



OUTDOOR COUNCIL OF CANADA
CONSEIL CANADIEN DE PLEIN AIR

Building Alberta's Outdoor Workforce

Existing Data Review & Labour Market Landscape

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Presented by



The Province of Alberta is working in partnership with the Government of Canada to provide employment support programs and services.

Canada

Alberta

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Executive Summary

Alberta's outdoor sector is a meaningful economic and social contributor, yet it is difficult to define and measure within existing labour market systems. This report synthesizes existing data and literature, including more than 170 sector reports, studies, and datasets scanned, to establish a baseline understanding of the province's outdoor workforce and identify where the evidence is strong and where it is incomplete. Because the workforce is not captured by any single industry or occupational category, much of the evidence is drawn from adjacent sectors, such as tourism, so the findings should be read as a best-available picture rather than a precise count.

Key Takeaways

Key findings are summarized below and reflect insights that emerged across the review.

1. **Outdoor workforce is economically significant but not clearly defined or measured.** Canada's outdoor economy is valued at approximately \$101.6 billion a year, but the workforce behind it has no shared definition in labour market systems, making its size, composition, and contribution hard to determine with confidence.
2. **Outdoor work delivers public value beyond employment.** The outdoor sector supports mental and physical health, youth development, and environmental stewardship, with active outdoor lifestyles estimated to save \$2.9–23 billion a year in health-care costs, while drawing high public participation (86% of Albertans) and support (85% of Canadians back greater park investment).
3. **Labour market evidence is relatively strong for subsectors but fragmented due to structural and definitional gaps.** Evidence from tourism, parks, trails, and recreation subsectors offer meaningful evidence, but it remains siloed across different geographical locations, studies and systems. Fragmentation is driven by absence of a shared definition of the outdoor sector, inconsistent use of terminology, and weak alignment with classification systems such as NAICS and NOCs.
4. **The workforce operates through non-linear, multi-role, and seasonal structures.** Outdoor work is typically seasonal, part-time, contract, or blended rather than single-role and year-round, with many workers holding multiple certifications and moving across guiding, instruction, education, recreation, retail, and conservation over time.
5. **The workforce is only partially visible, and access to it is uneven.** Composition is largely inferred from tourism data, which points to significant participation by youth, women, newcomers, and Indigenous workers, though Alberta-specific figures do not exist, while cost, geography, early exposure, and cultural barriers limit access for underrepresented groups, who appear in adjacent sectors but are unevenly represented in outdoor leadership.
6. **Structural job quality challenges are major barriers to attraction and retention.** Low wages, limited benefits, high certification costs, seasonal instability, and unclear progression contribute to patchwork employment, burnout, and early exit, making some outdoor careers hard to sustain.

7. **Strong intrinsic motivations drive entry but do not, on their own, support sustained careers.** Many workers are drawn to the sector through passion for outdoor activity, lifestyle appeal, and early exposure through camps, recreation, and family experiences. These motivations are important entry points, but they do not, on their own, offset structural employment challenges or create stable long-term career conditions.
8. **Training and certifications are extensive, but decentralized and inconsistent.** With many certifying bodies and activity-specific credentials and no common standard, expectations for what counts as "qualified" vary widely across regions, employers, and activities.
9. **Informal and volunteer labour is foundational but largely unrecognized.** Volunteers sustain trails, stewardship, clubs, and camps and often serve as entry points into outdoor work, yet these contributions rarely appear in formal labour statistics, raising important questions about sustainability, equity, and long-term workforce capacity.
10. **The outdoor workforce lacks a coordinating policy home.** With no dedicated provincial strategy, responsibility is spread across tourism, labour, immigration, education, and infrastructure portfolios, weakening the sector's ability to set standards, plan, and advocate, unlike jurisdictions with dedicated outdoor recreation offices.
11. **Infrastructure investment and climate adaptation are levers for a more stable workforce.** Investment in trails, parks, access points, and transportation directly expands and steadies outdoor employment, while planning that adapts to shifting seasons and climate risk, through year-round and blended roles, protects it; both are areas where the sector can advocate and act.
12. **Outdoor work develops high-demand transferable skills.** Evidence from led outdoor activities and camps shows that workers build leadership communication, teamwork, problem-solving, resilience, and decision making under pressure in dynamic, real-world environments. These competencies are relevant and in-demand across various sectors such as education, emergency management, health and organizational leadership.

Taken together, these takeaways describe a workforce that is economically and socially significant, structurally complex, and consistently under-measured. The sections that follow detail the evidence behind each finding, the limitations of current data, and priority opportunities for the Alberta-specific research needed to act on them.

Background and Methodology

Background

The outdoor workforce plays a meaningful role in Alberta's economy and communities, supporting activity across outdoor recreation, tourism, education, guiding, parks, retail, events, stewardship, and related services. Existing evidence shows that outdoor recreation and adjacent visitor-economy activity generate substantial economic value, while also contributing broader public benefits related to health, youth development, environmental stewardship, community wellbeing, and rural vitality.

Visibility of the outdoor industry and its workforce remain limited. The lack of consistent definitions around what constitutes outdoor jobs and businesses, the nature of outdoor work, and the industry's limited fit with formal classification systems have made isolating and measuring sector-specific data extremely challenging. As such, the body of existing data on the industry is limited.

This report aims to synthesize key findings from existing data and literature about the outdoor industry and closely related sectors to establish a baseline understanding of Alberta's sector and highlight where current knowledge is incomplete or indirect.

Research Objectives

The review was guided by four core objectives:

1. Improve understanding of the current outdoor industry workforce and its characteristics.
2. Identify labour market pressures affecting attraction, retention, and workforce availability.
3. Clarify existing training, skills, certifications, and career pathways.
4. Identify practical workforce development, policy, and system-level considerations relevant to the sector.

These objectives were explored across the following research topics:

- Existing labour market information and evidence gaps
- Workforce size, composition, and demographic profile
- Regional, subsector, and business-model variation
- Attraction, retention, and workforce barriers and enablers
- Skills, training, certifications, and career pathways
- Broader labour force, demographic, economic, education, immigration, and employment trends
- Policy factors shaping the outdoor workforce
- Workforce development strategies, practices, tools, and remaining gaps

Methodology

This study used a structured desk-based review of existing information relevant to Alberta's outdoor workforce, aimed at establishing a baseline understanding of the sector, identifying where evidence is strong and highlighting evidence gaps in available information.

The work included a comprehensive review of more than 170 relevant documents, including sector reports, labour market studies, and publicly available research from across Canada and comparable jurisdictions, as well as a review of published provincial and federal data sets. This breadth of sources supports a triangulated understanding of the outdoor workforce and helps ensure that the analysis reflects a range of perspectives and available evidence.

Findings were synthesized to:

- a. Identify key labour market patterns and workforce characteristics;
- b. Highlight consistent findings across subsectors and other jurisdictions' outdoor workforces; and
- c. Assess the availability and quality of existing labour market information to identify where evidence may be fragmented, indirect or missing.

Defining the Outdoor Industry

Core Challenge

The outdoor workforce spans a wide range of roles, activities, and sectors, creating challenges in defining it as one unified category. From the business perspective, there is no consistently used definition or criteria to determine whether an organization or subsector belongs to the broader outdoor sector, as defined below. Various organizations, including those who have tried to measure the outdoor sector, or its workforce have used varying terminology to describe the sector, and often include or exclude different activities and subsectors from their analysis.

On the workforce side, many individuals working in outdoor roles do not identify as a part of a single outdoor sector, describing their work in terms of education, recreation, tourism, conservation or community programming.

In addition to self-identification challenges, there is a lack of consistent terminology used to describe outdoor sector roles across subsectors. Workers may be described as guides, instructors, interpreters, interpretive guides, educators, facilitators, leaders or operators, depending on context, role, or employer. Despite differences in titles and contexts, many of these roles share a common set of baseline occupational competencies, with variation primarily in technical application, scope of practice and activity-specific requirements.

OCC's Definition

The OCC defines the **outdoor sector** as “the ecosystem of activities, services, products, and organizations whose primary purpose is enabling, facilitating, or supporting outdoor experiences in natural or semi-natural environments.” This includes:

- a) commercial guides and outfitters
- b) outdoor-education and leadership organizations
- c) recreation, tourism, and geotourism operators whose product is outdoors-first (day trips, back-country trips, multi-day expeditions)
- d) equipment manufacturers, rental, and retail services tied primarily to outdoor activity
- e) outdoor event and program organizers
- f) non-profit outdoor programming and infrastructure maintenance (e.g. trail maintenance)
- g) land-based Indigenous and cultural tours
- h) public agencies and managing bodies whose mandates directly enable outdoor visitation and activity

The definition explicitly excludes urban indoor fitness services and indoor tourism products.

Business Classification: Businesses within the sector can be classified into direct and supporting organizations, where:

- Outdoor businesses provide or directly enable services for the public, which have a direct connection to the outdoors (ex. campgrounds, ski resorts, outdoor sightseeing tours).
- Supporting businesses provide a service where the primary intention is to enable outdoor participation, but do not provide a direct outdoor service (ex. outdoor equipment retailers and rental services, equipment repairs).
- Mixed-activity businesses are organizations for which outdoor activities represent only a subset of their complete book of business. Businesses in this category may play direct and/or supporting roles within the sector (ex. post-secondary education, public administration, manufacturing).

Role Classification: Similarly, jobs within the outdoor sector can be differentiated into direct and indirect outdoor roles, where:

- Direct outdoor roles exist because of the outdoor activity itself: guides, instructors, park rangers, trail crew, outdoor educators and,
- Indirect outdoor roles support any business regardless of sector: clerical, managerial, IT, finance, marketing.

Classification Frameworks

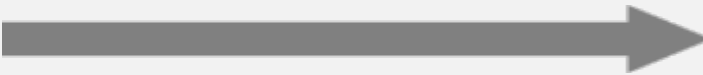
As a result of its complexity, the outdoor sector is not easily captured within standard labour market classification systems which tend to group businesses and job roles by industry or occupation rather than by the nature of their work or the service they provide. The major workforce classification systems used in Canada include:

NAICS: The North American Industry Classification System (NAICS) provides common definitions for industries across North America and enables the identification of sector-specific insights. While the

NAICS encompasses all economic activities, there is no clear set of NAICS codes that represents the outdoor sector. While a small subset of outdoor businesses fall into NAICS that cleanly represent outdoor sector activities, the majority of outdoor businesses fall under codes that also include explicitly non-outdoor business activity. For example, code 713999 - all other amusement and recreation industries include fishing and hunting guide services and all outdoor adventure operators (e.g., white water rafting without accommodation, in addition to carnival rides, night clubs, and haunted houses). While this code would include a large subset of directly relevant outdoor businesses, it cannot be used to draw inferences about the outdoor sector for this reason.

See Table 1 below.

Table 1: Outdoor Businesses Under the NAICS Framework

Clearly defined outdoor businesses	Clearly defined outdoor supporting businesses	Mixed Industries/businesses
• 487990 - Scenic and sightseeing transportation, other • 712190 - Nature parks and other similar institutions • 713920 - Skiing facilities • 721211 - Recreational vehicle (RV) parks and campgrounds • 721212 - Hunting and fishing	• 459111 - Golf equipment and supplies specialty stores • 459112 - Ski equipment and supplies specialty stores • 459113 - Cycling equipment and supplies specialty stores	• 481215 - Non-scheduled specialty flying services • 487110 - Scenic and sightseeing transportation, land • 487210 - Scenic and sightseeing transportation, water • 611210 - Community colleges and C.E.G.E.P.s • 611310 - Universities • 611620 - Athletic instruction • 611690 - All other schools and instruction • 621330 - Offices of mental health practitioners (except physicians) • 624190 - Other individual and family services • 713930 - Marinas • 713999 - All other amusement and recreation industries • 721213 - Recreational (except hunting and fishing) and vacation camps • 339920 - Sporting and athletic goods manufacturing • 414470 - Amusement and sporting goods merchant wholesalers • 532280 - All other consumer goods rental • 561520 - Tour operators* • 912910 - Other provincial and territorial public administration • 913910 - Other local, municipal and regional public administration • 914110 - Aboriginal public administration • 114113 - Salt water fishing • 114114 - Freshwater fishing • 114210 - Hunting and trapping
 Most outdoor businesses fall into the mixed category. In some cases, individual businesses within this category do outdoor work as only part of their overall service or product offering. For example, the “Universities” NAICS code captures all universities, and is not differentiated by program. In most cases, a universities employees will largely fall outside of the outdoor sector, yet, specific departments or programs, such as the University of Calgary’s Outdoor Leadership programs, play an important role in the outdoor sector. Other NAICS that fall into the mixed industry category include codes where some businesses should be classified as outdoor, while others should not. For example, sporting and athletic goods manufacturing includes manufacturing of indoor equipment including hockey equipment, punching bags, and bowling pins, as well as outdoor equipment such as fishing and skiing equipment. Including these broad codes in industry estimates would not enable clear depictions of industry size, economic value, or geographic spread; however, excluding these codes eliminates key subsectors of industry work.		

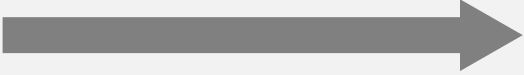
*Note: Tour operators as defined within the NAICS framework include only businesses primarily engaged in arranging, assembling, and marketing tours, generally through travel agencies. This code explicitly excludes guide services and access to outdoor adventure facilities which make up a significant proportion of outdoor work.

NOCs: the National Occupational Classification structure categorizes the entire range of occupations in Canada based on training, education, experience and responsibilities (TEER). Like the NAICS system, outdoor work is not independently or clearly reflected in the NOCs system. Many codes within the mixed category cover critical subsectors of the outdoor industry, but like the NAICS, cannot be used to draw inferences about worker populations due to overlap.

The NOC system similarly fails to accurately represent the range of skills and training needed for certain outdoor professions. Many outdoor roles are grouped within broad occupational classifications that do not reflect the level of technical training, certifications and experience required. This misalignment can result in highly skilled workers being classified below their actual competency level, limiting recognition of their qualifications and affecting career progression, mobility and access to opportunities linked to formal classification systems.

A critical example of this is code 54100 which covers snow school professionals, ski patrollers, and search and rescue crew members, who are known to be key players within outdoor workforce in Alberta. However, this code also includes personal trainers, aerobics instructors, and gymnastics coaches. See Table 2 below.

Table 2: Outdoor Jobs Under the NOCs Framework

Clearly defined direct outdoor roles	Mixed direct outdoor and unrelated roles
64322 – Outdoor sport and recreational guides  Like the NAICS, most outdoor roles fall into broader profession buckets alongside unrelated jobs. For example, therapists in counselling and related specialized therapies include practitioners who offer land-based therapy in addition to marriage counsellors, behavioural consultants, and clinical counsellors practicing in clinical settings. For many outdoor workers, technical competencies are not captured under the NOC framework. This is acutely visible for certified mountain guides, who are typically grouped under NOC 64322. These individuals would have the same degree of training as many professionals grouped under NOC 22214, yet they fall into vastly different NOCs TEERs. Adding another layer of complexity, many outdoor industry jobs are indirect, falling into broad NOCs that include huge numbers of workers, including business, finance and administration; sales and service; trades, transport and equipment operators; and occupations in manufacturing. People working in these roles may work for a direct outdoor business, a supporting business, or a mixed business, further complicating the delineation of roles under the NOC framework.	21201 - Landscape architects 21202 - Urban and land use planners 22113 - Conservation and fishery officers 22214 – Technical occupations in geomatics and meteorology 22114 - Landscape and horticulture technicians and specialists 4002 - Managers in education 40030 - Managers in social, community and correctional services 412 - Professional occupations in education services 41210 - College and other vocational instructors 4122 - Secondary elementary and kindergarten schoolteachers 4120 - University professors and post-secondary assistants 43109 - Other instructors 41301 - Therapists in counselling and related specialized therapies 50012 - Recreation, sports and fitness program and service directors 53201 – Coaches 54100 - Program leaders and instructors in recreation, sport and fitness

Implications for Workforce Measurement

The lack of clarity in defining outdoor roles, businesses, and subsectors, combined with limited alignment to national classification systems, creates challenges in measuring the size and scope of the sector. As a result, the sector and its impacts are often:

- **Underestimated:** classification limitations and incomplete data lead to undercounting; and
- **Fragmented:** data is dispersed across sectors, occupations and various employment types, making it difficult to aggregate and interpret.

Evidence Base and Interpretation

This report synthesizes the best available evidence on Alberta’s outdoor workforce while recognizing that outdoor workforce data is often indirect, fragmented, drawn from adjacent sectors, or extrapolated from outdoor subsectors. Due to data limitations, and to draw conclusions about the outdoor sector, as defined above, this report relies heavily on proxy data and information published by other organizations. As much as possible, this report uses consistent terminology to describe the outdoor sector, however, when referring directly to figures or statistics presented by other organizations, the source terminology is used. Findings should be interpreted with the understanding that the workforce is difficult to define, measure and consistently quantify, and that differences in terminology and definitions used across organizations presenting data about the sector impact the extent to which inferences can be made about the outdoor sector according to OCC’s definition.



Research Findings

Industry Overview

Despite limitations in data, strong evidence exists to suggest that the outdoor sector generates significant economic and social value.

Economic Significance

Existing evidence suggests that outdoor activity contributes significantly to national, regional, and provincial economies, despite the outdoor workforce remaining only partially visible with available data.

Protect Our Winters Canada's Outdoor Recreation Report (2024) suggests that at a national level, Canada's outdoor recreation economy* generates approximately \$101.6B annually and supports over one million full-time equivalent jobs. These figures suggest that outdoor recreation outperforms several major economic contributors including pharmaceuticals (\$16B), agriculture (\$66.9B), and fisheries (\$36.1B). ¹

Alberta-specific estimates also indicate substantial impacts. According to the Outdoor Council of Canada, non-motorized outdoor recreation alone contributes approximately \$5.5B to provincial GDP and supports more than 77,000 FTE jobs. Notably, much of this economic contribution is generated via tourism, retail, transportation and services rather than guiding roles alone. ²

Canadian-specific estimates are substantiated by U.S. GDP contribution data provided by the Bureau of Economic Analysis (BEA) Outdoor Recreation Satellite Account, which shares state-level figures for the percent of total value added to GDP by outdoor recreation[†]. These figures range from a low of 1.0% in

* The outdoor recreation economy, according to *Protect Our Winters*: any leisure or recreational activities that take place in natural environments or outdoor setting which are human-powered and use the same activities as the Outdoor Industry Association (2017) analysis in the United States, with the addition of golf. This includes 19 recreation activities across: camping and related park visits, RV camping, sport fishing-hunting-trapping, ATV-adventure and dirt bikes, downhill skiing and snowboarding, snowmobiling, heli cat skiing, hiking, horseback riding, recreational boating, wildlife viewing and golf. Partial information on economic contributions also came from rock climbing, canoeing and kayaking, road and mountain biking.

[†] Total outdoor recreation, according to the U.S. Outdoor Recreation Satellite Account: all recreational activities undertaken for pleasure that generally involve some level of intentional physical exertion and occur in nature-based environments outdoors (including bicycling, boating, hiking, and hunting)., in addition to other activities such as gardening and outdoor concerts; and supporting activities such as construction, travel and tourism, local trips, and government expenditures related to the outdoor industry. ⁵

D.C. to a high of 6.1% in Hawaii, while states that are comparable to Alberta, based on geography and population density range from 3.2-4.9% ³

Table 3: Outdoor Recreation Dollar Value and % of GDP Value Added in Select US States (Thousands of Current Dollars, 2024)

	Total outdoor recreation activities	Conventional outdoor recreation activities *	Boating / fishing	RVing	Snow activities
Montana	\$3,829,625 (4.9%)	\$1,191,579 (1.5%)	\$149,189 (0.19%)	\$238,961 (0.30%)	\$77,863 (0.10%)
Utah	\$9,745,452 (3.3%)	\$3,472,820 (1.2%)	\$562,921 (0.19%)	\$403,419 (0.13%)	\$598,196 (0.20%)
Colorado	\$18,127,399 (3.3%)	\$5,479,160 (1.0%)	\$736,453 (0.13%)	\$582,163 (0.10%)	\$1,579,512 (0.28%)

(BEA State Quarterly GDP Summaries, Outdoor Recreation Economic Statistics) ⁴

While not directly comparable to the Alberta context, these proportions can provide some indication of the approximate size of the economic contribution of the sector locally. To estimate the size of the contribution in Alberta, we multiply the GDP contribution proportion seen in comparable states (above) by the Alberta annualized GDP at market prices figure (2024). Using high- and low-end estimates, this gives the following estimates:

Table 4: Approximate GDP Contribution of Total and Conventional Recreation Activities in Alberta (Thousands of Current Dollars, 2024)

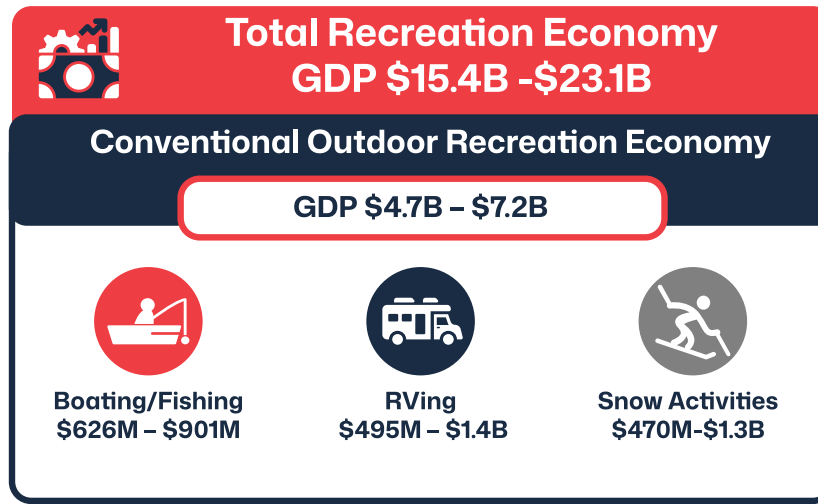
	Conventional Outdoor Recreation Activities	Total Outdoor Recreation Activities
Lower-end Estimate (assuming lowest contribution % amongst comparable states)	= 0.98% * \$473,937,000,000 = ~\$4.7B	= 3.3% * \$473,937,000,000 = ~\$15.4B
Higher-end Estimate (assuming highest contribution % amongst comparable states)	= 1.5% * \$473,937,000,000 = ~\$7.2B	= 4.9% * \$473,937,000,000 = ~\$23.1B

*Note: for reporting purposes, proportion figures are rounded for readability. Calculations use unrounded figures.

Based on the above proportions, the economic contribution of the conventional outdoor recreation industry in Alberta (including physical activities occurring in nature-based outdoor environments) in 2024 would have fallen between \$4.7B and \$7.2B. When expanding the definition to include other and supporting activities, this figure jumps to between \$15.4B (3.3%) and \$23.1B (4.9%). ⁶

* Conventional outdoor recreation, according to the U.S. Outdoor Recreation Satellite Account: all recreational activities undertaken for pleasure that generally involve some level of intentional physical exertion and occur in nature-based environments outdoors (including bicycling, boating, hiking, and hunting). ⁵

Figure 1: Estimated GDP Contribution of Alberta Outdoor Industry and Subsectors
(Based on BEA Definitions)



Notably, figures derived using U.S. state data are not directly reliable, due to differences in land access and jurisdiction-specific dominance of unrelated industries (such as oil and gas). These figures are intended to provide the best available estimated size range for the sector and relevant subsectors rather than an exact figure. Based on the [OCC definition](#), **the total economic contribution of the outdoor sector is likely to fall somewhere between the total recreation and conventional recreation estimates** using the BEA proportions.

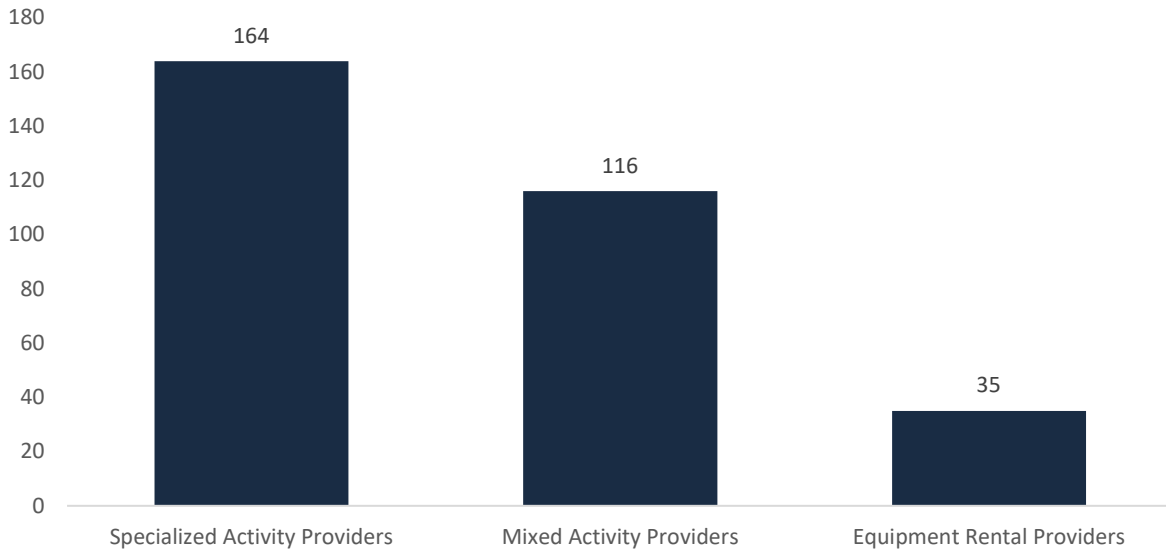
Outdoor Sector Businesses in Alberta

Publicly available data on outdoor sector businesses is extremely limited. As such, this section relies on the OCC's internal list of outdoor sector businesses. Although this list is not representative of all outdoor sector businesses in Alberta, it provides some indication of the types, sizes, and locations of outdoor businesses in the province.

Business Count - The OCC is aware of at least 315 direct outdoor sector operators in Alberta, covering a wide variety of subsectors, including skiing, fishing hiking, and water sports guiding, horseback riding, non-adventure tours, cultural experience providers, and rental equipment providers, among others.

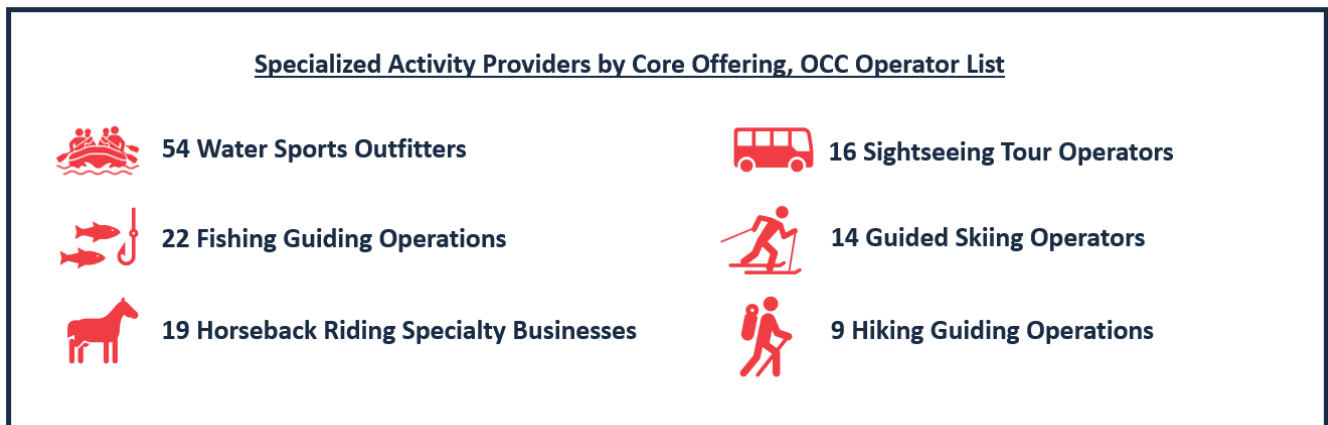
Service Offering - While most businesses on the OCC operators list specialize in a certain type of offering (ex. hiking, snowmobiling, kayaking) (n=164), a relatively large number of businesses (n= 116) known to the OCC are tour/guiding businesses that provide access to multiple types of outdoor activities. Rental equipment is another major business activity, where many businesses on the OCC list offer rental equipment as a secondary service with 35 focusing on rentals as their core service offering.

**Figure 2: Outdoor Provider by Service Offering, OCC Operator List
(n=315)**



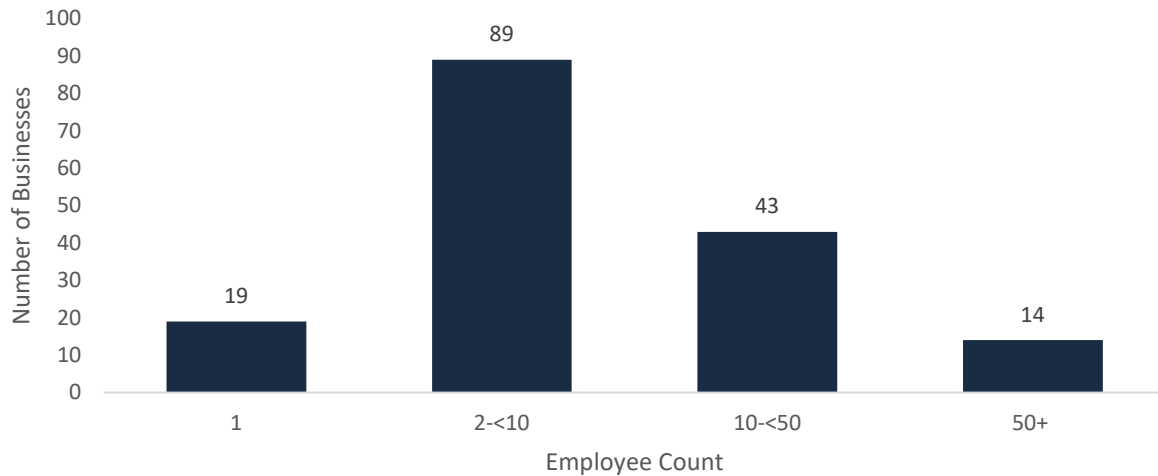
Among known specialized activity providers, water sports businesses, including rafting, canoeing, kayaking, paddleboarding, and river surfing operators make up a large subset (n=54). Other high-frequency specialized businesses include fishing (n=22), horseback riding (n=19), sightseeing operators (interpretive walks, bus tours, food tours, etc.), and skiing guide companies (n=14).

Figure 3: Most Common Core Service Offerings for Speciality Providers on OCC Operator List



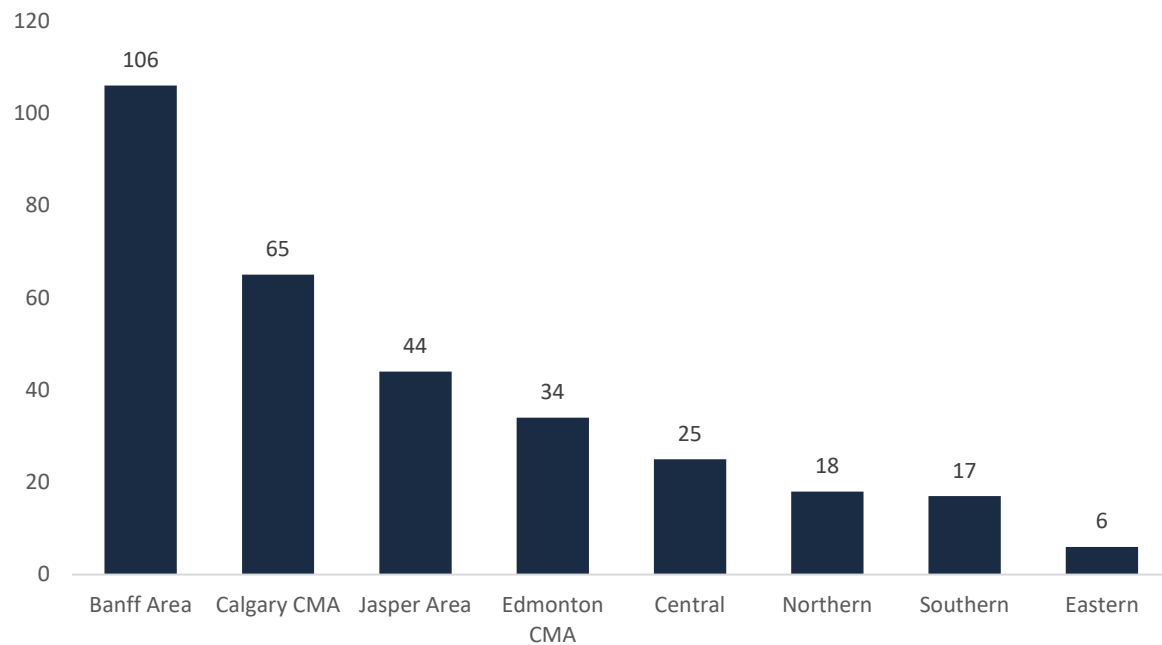
Business Size - Where estimated employee counts were available (165 businesses), organizations on the OCC operator list tended to be small in terms of employee count. Most businesses on the list (n=89) are estimated to have between 2 and 10 employees.

Figure 4: Business Size, OCC Operator List
(n=165)



Geographic Distribution – Outdoor sector businesses on the OCC operators list are largely concentrated in the Banff, Calgary, and Jasper areas, suggesting significant activity in mountain communities.

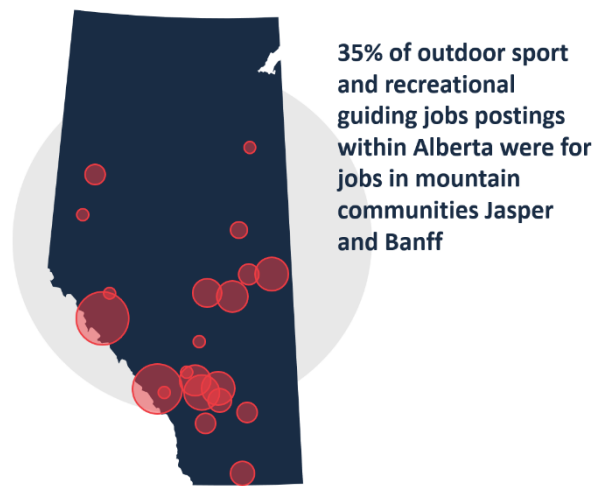
Figure 5: Business Location, OCC Operator List
(n=315)



Inferences drawn from the OCC business data are substantiated by Canada Job Bank posting data. During the 12-month period between June of 2025 and May of 2026, 110 jobs falling under the outdoor

sport and recreational guides NOC (64322) were posted on the Canada Job Bank platform. Of this, 39 (35%) were in the Banff and Jasper areas. Alone, this data cannot be used to make inferences about the outdoor sector in Alberta overall, however, alongside OCC business lists, it supports the conclusion that outdoor roles are heavily concentrated in mountain communities, including Banff and Jasper, in addition to Calgary and surrounding areas.

Figure 6: Geographic Distribution of Canada Job Bank Postings for Outdoor Sport and Recreational Guiding Roles (2025-2026)



(Canada Job Bank) 12

Workforce Characteristics

Understanding the size and composition of the outdoor workforce is similarly constrained by data limitations. Much of the available evidence is proxy data: indirect measures that stand in for missing outdoor-specific data, drawn from adjacent sectors such as tourism or produced through indirect calculation. Even so, this information reveals clear patterns about the nature and structure of outdoor careers, which are heavily non-linear, blended, and often not formally recognized.

Workforce Size - Outdoor employment is extremely difficult to quantify. Proxy data can provide a rough order of magnitude, but available estimates for workforce size vary significantly.

The U.S. Outdoor Recreation Satellite Account provides rough estimates for outdoor workforce size at national and state levels, with levels in comparable states (Utah, Colorado, and Montana) falling between 4.1% and 5.9% of total wage and salary employment for the total outdoor recreation economy. No figures are available for the conventional recreation economy. ³

Tourism HR Canada estimates that tourism labour accounts for approximately 10% of the total Canadian labour force, with Alberta experiencing tourism employment growth of +4.8% year-over-year between 2024 and 2025, outpacing broader labour force growth. ⁷ Standard tourism definitions are also susceptible to undercounting the tourism workforce by an estimated 40–45%. ⁸ This underestimation

likely extends to the outdoor sector – for the outdoor sport and recreational guiding profession, Tourism HR Canada reported a projected estimated total of 1,448 guides across Canada in 2026, while Alberta industry associations report similar numbers for the province alone. ¹¹

Occupational Makeup - Outdoor work is embedded across multiple sectors without a single category that fully captures the workforce. Individuals within outdoor roles self-identify as educators, interpreters, recreation leaders, land-based practitioners, youth workers, or wellness professionals, rather than seeing themselves as tourism or outdoor sector employees.

Fragmented naming conventions, such as guide, instructor, interpreter, leader, facilitator, educator or operator add further complexity in tracking workers, aligning their credentials, and standardizing expectations. Fragmentation of the outdoor workforce creates challenges in isolating the workforce itself and measuring contribution as well as planning for long-term development.

These titles are not interchangeable. Interpretation, for example, is a recognized profession with its own training, standards, and ongoing professional development, and interpretive skill does not follow automatically from guiding experience. Treating distinct professions as a single undifferentiated category is part of what makes the workforce difficult to measure and its expertise difficult to recognize.

Similar patterns exist in the United States, where the outdoor workforce itself is distributed across manufacturing, public policy, retail, engineering, guiding and other roles without unified occupational definition. ⁹

Demographic Composition - Due to the lack of available outdoor sector-specific evidence, demographic characteristics are largely inferred through tourism and visitor economy data.

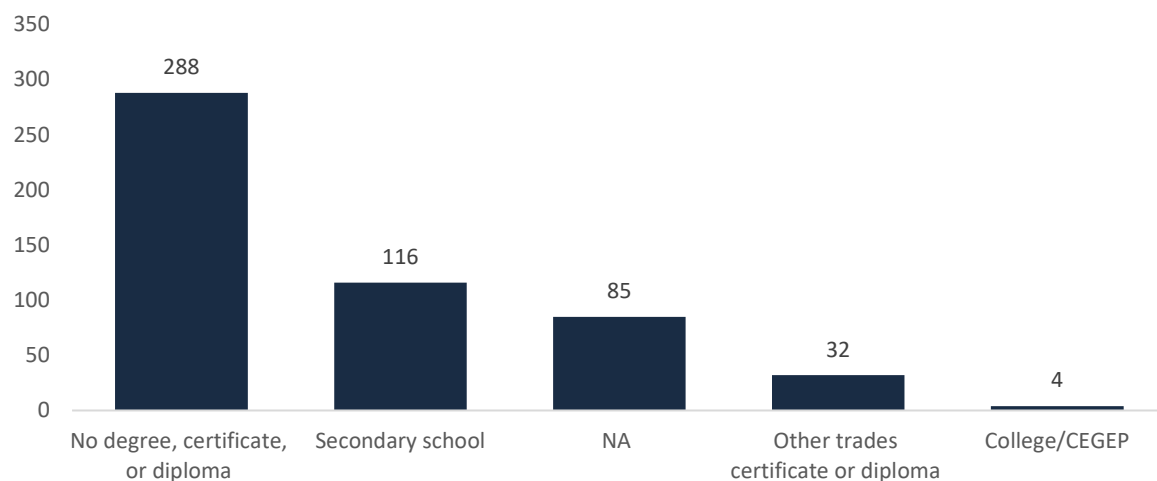
- Tourism employment in Canada overall is relatively gender balanced, with 51.4% men+ and 48.6% women+, though some subsectors (such as transportation) remain more male-dominated and others (such as travel services) employ more women. ^{7 10}
- Tourism employs a diverse and internationally sourced workforce, with landed immigrants representing 31.3% of the workforce, particularly in transportation, travel services, and accommodation. ⁷
- Tourism exhibits a high concentration of youth and early career workers in seasonal roles. ¹¹ National tourism workforce estimates indicate that more than half (54.6%) of the outdoor-adjacent tourism workforce is aged 15–32, and 31.6% is aged 15–24, with even stronger youth concentration in segments such as food and beverage that support outdoor ecosystems (42.6% aged 15–24). ⁷

Based on this information, outdoor work likely functions as a key entry point into the Canadian labour market, particularly for youth and other early-career workers, because the broader visitor economy is where many individuals gain their first job, initial work experience and begin to build transferable skills. ¹⁰ Alberta-specific demographic breakdowns of outdoor workers by age, gender, geography, and Indigenous identity are not currently available.

Educational Attainment - Canada Job Bank posting data for outdoor sport and recreational guiding jobs can provide a proxy for educational attainment characteristics of that subset of the workforce in Canada.

For this NOC, most posted roles required no degree, certificate, or diploma (55%); 22% required a secondary school diploma, and 7% required some type of post-secondary training, suggesting that these roles typically have low educational barriers to entry. For the remainder of roles (18%), no educational requirement was included in the posting. This data, however, must be interpreted cautiously as it excludes all roles falling under NOCs defined as “**Mixed direct outdoor and unrelated roles**” as defined in Table 2. Further, this data only includes information for jobs advertised on the Canada Job Bank and therefore is not necessarily reflective of the industry overall.

Figure 7: Educational Requirements for Canadian Outdoor Sport and Recreational Guiding Roles
(Canada Job Bank, 2025-2026)
(n=525)



(Canada Job Bank) 12

Social Significance of the Outdoor Sector

Canadian evidence, supported by findings in comparable jurisdictions, highlights that outdoor work operates as a public-interest system, which delivers benefits beyond employment contribution. Led outdoor activities contribute to improved mental health, youth development, social connection, and environmental stewardship, with clear downstream value for public health, education, and community resilience. 13 14

Outdoor recreation is associated with major mental and physical health benefits including youth development, reduced stress, anxiety, and depression, and overall healthier aging. Outdoor recreation is used as “prescribed medicine” in several countries and some studies in Ontario, British Columbia and Nova Scotia suggest that recreation-based therapy programs can be as effective as certain medications.

These social benefits also have considerable economic implications where: active outdoor lifestyles may reduce Canada's public health care costs by an estimated \$2.9-23B annually. ¹

Transferable Skills and Broader Workforce Value - Outdoor work generates significant transferable skills that extend beyond the sector itself, reinforcing its broader social value. Evidence from led outdoor activities and camp-based programming shows that workers develop leadership, teamwork, communication, problem-solving, resilience and decision-making under pressure by operating in dynamic and real-world environments that require managing risk, coordinating groups and responding to emergent situations. These competencies are directly applicable across sectors such as education, emergency management, health and community services, positioning outdoor work as an important contributor to Canada's human capital.

Meanwhile, the value of these skills is not consistently recognized and articulated within formal labour systems due to fragmented training, certification and classification frameworks that do not fully capture or translate these skills and experiences. This creates tension, where outdoor work produces highly valued skills with strong social benefits, but their visibility and transferability to other career pathways remains limited and can constrain workforce mobility and full recognition of the sector's contribution. ¹³

Public Participation and Support - Public support for outdoor recreation in Canada is widespread and growing, further reinforcing the sector's economic and social significance. Consistently high outdoor recreation participation rates (78% in 2021) suggest that outdoor activity is not a niche interest, but rather a mainstream and embedded aspect of Canadian life. ¹

According to Alberta's *Recreation Survey Report* (2022), outdoor participation within the province is similarly high. 86% of survey respondents had participated in land-based (83%), water-based (55%), and/or snow-based (16%) outdoor recreation activities in the previous year, with the most popular outdoor activities being hiking (61%), camping (49%), and swimming (lakes, rivers, ponds (38%)). 73% of respondents reported having visited an Alberta provincial park in the past 12 months. ¹⁵

In parallel, public demand for investment in outdoor infrastructure and access is exceptionally strong. Approximately 85% of Canadians support increased public investment in parks, with even higher support observed regionally, such as in British Columbia, where 9 in 10 residents advocate for greater government investment in outdoor recreation. ¹

Perceived value of recreation and parks is extremely high in Alberta. 99% of Recreation Survey respondents felt that improving quality of life is an important benefit of recreation and parks. ¹⁵

Indigenous Community Representation – Indigenous Peoples have maintained deep relationships with the lands and waters now known as Alberta. Through generations of land stewardship, travel, harvesting, teaching and cultural practice, Indigenous communities developed and continue to maintain extensive knowledge systems that shape understanding of local environments, seasonal conditions, wildlife and safe travel across the landscape.

Many of the places, routes and experiences that now underpin outdoor recreation and tourism in Canada exist because of these long-standing relationships with the land. Indigenous guides, knowledge holders, and communities have played important historical and contemporary roles in enabling people to safely navigate and understand these environments.

Today, Indigenous-led outdoor experiences, land-based education, cultural interpretation, stewardship initiatives and tourism businesses continue to make significant contributions to local economies, workforce development, cultural continuity, and visitor experiences.

As emphasized in *Parks for All*, these contributions are strongest when outdoor roles, programs and decision-making are shaped by Indigenous rights, voices, governance and reciprocal relationships, helping advance reconciliation in community-led ways. ¹⁶

Current State Labour Market Pressures

Labour demand within the outdoor industry is difficult to quantify as government employment shortage projections use NAICS codes at the three-digit level. While profession-specific information is limited, regional labour shortages are anticipated, particularly in Banff-Jasper-Rocky Mountain House and Athabasca-Grande Prairie-Peace River region, which are expected to see about 110,000 new openings and 90,000 new jobseekers between 2023 and 2033. ¹⁸

Subsector-level data, proxy data, and qualitative insights can provide more outdoor-specific context:

Subsector Pressures - Subsectors within the outdoor sector show substantial regional employment impacts provincially, particularly in rural and gateway communities where outdoor recreation is often a core economic driver. In many cases, these industries rely on highly specialized, seasonal, and location-dependent labour, which constrains the available labour pool and contributes to recruitment challenges. This trend is exacerbated in rural areas as employers compete for a limited workforce that is both appropriately skilled and geographically mobile. ^{19 20 21 22} This dynamic reinforces broader sector trends including reliance on seasonal and multi-role workers and ongoing challenges with maintaining workforce stability across cycles.

Tourism and Adjacent Sectors Pressures - Unemployment in the recreation and entertainment subsector of the Alberta tourism industry sits at 4.0% as of April 2026, remaining below the provincial unemployment rate (7%). These figures suggest tight labour market conditions in the industry, meaning that employers are competing for a limited number of available workers. Low unemployment can create challenges of recruitment and wage pressures and makes retention critically important for employers. ²³

Pressure in Other Jurisdictions - In the United States, employers across the outdoor sector report a demand and supply mismatch, specifically for technical, operational and professional roles where specialized skills and certifications are required. ⁹ Shortages are attributed to unclear skill pipelines and limited standardized forecasting for outdoor work.

Growing Demand in Outdoor-Adjacent Sectors

Labour market projections point to growing and sustained demand across outdoor-adjacent sectors, particularly tourism, recreation, and nature-based services. National tourism employment is projected to surpass pre-pandemic levels, reaching 2.24 million jobs by 2027, with recreation and entertainment recovering faster than several other tourism industries. ¹¹ This suggests relatively strong ongoing demand in activity areas closely linked to outdoor recreation.

In Alberta, the tourism workforce grew 8% as of March 2026, driven in part by recreation and entertainment. ²³ Alberta's tourism sector has generally outpaced overall employment growth, indicating that tourism and outdoor-linked roles are expanding the provincial labour market. ⁷

Demographic Trends and Youth Pipeline Challenges

Broader demographic trends such as an aging population, affordability pressures, and shifting youth participation patterns are expected to constrain future workforce supply across many industries. Projections indicate that aging populations and inflation will continue to affect labour availability, with low-wage and seasonal roles in tourism and outdoor work especially vulnerable to worker exit when costs of living rise. ¹¹

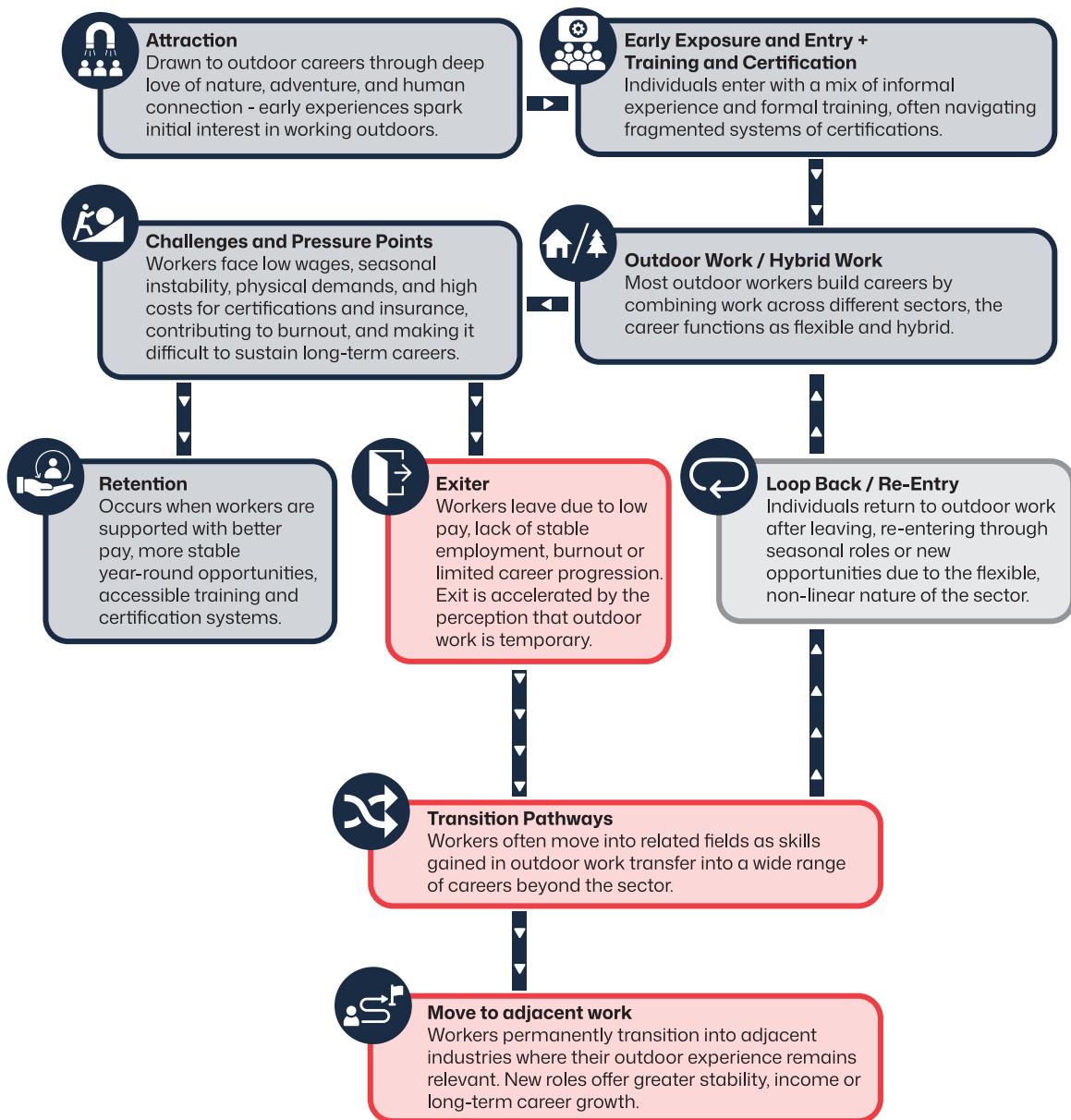
Participation research also suggests that while overall youth participation in outdoor recreation remains high, participation frequency is declining, raising concerns about whether broad interest will translate into sustained skill development, repeat engagement, and eventual employment pathways. ²⁴

Youth are also experiencing higher unemployment rates and more precarious transitions into stable careers, which can contribute to early exit from outdoor roles if progression pathways are not visible. ²⁵ Overall, these trends suggest weakening youth pipelines into outdoor work.

The Outdoor Career Journey

The outdoor career journey is often non-linear and untraditional. While many job seekers are intrinsically drawn to the sector, persistent structural challenges often drive early exit. Workers may leave and re-enter the sector several times over the course of their career, finding work in adjacent or related fields and then re-entering the sector after a period of time. For those who work in the industry, seasonal and hybrid employment is often the norm.

Figure 8: The Outdoor Career Pathway



Career Pathway Characteristics

Non-Linear Employment Patterns - Outdoor employment is consistently characterized as seasonal, part-time, and structurally precarious. In Alberta, outdoor employment is often associated with peak seasons, short contracts, and variable hours with workers often moving in and out of career roles to maintain career and income continuity. ^{2 26}

Hybrid (Portfolio) Career Structures - Outdoor workers frequently combine roles to maintain full-time employment. Survey data and qualitative evidence indicate that outdoor workers are highly multi-credentialed and often operate in blended roles that span guiding, instruction, education, retail, search and rescue, and other adjacent activities. A national survey found that 71.5% of outdoor workers hold industry-recognized certifications, frequently across multiple disciplines, pointing to composite skill profiles rather than single-discipline careers. ²⁷

Hybrid employment is common among outdoor workers, particularly where micro-operators dominate. Workers routinely assemble portfolios of short-term positions, seasonal contracts, and multi-employer arrangements, and many eventually transition into adjacent sectors such as education, parks, conservation, recreation programming, or entrepreneurship. ²⁶ Hybrid employment underscores both the adaptability and instability of the outdoor workforce.

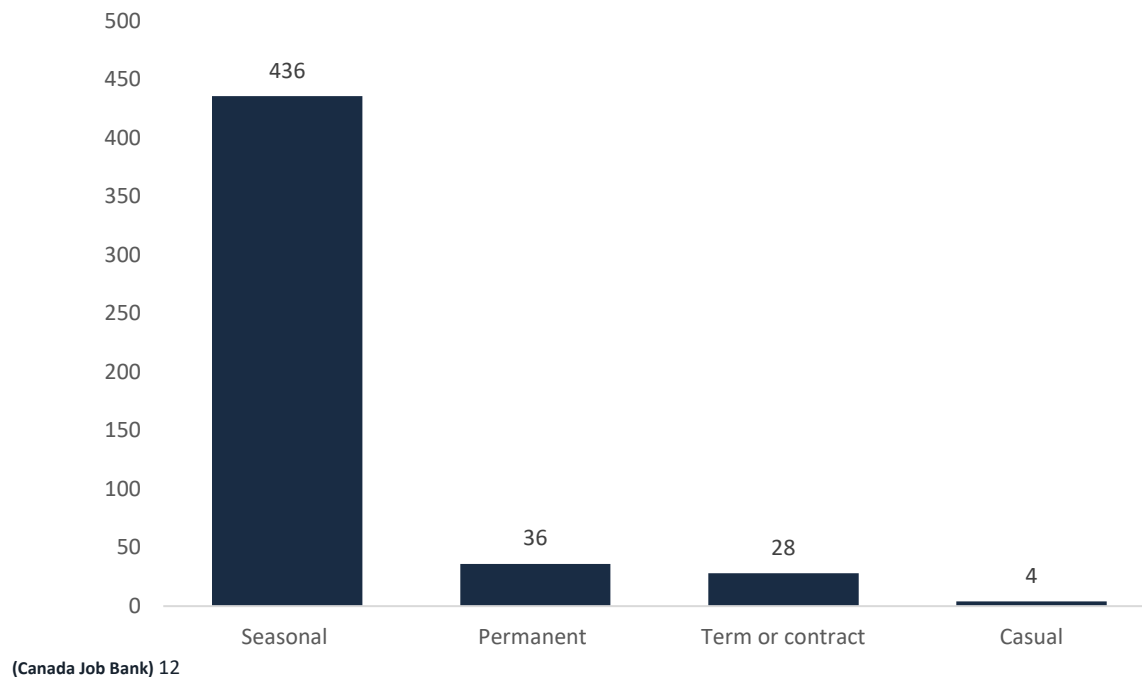
Volunteering and Informal Labour - Volunteer and informal labour underpin large portions of outdoor work across both Alberta and Canada, particularly for trails, stewardship, clubs, camps and community programming. These unpaid contributions are valued at hundreds of millions of dollars at the national level. ^{22 28 29}

Volunteer and club roles often function as informal training grounds and early entry points for future outdoor workers, enabling young people to build leadership, teamwork, and technical skills before or alongside formal employment. ³⁰

Despite their value, informal contributions are rarely captured in labour statistics and remain largely invisible in workforce analysis, raising questions about burnout, sustainability, and equity, particularly as unpaid opportunities are more feasible for those with greater financial flexibility. ³¹

Seasonally Structured Employment – Work in the outdoor sector is heavily influenced by seasonality, which necessitates employment shifts within calendar years and contributes to the patchwork career structure common to outdoor work. ^{19 26 27 32} Canada Job Bank postings data validate the seasonality of work for outdoor sport and recreational guides. Of the jobs posted in this category with employment term information, 87% (436) were seasonal, 6% (28) were term or contract, and 1% (4) were casual. Only 7% (28) of jobs within this category were classified as permanent*.

Figure 9: Employment Type for Outdoor Sport and Recreation Canada Job Bank Postings (June 2025-May 2026)
(n=504)



*Note that percentage figures may not add to 100 due to rounding

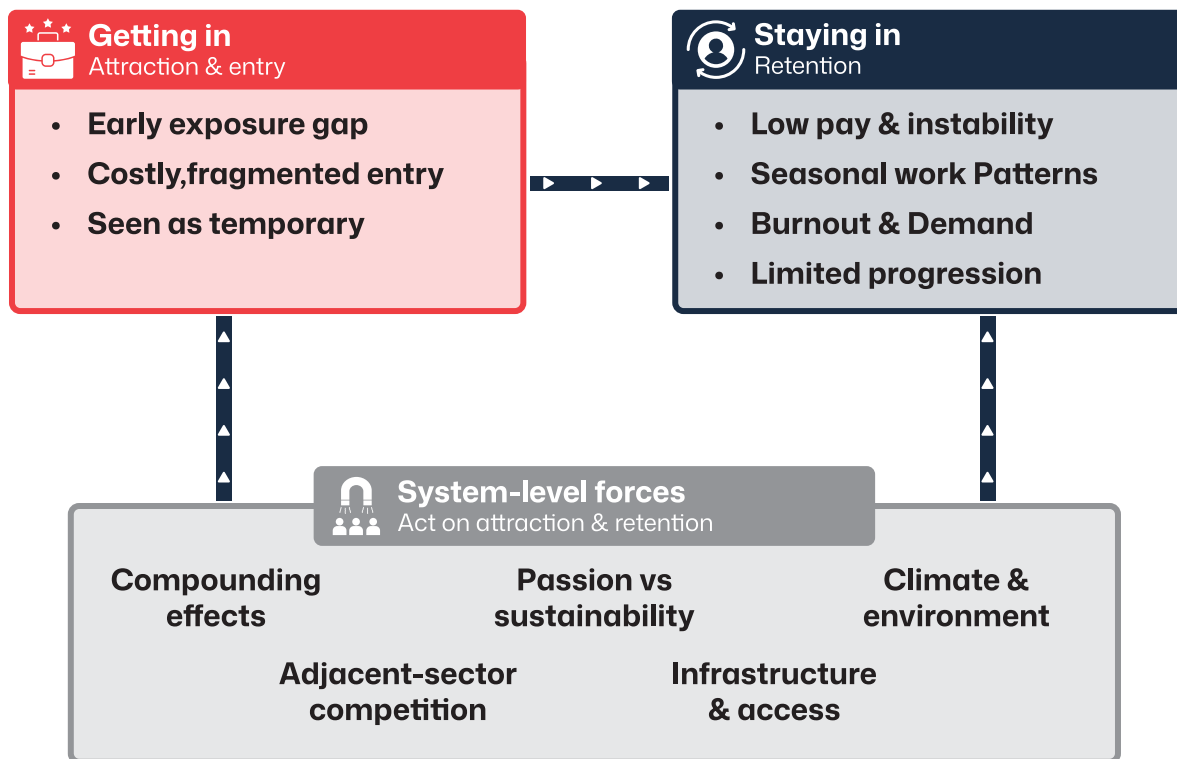
Cross Sector Mobility and Transferability – Outdoor careers are deeply interconnected with adjacent sectors which creates natural opportunities for workers to transition into other fields such as education, conservation, tourism, or entrepreneurship. In addition, outdoor work develops competencies that are highly valued across business, management, and organizational leadership contexts. Leading groups in dynamic outdoor environments requires workers to make decisions under uncertainty, manage risk, communicate effectively, resolve conflict, adapt to changing conditions, build team cohesion and balance competing priorities in real time. These capabilities closely align with competencies sought across private, public and non-profit sector leadership roles, suggesting that outdoor experiences contribute to broader leadership development and organizational capacity beyond the outdoor sector itself. 13 26 27 30

Barriers to Workforce Attraction and Retention

While outdoor careers attract individuals through passion and lifestyle fit, systemic barriers significantly constrain both entry into and long-term participation in the workforce. These barriers exist across the career journey; from initial exposure through to retention, contributing to workforce instability and attrition. 26 27

The barriers fall into three layers: those that block entry into the sector, those that erode retention once people are in, and the system-level dynamics that cut across both. The figure below maps them; the sections below explain each.

Figure 10: Barriers Across the Outdoor Career Journey



Barriers to Attraction and Workforce Entry

Barriers to entry arise before employment begins. Three are most consistently identified: uneven early exposure to outdoor activity, a costly and fragmented path to qualification, and a perception of outdoor work as temporary rather than professional.

	Early Exposure Awareness Gap – Despite the importance of early experiences in shaping interest, access to outdoor experiences is uneven and often dependent on geography, socioeconomic status and prior exposure, which limits awareness of outdoor careers as viable professional pathways. ^{26 33 34}
	Fragmented and Costly Entry Pathways – Entry into outdoor careers requires navigation of fragmented training ecosystems where certifications are costly, duplicative and not consistently recognized across employers and regions. These factors create financial and structural barriers to entry, specifically for new entrants and underrepresented groups. ^{26 33} Sector feedback suggests the pressure stems from duplication and limited portability rather than the credentials themselves.
	Perception Barriers – The outdoor workforce is often perceived as temporary, transitional, and lifestyle-oriented, while lacking long-term stability. These perceptions reduce attraction among individuals seeking sustainable careers and contribute to under-recognition of the sector as legitimate employment pathway. ^{26 33}

Barriers to Retention and Sustaining Long-Term Careers

These barriers do not operate in isolation. A set of system-level dynamics connects and reinforces them, shaping conditions across the workforce as a whole.

	Low Wages and Financial Instability – Compensation across many outdoor roles remains low relative to required skills levels and certifications. Combined with seasonal work patterns, this often results in income insecurity, need for multiple jobs, and difficulty achieving financial stability in the long term. ^{26 32 33}
	Seasonal and Employment Instability – The seasonal structure of outdoor work creates discontinuous employment and requires workers to patch together roles across seasons. This leads to career fragmentation, limited access to benefits, and job security, and increased administrative and logistical burden for workers. ^{26 32}
	Burnout and Physical Demands – Outdoor work involves high levels of physical exertion, emotional labour through client care and safety responsibility, environmental exposure, and overtime work. These factors contribute to burnout and injury. ^{26 32} Sector feedback also points to a gap between the safety responsibility these roles carry, and the compensation attached to them.
	Limited Career Progression Pathways – The non-linear nature of the sector provides flexibility but often lacks clearly defined advancement pathways, leadership or specialization tracks, or recognition of accumulated experience which creates a ceiling for long-term career development. ²⁶

System Level Barriers and Dynamics

These barriers do not operate in isolation. A set of system-level dynamics connects and amplifies them, shaping the workforce as a whole rather than acting on individuals one at a time.

	Compounding Effects Across the Career Journey - Barriers are not isolated; they interact and reinforce one another over time. For example, high entry costs combined with low wages discourage both entry and retention. Similarly, seasonal instability amplifies financial stress and burnout, while the lack of clear pathways reduces motivation for long-term commitment. ²⁶
	Mismatch Between Passion and Sustainability – While attraction is driven by intrinsic motivation, retention depends on extrinsic conditions including pay, stability and recognition – the current system relies heavily on passion to offset structural weakness which is not sustainable long term. ²⁷
	Competition from Other Adjacent Sectors - Labour shortages in adjacent sectors such as hospitality, food and beverage, transportation, and other service industries intensify competition for the same worker pool that outdoor operators rely on, particularly for youth, students, and early-career workers. ¹¹
	Infrastructure, Access and Job Quality - Outdoor infrastructure, including trails, campgrounds, access points, and facilities, directly shapes both the level and quality of employment in outdoor and outdoor-adjacent sectors. More specifically, trails and recreation facilities function as foundational infrastructure for enabling jobs through guiding, maintenance, conservation, and programming, and supporting longer operating seasons in some regions. ³⁵ Regions with well-developed trail and recreation systems show stronger employment multipliers and greater workforce stability than areas with under-developed or primarily day-use facilities. ²⁰
	Climate and Environment Change Increasing Workforce Pressures - Climate change is increasingly affecting season length, snow weather conditions, wildfire risks, and operational windows, in turn affecting employment stability, business models and required employment skills. ³⁶

Opportunities for Intervention

Addressing barriers will require action across the workforce pathway. Attraction strategies should focus on youth and early exposure, given the importance of camps, family recreation, and first-job entry points in drawing people into the sector.

Training interventions should prioritize clearer and more standardized pathways, alongside subsidies that reduce the cumulative cost of duplicative certification, recertification, and insurance requirements. Sector feedback notes that individual outdoor credentials compare reasonably on cost with apprenticeship training or post-secondary education, and that certification is better understood as professional preparation for skilled work. This perspective merits testing through primary research, alongside worker-reported data on the actual cost burden of obtaining and maintaining credentials.

Framing outdoor certification as recognized professional preparation may also support stronger recognition of the sector's expertise among employers, career services, and government systems.

Retention strategies should address low wages, limited benefits, and seasonal instability by improving employment quality and expanding year-round or blended roles. Sector feedback also points to a gap between the responsibility these roles carry, including safety-critical judgment exercised in the field under environmental risk, and the compensation attached to them. Aligning pay more closely with the level of skill and accountability required is central to improving retention.

Career development efforts could also strengthen the legitimacy and visibility of the outdoor workforce by clarifying progression routes and demonstrating how outdoor roles connect to longer-term careers across the broader outdoor economy. 10 37



Case Study – Coordinated Workforce Development Model

Quebec's adventure tourism and outdoor sector stand out as a leading example of coordinated professionalization with direct relevance to Alberta's workforce development considerations.

Aventure Écotourisme Québec (AEQ) serves as a single recognized body organizing standards, training, and industry coordination, representing over 250 businesses across more than 50 activities and acting as the "official voice" of the adventure tourism sector in the province. 38

Key features of this model include:

- **Formalized professional standards** - A Quality Safety Certification system covering more than 60 standards, supported by regular audits and site visits every three years.
- **Mandatory certifications linked to public funding and insurance** - Since 2020, certification has been required to access government funding, aligning financial incentives with safety and quality standards.
- **Ongoing workforce development** – Continuous creation of training programs and competency frameworks, such as mandatory certification for road vehicle guides (2021) and new training for dog sled guides (2022), developed through consultation with guides, operators, and research bodies.
- **Standardization and Transferability** – Consistent expectations across hundreds of businesses, enabling workers trained under this system to move more easily between employers with recognized credentials.
- **Integrated policy and industry ecosystem** - Close collaboration between AEQ, government, Tourism HR, sustainability organizations, and national and international associations. 39

Policy Context Shaping the Outdoor Workforce

At present, there is no dedicated, standalone provincial workforce policy specific to Alberta's outdoor sector. Instead, workforce considerations for outdoor workers are embedded within broad tourism, labour, immigration, and infrastructure strategies. This lack of a focused policy framework contributes to ongoing fragmentation, as outdoor roles are spread across multiple ministries, agencies, and program areas without a central coordinating body or shared set of objectives.

Governance fragmentation weakens the sector's ability to advocate collectively, standardize expectations, and present a coherent case for workforce investment and support, particularly compared with jurisdictions such as Quebec and some U.S. states, which have dedicated outdoor recreation offices or recognized sector associations. ^{38 40}

Building a Stronger and More Sustainable Outdoor Workforce

The findings throughout this review suggest that Alberta's outdoor sector is entering a period where workforce development considerations are becoming increasingly important. While outdoor activities, businesses and organizations have long generated economic, social health and community benefits, several intersecting trends are placing greater attention on the workforce capacity, sustainability, and long-term planning.

Immigration

Immigration has increasingly been positioned as a central component to workforce strategies across both tourism and outdoor-adjacent sectors.

At the national level, tourism policy highlights immigration as a key tool to address persistent labour shortages to support moving beyond short-term recovery measures and toward longer-term workforce strategies. Canadian tourism policy research highlights workforce constraints as a central issue and emphasizes investments in training, skills, Indigenous tourism, and marketing to support sector resilience and growth. ¹⁰ Similar priorities are evident at the provincial level, where the Alberta Advantage Immigration Program also helps to address staffing gaps related to workforce attraction, training, and immigration. ³⁷

Given the strong overlap between tourism and outdoor-adjacent roles, immigration pathways are likely to be increasingly important for stabilizing workforce supply in outdoor recreation, guiding, and nature-based services, particularly in high-demand regions and roles.

Infrastructure

Workforce conditions are also shaped by broader systems, particularly housing, transportation, and general infrastructure, which influence both labour supply and job quality.

Housing and Transportation - In Alberta, workforce needs are closely tied to housing affordability, access, and training infrastructure, while investments in tourism infrastructure such as trails and transportation directly affect the seasonality, distribution, and stability of outdoor employment. ^{10 35 37}

Land Use, Tenure and Regulatory Systems - Land use, tenure arrangements, and regulatory frameworks have a direct impact on workforce stability in outdoor sectors. Uncertain or short-term tenure for outdoor operators can make it difficult to invest in staff development, equipment, or multi-session business models, contributing to shorter contracts, higher turnover, and limited career progression opportunities. ⁴⁰ Where land use planning and tenure decisions are well coordinated, and provide long-term certainty, and clear pathways, employers are better positioned to offer stable employment, invest in training, and contribute to local workforce development. ⁴¹

Climate Change

Climate change and environmental pressures are also increasingly impacting the policy context in which the outdoor workforce operates. Variability in seasonal length, snow weather conditions, and increasing risk of wildfires are shifting operational windows, impacting employment stability, business models, and required employment skills. ^{36 42}

These shifts are creating new pressures on policy and workforce development systems as existing training, certification and employment models are not fully aligned with increasingly unpredictable conditions. In response, there is a growing need for more adaptive and responsive frameworks that support year-round employment strategies and flexible training pathways. Policy coordination across various sectors is becoming increasingly important to ensure workforce stability and to support the outdoor sector's ability to adapt to ongoing environmental change.

Looking Forward: Workforce Development Strategies and Gaps Remaining

Equity, Access and Inclusion

Equity, access, and inclusion are increasingly recognized as structural issues that shape who can enter and remain in outdoor work. Participation research indicates that cost barriers such as equipment, training, transportation; geography; and income levels all influence access to outdoor recreation and related career pathways, particularly for lower-income youth and underrepresented groups. ^{24 43} Furthermore, outdoor imagery and existing workforce demographics can create psychological and cultural barriers for newcomers, racialized communities, and first-generation participants. ³⁴

Policy discussions within tourism and workforce development emphasize the need for low-threshold entry points, beginner-friendly programming, mentorship, and targeted supports to diversify participation and employment in outdoor sectors. Updates to Tourism HR Canada's National Occupational Standards emphasize diversity, equity and inclusion, Indigenous cultural literacy, and professionalism, suggesting that future funding and regulatory environments will increasingly reward operators and training systems that can demonstrate inclusive practices. ¹⁰

From an exposure perspective, early introduction to the outdoor sector through family, school, and camp systems is a critical determinant of long-term participation and workforce entry, underscoring the importance of inclusive youth access to outdoor activity as a foundational equity and workforce issue. ³⁰

Infrastructure Investment as Long-Term Workforce Enabler

Infrastructure investment is emerging as a lever for enabling a sustainable outdoor workforce. Investments in trails, parks, campgrounds, and access points not only support visitor experiences and environmental stewardship but also expand and stabilize employment opportunities across guiding, maintenance, conservation, and programming. ³⁵

Regions that have invested in comprehensive outdoor recreation systems demonstrate stronger employment multipliers and more stable seasonal transitions, indicating that physical infrastructure decisions have long-term workforce consequences. ²⁰ Similarly, underinvestment or reliance on aging and informal infrastructure can limit program scalability, increase safety risks, and shift maintenance burden onto volunteers and small operators, exacerbating burnout and constraining workforce development. ^{31 44}

For Alberta, policy choices about outdoor infrastructure renewal and expansion will therefore play a key role in shaping both visitor outcomes, and the size, stability, and quality of the outdoor workforce over time.

Conclusion

This report synthesizes the best available evidence on Alberta's outdoor workforce to provide a clearer understanding of a sector that is both economically and socially significant, yet difficult to define and measure within existing labour market systems.

The findings reinforce that the outdoor workforce operates as a broad, interconnected system, embedded across tourism, recreation, education, conservation, and other sectors, rather than as a single, clearly defined industry. This is both its strength and the reason it remains undercounted: the same breadth that makes outdoor work valuable also scatters it across classification systems, employment types, and informal arrangements that standard data cannot easily capture.

Importantly, the evidence is strong enough to support action even as it reveals significant gaps. The considerations, limitations, and research opportunities below summarize what the review found, where the data falls short, and what is needed to close those gaps.

Key Considerations

The considerations below distill the review's most significant findings, spanning the sector's economic and social value, the structural realities of outdoor careers and job quality, and the policy, infrastructure, and equity conditions that shape the workforce.

The outdoor sector in Alberta is economically-significant - Available evidence suggests that the outdoor workforce generates significant economic value in terms of both GDP and jobs created. Best estimates of the economic size of the industry within Alberta range from \$4.7-7.2B for conventional outdoor recreation activities alone.

Lack of a shared definition limits both visibility and planning - The outdoor workforce is not formally defined in labour market systems, and the roles are dispersed across many NAICS and NOCs codes as well as informal and volunteer arrangements. Similarly, in many cases, NOCs do not accurately reflect the level of training and certification required for specialized outdoor roles, grouping them in the same categories as entry-level workers. This fragmentation leads to undercounting, complicates efforts to quantify the size, composition, and skill-level of the workforce, constrains evidence-informed policy decisions, and impacts the career pathways of outdoor professionals.

Proxy use of tourism and U.S. data offers incomplete insights into outdoor dynamics - Tourism and other adjacent sectors provide the strongest available signals on employment, demographics and labour market conditions, while U.S. sector-specific data can provide insight into industry size, but they only partially overlap local outdoor work.

Non-linear and hybrid career challenges - Conventional workforce models for outdoor careers are often seasonal, part-time and portfolio based, with workers combining roles across various roles, including guiding, instruction, education, retail, conservation and other areas. The non-linear structure of outdoor work further complicates measurement and development of standard progression pathways.

Structural job quality issues constrain attraction and retention - Low wages, seasonal instability, limited benefits, high certification and insurance costs, and unclear advancement pathways create systemic barriers and limit long-term participation. These pressures are heightened in roles where workers carry significant safety responsibility, since compensation often does not reflect the level of risk and judgment the work requires. The sector relies heavily on workers' passion and intrinsic motivation, but poor job quality often undercuts these, which is not sustainable for many people over time.

Volunteer and informal labour underpin the system but are largely invisible - Informal and volunteer roles are foundational to the outdoor workforce for trails, stewardship, camps, training pathways and community programming. These contributions function as early entry points for outdoor careers but are not quantified in standard labour statistics, contributing to underrepresentation of size and measurement of the workforce.

Training and certification systems are extensive but fragmented - Multiple certifying bodies, overlapping credentials and inconsistent recognition across employers and regions create complicated and costly barriers to entry and progression pathways. The absence of common standards complicates the development of clear career pathways and limits portability of qualifications across employers and jurisdictions. The constraint lies in duplication and limited portability of credentials across employers and jurisdictions, rather than in the level of training required.

Equity, access and inclusion are system-level workforce issues - Participation and workforce entry are shaped by cost barriers, geography, early exposure, and cultural factors. Youth, newcomers, Indigenous peoples and other equity-deserving groups are largely present in adjacent sectors but are unevenly represented across leadership opportunities, limiting the sector's ability to build and retain a diverse workforce.

Policy and governance fragmentation weakens coordination - Outdoor workforce is spread across tourism, labour, immigration, education, land use and infrastructure, without a dedicated policy framework or coordinating body in Alberta. Governance fragmentation hinders sector-wide standard setting, workforce planning and advocacy compared with jurisdictions that have dedicated outdoor recreation offices or recognized sector associations.

Infrastructure, housing and climate shape outdoor workforce stability and planning - Trail systems, parks, access points, transportation and housing conditions all influence job availability, season length, regional distribution of work and overall job quality. Climate change and environmental pressures are increasing and further affecting operating windows, risk profiles and skills requirements, underscoring the need to integrate workforce planning in the evolving landscape.

Social and public-interest benefits strengthen the case for workforce investment - Outdoor work contributes to both mental and physical health, youth development, social connection, environmental stewardship and rural vitality. Broader public benefits position the outdoor workforce as part of a public-interest system, reinforcing the need for coordinated, long-term workforce development strategies beyond sectoral considerations.

Limitations of Existing Data

The limitations below explain why current estimates should be read as conservative and partial, and they directly inform the research opportunities that follow.

No direct industry definition or occupational category for “outdoor work” - There is no discrete set of NAICS and NOC codes that capture the outdoor sector, as outdoor businesses and roles are spread across multiple categories, making it impossible to extract clean outdoor workforce data. Similarly, many NAICS and NOC codes bundle outdoor and non-outdoor activities within the same category, with no subcategories for outdoor-specific operations.

Reliance on proxy sector and indirect measures - Most workforce insights are inferred from tourism, recreation and other visitor economy data, which does not distinguish between indoor and outdoor roles nor between outdoor-specific and outdoor-adjacent roles, contributing to potentially inaccurate estimates of size and composition.

Undercounting due to informal, seasonal, volunteer and multi-employer work - Standard labour force datasets are designed around formal, paid jobs with clear employer and employee relationships, but seasonal contracts, casual work and portfolio careers are only partially captured, if at all, limiting understanding of the labour required to sustain outdoor systems.

Siloed evidence across subsectors and jurisdictions - Much of the existing research is subsector-specific; this report, for example, draws on separate studies of mountain biking, snowmobiling, heli-skiing, camps, and trails, often from different provinces. These studies offer valuable detail, but because they use different methods, definitions, and geographies, their findings are difficult to aggregate or compare, making it difficult to build a consolidated picture of the outdoor workforce.

Limited, indirect demographic information - Alberta-specific demographic breakdowns such as age, gender, geography, Indigenous identity and immigration status for outdoor workers are not available in a unified dataset, rather are often inferred through related sectors which may not fully reflect outdoor-specific dynamics or representations, making it more challenging to understand career pathways for equity-deserving groups with unique needs and experiences.

Measurement constraints on labour demand, shortages and employment - Labour demand and shortage projections are typically generated via broad NAICS level, that do not align well with outdoor occupations. At the same time reliable data on vacancy rates, turnover, wages, benefits and working conditions specific to outdoor roles is largely unavailable in the public domain. As a result, analysis is limited and relies heavily on qualitative evidence through case-specific studies rather than consistent longitudinal metrics.

Opportunities for Future Industry Research

Given the noted gaps in available data, industry stakeholders within Alberta and across jurisdictions should consider the following recommendations to strengthen the understanding of the outdoor industry and its workforce:

1. **Agree on a shared industry definition** - Work towards sector-wide consensus on a singular definition for the outdoor sector and establish consensus on how existing NAICS and NOCs should be mapped to outdoor businesses and roles to improve usability of existing data and comparability across jurisdictions and subsectors.
2. **Build a dedicated outdoor workforce survey for Alberta** - Develop and conduct a recurring survey, targeting both employers and workers across outdoor roles and supporting services to collect data on employment patterns, wages, benefits, job quality, seasonality, hybrid work models, demographics training pathways, and barriers to attraction and retention. Primary data generated through this type of research would be extremely valuable in understanding local workforce characteristics and local needs and measuring change over time.
3. **Quantify volunteer and informal labour** - Partner with trail associations, clubs, non-profits and stewardship groups to collect data on volunteer hours, roles, training, and progression of volunteers into paid career pathways to better understand their contributions into economic and workforce metrics and inform better planning and funding decisions.
4. **Develop Alberta-specific demographic and equity profiles** - Undertake research specifically focused on equity-deserving groups in outdoor work, including Indigenous peoples, women, newcomers, racialized communities as well as rural and northern residents. Explore barriers, representation in leadership, wage and job stability differences and culturally relevant pathways for outdoor careers.
5. **Assess training, certification and recognition pathways** - Map the full ecosystem of outdoor-related training and certifications including overlaps, gaps and cost structures. This will enable better understanding amongst workers of standards recognition, portability of credentials across employers and jurisdictions and identify opportunities for standardization to support clearer career pathways.
6. **Model future state scenarios on climate change and seasonality impacts to workforce demand** - Develop future state scenarios that quantify how changing environmental factors including snowpack, wildfire risks and extreme weather might impact the industry in terms of required skills and business models. This offers an opportunity to identify priority occupations and regions for adaptation planning and diversified year-round employment strategies.
7. **Benchmark governance models in other jurisdictions** – Undertake comparative research on workforce governance and professionalization models through engagement across jurisdictions with coordinated outdoor sector frameworks (ex. provinces or states with outdoor recreation offices or sector-wide accreditation). Identifying transferable elements such as centralizing bodies, funding

mechanism related to certification and integrated training partnerships may inform next steps and support standardization across Alberta.

Next Steps

As an immediate next step, the gaps identified in this review will directly shape the primary research that follows in this project, including employer and employee surveys, focus groups, and interviews, and the resulting Workforce Action Plan, which will translate the evidence into targeted strategies for youth attraction, retention, and career development. The broader recommendations above set a longer-term, sector-wide agenda that will require coordinated effort across industry, government, education, and community partners.

Pursuing these opportunities, in the near and longer term, would strengthen the outdoor workforce evidence base, reducing fragmentation and reliance on proxy-driven estimates and moving toward a more comprehensive, Alberta-specific understanding that can directly inform workforce development.

Glossary of Key Terms

Throughout this report, multiple terms are used to describe what is more broadly referred to as the “outdoor sector”, including terms such as “outdoor industry”, “outdoor recreation economy”, and related variations. These terms are intentionally used and reflect a key finding in the research: the outdoor workforce is not defined or measured through a single, consistent framework.

Terminology varies across the existing literature and sources, with different organizations using distinct language depending on their analytical lens or area of focus (i.e. tourism, recreation, education, or economic development). As such, this report uses terminology as it appears in source materials where appropriate, while applying the term “outdoor sector” as the most inclusive. This approach reflects fragmented and cross-sector nature of the field rather than inconsistency in analysis.

Outdoor Sector: The broadest and most inclusive term used in the report refers to the ecosystem of activities, services, products, organizations and roles that enable or support outdoor experiences in natural or semi-natural environments. This term reflects the reality that outdoor work spans tourism, education, recreation, conservation, and community programming.

Outdoor Industry: A commonly used term in economic and business contexts to describe the network of business, organizations and operators engaged in producing outdoor related services, goods and experiences as it appears frequently across industry reports, economic studies and policy documents which emphasize market structure.

Outdoor Workforce: Refers to all individuals engaged in work that directly or indirectly enables outdoor experiences and includes guides, instructors, interpreters, educators, operators, land managers and supporting roles. This term reflects the non-linear and multi-role career pathways across outdoor work.

Outdoor Recreation Economy / Outdoor Economy: This term captures the total economic contribution of outdoor recreation activities, including direct and indirect impacts such as spending, employment and infrastructure and is commonly used in national and international analysis as it highlights the scale, value and economic significance and includes a broader set of activities such as retail, manufacturing and services linked to outdoor participation. This often includes both core activities such as guiding and recreation, but also supporting activities such as transportation, retail, and infrastructure. Definitions may vary across jurisdictions.

Outdoor Recreation: Activity-based framing referring specifically to participation in outdoor activities such as hiking, camping, skiing etc. It is commonly used in participation data and public benefits. In this report, outdoor recreation is often used as a proxy for workforce economic analysis where sector specific data is unavailable.

Outdoor-Adjacent Work / Outdoor-Adjacent Sector: Refers to sectors and roles that are not exclusively outdoor focused but have strong overlap with support in outdoor activities such as tourism, hospitality, transportation or retail. This term is frequently used in labour market analysis where direct outdoor data is unavailable.

Tourism: Refers to multiple sector systems of activities, services, industries, and infrastructure that support travel and visitation in places outside an individual's usual environment. Tourism is not a single industry but a composite of interconnected sectors including accommodation, food and beverage, transportation, attractions, events, guiding and experiential services that collectively contribute to the presence of visitor economy where economic value is generated through travel related experiences and spending.

Outdoor Tourism / Nature-Based Tourism: Is a subset of the outdoor sector which focuses on travel and the visitor experiences tied to outdoor environments and destination-based recreation. This term reflects the overlap with the visitor economy and signals that not all outdoor workers identify as part of tourism.

Visitor Economy: A broader system that encompasses tourism but also hospitality and related services that support visitors and is often used in economic reports. In this report, the visitor economy provides proxy data for outdoor workforce insights due to overlap but also includes roles that are not specific to outdoor work.

The coexistence of these terms reflects the absence of a unified definition and measurement framework for outdoor sectors, contributes to fragmentation in data, policy, and workforce analysis.

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