dijk, President, CVAS: columbiavalleyairport@gmail.com
Ben Crooks, Planner, HM Aero: Ben.Crooks@hmaero.ca

1. Which option best describes your place of residence?

- ◯ East Kootenay Area F
- ◯ East Kootenay Area G
- ◯ Other (please specify)

2. Which option best applies to you?

- ◯ I am responding as a resident or representative of my household
- ◯ I am responding as a pilot, aircraft operator, or routine airport user
- ◯ I am responding as a representative of a business or organization

3. Are you aware that there is an airport in Fairmont Hot Springs?

- ◯ Yes
- ◯ No

4. Do you know where the airport is in Fairmont Hot Springs?

- ◯ Yes
- ◯ No

5. Do you know how and where to access the airport?

- ◯ Yes
- ◯ No

6. Do you think the airport is open to the public?

- ◯ Yes
- ◯ No

7. Who do you think are the main users of the airport?

8. Who do you think currently operates the airport in Fairmont Hot Springs?

9. Where do you think funds to operate the airport in Fairmont Hot Springs come from?

10. How important do you feel it is to have an airport in the Columbia Valley?

Not Important	Slightly Important	Moderately Important	Important	Very Important
◯	◯	◯	◯	◯

11. How important are each of the following activities that routinely occur at Columbia Valley Airport to you?

	Not Important	Slightly Important	Moderately Important	Important	Very Important
Air Ambulance Patient Transfers	◯	◯	◯	◯	◯
"Angel Flights" / Healthcare Access Flights	◯	◯	◯	◯	◯
Wildfire Suppression	◯	◯	◯	◯	◯
Search and Rescue	◯	◯	◯	◯	◯
Law Enforcement	◯	◯	◯	◯	◯
Flight Training	◯	◯	◯	◯	◯
Intercommunity Access for Business and Tourism	◯	◯	◯	◯	◯
Recreational Flying	◯	◯	◯	◯	◯

12. In your opinion, what growth opportunities may exist for Columbia Valley Airport?

13. What additional airport amenities or services would be of greatest interest to you? (e.g., hangar rentals, cardlock aircraft fueling, rental cars / e-bikes, on-site camping, shuttle services to local accomodations, etc.)

14. What airport community events would be of greatest interest to you? (e.g., car shows, fly-ins, RV / camping / outdoor shows, etc.)

15. Do you have any other comments you would like to provide regarding the Columbia Valley Airport Master Plan?

16. If you would like to be added to the email list for the Columbia Valley Airport Society and receive updates on the airport, community events, etc., please provide your email address below. You are able to unsubscribe at any time.

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