

Alberta's Crown Land Outdoor Recreation Economy

Technical Report

August 2021





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1.0 Introduction

In early 2021, the Tourism Industry Association of Alberta (TIAA) expressed interest in having a study done to assess the importance of the outdoor recreation economy in Alberta that would be similar to the recently completed study prepared for the Outdoor Industry Association in the United States (Earth Economics, 2021). The US study contained information on the extent of annual participation in 10 outdoor recreation activities and the expenditures associated with these activities and then translated this information into estimates of employment and government revenues supported by these expenditures. TIAA was particularly interested in understanding the extent of recreation and associated economic impacts on Crown lands in Alberta, which consist of provincial parks and recreation areas and public lands managed for recreational purposes, such as: Athabasca Ranch, Livingstone, Porcupine Hills, Ghost-Waiparous, McLean Creek, Brule Lake, Bighorn, Richardson Backcountry, Timeu, Sherman Meadows, Border Town, Caw Ridge, Porcupine Hills, and along the Forestry Trunk Road.

The original work program for this study envisaged a literature review of current and recent recreation and tourism data sources concerning the extent and value of expenditures associated with various outdoor recreation activities in Alberta. It was hoped that available information could be used to prepare estimates of the extent of annual household or individual participation in selected outdoor recreation activities in terms of user-days, visitor nights or whatever metrics may be available. Estimates of current (2020) participation would then have been developed using the most recent population and/or household estimates for Alberta. Available information would also be used to develop estimates of recreation spending in Alberta, differentiating between spending on equipment (capital spending) and spending related to recreational visits or trips. These expenditure data would then be used as the basis for estimating the extent to which outdoor recreational activities by Albertans in Alberta have contributed to provincial gross domestic product (GDP), labour income, employment, and government revenues.

The literature review and associated analysis were completed in February, 2021. The results of the analysis are provided in Section 2.0 of this report. While the review of available literature was able to provide some insights into the overall value of the Alberta resident recreation economy in Alberta, there was insufficient published information to be able to differentiate recreational activity among national parks, provincial parks and recreation areas and other public lands. Furthermore, there was insufficient information on household participation in various outdoor recreation activities or associated spending to be of any help in replicating the types of analyses presented in the US study. Based on these findings it was concluded that some type of primary research would be required to fill the data voids.

In March 2021 it was determined that a survey of Albertans regarding their participation in recreation activities on Crown lands in Alberta would be required in order to replicate the US study. An online survey was designed and tested during March and April, and was made available for completion by Albertans during the month of May. The survey was designed to acquire information on trips to national parks, provincial parks and recreation areas and other public lands in each of Alberta's seven regions identified in its Land Use Framework (LUF). Questions were related to both day and overnight trips to these various destinations during winter and summer months, including the number of trips, primary and secondary activities on these trips and trip-related spending. On the understanding that the COVID-19 pandemic may have adversely affected participation in outdoor recreation activities in 2020/21, respondents were asked to provide information for both 2019/20 and 2020/21. Socio-economic questions were included in order to understand how the characteristics of respondents matched those of average Albertans in each of the LUF regions. Links to the survey were provided to various outdoor recreation associations and organization with the expectation that their members would take the time to complete the survey.

A total of 2,947 parties attempted to complete the online survey during the month of May 2021. However, 486 surveys were completed by non-Albertans, 353 surveys were too incomplete to analyze, 69 surveys appeared to be duplicates because they came from the same IP address and had similar use information, and 640 had no use data included in the response. This resulted in a total of 1,399 surveys being used as the basis for analysis. The results of the survey are presented in Section 3.0 of this report. Analysis of the responses and the socio-economic information showed that the surveys were completed by avid outdoor recreation users, as has been typical of most recently completed recreation-related surveys, who reported very high levels of use and spending. With the respondents not being representative of typical Alberta households, it was concluded that the survey results could not be extrapolated to provide a reliable picture of recreational use and spending at a provincial level.

Given the limitations of both the literature review and the survey, it was concluded that the best approach for understanding of the use of Crown lands in Alberta for recreation by Albertans was to combine information from both sources. The results of the literature review were used to identify the total annual spending by Alberta households on vacation, pleasures trips to Alberta destinations in 2019/20; this number became the ceiling under which the results of the survey would be interpreted. The survey results then became the basis for understanding how recreational activities and spending would be geographically distributed under this ceiling. Admittedly, this approach may not provide an entirely accurate picture of Albertans' participation in outdoor recreational activities on Crown lands in Alberta. However, given the limitations of published information and the challenge of trying to use an online survey to collect information from a representative sample of Alberta households, this approach is the best possible and provides some important insights into how Albertans use and value the various Alberta lands that are used for outdoor recreation.

2.0 Part A: The Literature Review

2.1 METHODOLOGY AND ASSUMPTIONS

2.1.1 Overall Approach

The two recent US studies of the value of outdoor recreation (Earth Economics, 2021; Outdoor Industry Recreation Association, 2017) were able to develop estimates of total use and expenditures by using participation information for specific outdoor recreation activities. It appears that at least some US states undertake regular or periodic surveys to determine participation patterns and collect expenditure information on individual outdoor recreation activities. Thus, they are able to build the picture using known individual pieces of the outdoor recreation puzzle.

In Canada, and certainly in Alberta, data on individual recreation activities and associated expenditure information are not regularly collected. While the Alberta Recreation Survey has been conducted periodically, with the most recent version being in 2017, the survey only provides information on individual participation in various activities, with some information on levels of activity, but no information on spending. On the other hand, the 2012 Canadian Nature Survey provides information on recreation spending by Alberta residents but, with the exception of fishing and hunting, tends to group all other outdoor recreation activities under the headings of nature-based recreation and motorized recreation. Neither study differentiates between activities by Albertans at Alberta destinations versus other destinations. And, while the Alberta Tourism statistics provide information on levels of visitation in Alberta by Albertans,

other Canadians and other countries, as well as expenditure data, the available information does not clearly differentiate between tourism involving outdoor recreation from other types of tourism. Thus, for Alberta, the pieces of the puzzle for individual outdoor recreation activities do not exist, so it will not be possible to recreate the information contained in the US studies using the same methodology.

So, based on the available information, developing an estimate of the value of the outdoor recreation economy will require that a top-down approach be used, where we start by developing a total value estimate and then use interpolation to develop estimates of value associated with individual activities.

2.1.2 Reference Period

The base year for the analysis will be 2017. This is the most recent year for which Alberta Tourism has prepared detailed activity and spending information for all of its tourism regions and was also the most recent year for the Alberta Recreation Survey. While Statistics Canada does have information on visits by non-Canadian visitors for 2018 and 2019, there is no equivalent information yet on domestic tourism. However, estimates for 2018 and 2019 could be made by extrapolating historical data related domestic tourism and visitation patterns. Extrapolation to estimate outdoor recreation in 2020 will not be possible, however, because historical data will not be available to capture the effects of COVID-19, which has had a profound effect on recreation and travel patterns globally. It may be possible to make some general observations on levels of activity in 2020 once the February edition of the Alberta Tourism Market Monitor is released.

2.2 PREDICTION OF TOTAL OUTDOOR RECREATION ACTIVITY

Development of an estimate of the amount of outdoor recreation activity in Alberta in 2017 requires collecting information on the following factors:

- The number of trips made by Albertans to locations in Alberta for outdoor recreation purposes and the associated spending
- The number of trips made by Canadians from other provinces to locations in Alberta for outdoor recreation purposes and the associated spending
- The number of trips made by residents of other countries to locations in Alberta for outdoor recreation purposes and the associated spending
- The value of purchases of outdoor recreation equipment by Alberta households.

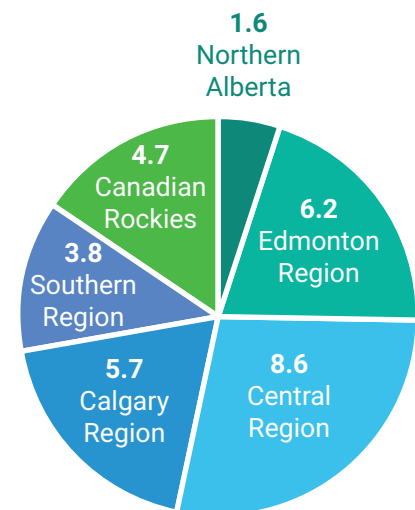
These items are considered below.

2.2.1 Activity and Spending by Albertans

2.2.1.1 Annual Activity

According to data reported by Alberta Economic Development, Trade and Tourism (AEDTT, 2019a), Albertans made 30.8 million person-visits to Alberta destinations in 2017. These visits were distributed among the six Alberta tourism regions (AEDTT, 2019b) as shown in Figure 1. The Central Region accounted for 28.1% of total person-visits by Alberta residents, followed by the Edmonton Region with 20.6%, the Calgary Region with 18.6%, the Canadian Rockies Region with 15.3%, the Southern Region with 12.5% and the Northern Region with 5.2%. There is limited information regarding levels of activity by the residents of each zone within their home zones, but it would appear that, with the exception of the Canadian Rockies zone, about 25% of the activity within each region is by regional residents.

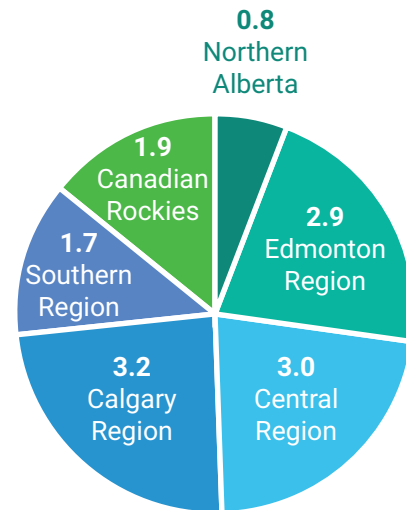
Figure 1: Regional Visitation by Albertans, 2017



Millions of Person Visits
Source: AEDTT, 2019a

According to Albert Tourism (AEDTT, 2019b) 13.6 million overnight visits were included in the person-visit data were made by Albertans and other Canadians in 2017. Estimates of the overnight regional distribution of these overnight visits is provided in Figure 2. It shows that the Calgary Region accounted for the highest number and percentage of overnight visits (23.4%) followed by the Central Region (22.1%), Edmonton Region (21.7%), Canadian Rockies Region (14.2%), Southern Region (12.8%) and Northern Region (5.9%).

Figure 2: Regional Visitation by Albertans on Overnight Visits, 2017

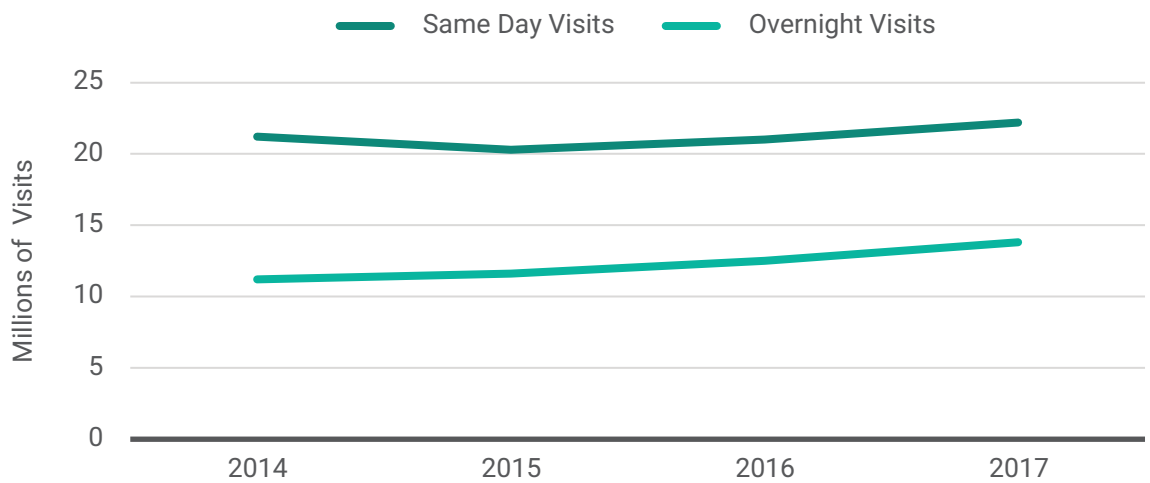


Millions of Overnight Visits
Source: AEDTT, 2019b

Additional information on visitation is available from Statistics Canada (2018a), which reported both the number of same day-visits and the number of overnight camping visits by Canadian residents for 2014 through 2017. Statistics Canada estimates the number of overnight visits to be 13.8 million, which is slightly higher than the 13.6 million reported by Alberta Tourism. Statistics Canada estimated that there were 22.2 million day visits in 2017. When combined, Statistics Canada’s estimate of total visits in Alberta was 36.0 million; this is higher than the 34.9 million trips reported by Alberta Tourism.

Figure 3 shows the changes in the number of same day and overnight trips in Alberta by domestic (Canadian) visitors between 2014 and 2017. It shows that the number of same day visits dropped between 2014 and 2015 but rose afterwards such that visitation levels in 2017 were 4.8% higher than in 2014. There has been a steady increase in the number of overnight visits since 2014, such that 2017 levels were 23.6% higher than in 2014.

Figure 3: Number of Same Day and Overnight Visits to Alberta by Canadian Visitors, 2014 to 2017



Source: Statistics Canada, 2018a

The Statistics Canada data also show that 31.3% of same-day visits and 34.9% of overnight visits were made during the third quarter of 2017, with the remainder being spread evenly throughout the other three quarters (about 22% each). The only exception was that there was a higher percentage of same day trips 24.3% in Q4 compared to overnight trips (21.0%).

There are no statistics that differentiate the Alberta portion of domestic visitation, other than the observation from AEDTT (2019a), that Albertans accounted for 88.25% of total person-visits in 2017 (30.8 million of the 34.9 million domestic person-visits). However, AEDTT (2019b) did provide statistics on the average number of travel nights spent by visitors from all of Canada, from Alberta and from other provinces for each of the six tourism regions. By determining the percentages of Alberta visits and other Canada visits that would yield the correct average of domestic overnight visits, it was then possible to differentiate the number of overnight visits by Albertans from overnight visits by other Canadians. Based on these calculations, the percentage of overnight visits made by Albertans varied from 57.1% in the Calgary Region to 63.5% in the Edmonton Region to 75.0% in each of the Southern Region and the Rocky Mountain Region to 80.5% in the Northern Region and 84.6% in the Central Region. Overall, 70.8% of overnight visits in Alberta are estimated to have been made by Alberta residents; this represents 9.6 million of the 13.6 million overnight visits. Canadian visitors are estimated to have accounted for the other 4.0 million overnight visits.

The estimates of overnight visits by Alberta and other Canada can then be subtracted from the statistics related to total visitation by Albertans (30.8 million person-visits) and other Canadians (4.1 million person-visits) to determine the number of same day visits for each group. On this basis, the Alberta portion of domestic travel in Alberta in 2017 is estimated to be 30.8 million visits, including 21.2 million same day visits and 9.6 million overnight visits (see Table 1).

Table 1: Estimated Same Day Visits and Overnight Visits by Albertans and Other Canadians, 2017

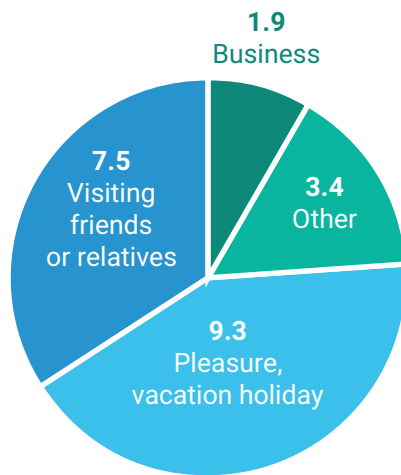
	Same Day Visits	Overnight Visits	Total Visits
	Millions of Visits		
Alberta	21.2	9.6	30.8
Other Canada	0.1	4.0	4.1
TOTAL	21.3	13.6	34.9
Percent from Alberta	99.4%	70.8%	88.3%

Since the Travel Alberta reports are based on the Statistics Canada data, this report will use the higher numbers produced by Statistics Canada. Based on Table 1, the Alberta portion of tourism in Alberta in 2017 would be 22.1 million same day visits and 9.8 million overnight visits, for a total of 31.8 million visits.

2.2.1.2 Purpose of Visit

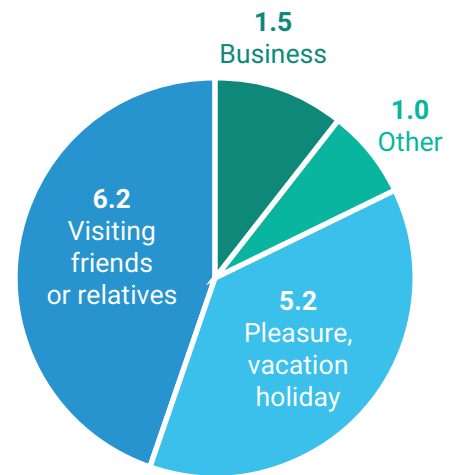
While the number of same day and overnight visits by Alberta residents has now been estimated, these visits were made for a variety of reasons including visiting friends and relatives, business, leisure and other purposes. According to Statistics Canada (2018a), 41.9% of the same day visits made by residents of all parts of Canada (9.3 million) were for purposes of pleasure, vacation holiday (see Figure 4) while 37.3% of overnight visits (5.2 million) were for those same purposes (see Figure 5).

Figure 4: Purpose of Same Day Visits, 2017



Millions of Same Day Visits
Source: Statistics Canada, 2018a

Figure 5: Purpose of Overnight Visits, 2017

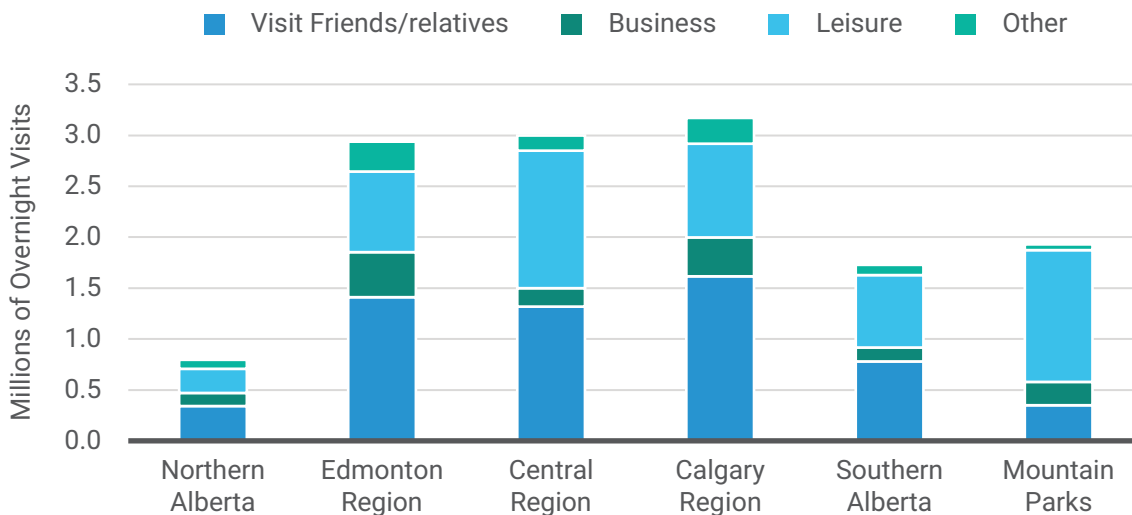


Millions of Overnight Visits
Source: Statistics Canada, 2018a

Fewer same day visits were made to visit friends or relatives (7.5 million visits or 34.0%) while there more overnight visits or visit friends or relatives (6.2 million visits or 44.5%).

Figure 6 shows how overnight visits made by all domestic visitors were distributed among the six tourism regions. There is no separate information for just Alberta residents nor is there information on the distribution of same day visits.

Figure 6: Purpose of All Overnight Trips to the Six Alberta Tourism Regions



Source: AEDTT, 2019b

In the absence of specific information related to trip purposes for Alberta residents only and for day visits instead of overnight visits, the available information will be used to determine the percentage and number of same day visits made by Albertans for the various purposes.

Since the purposes of this study is to identify the extent of participation in outdoor recreation activities, it is assumed that “pleasure, vacation holiday” is synonymous with “outdoor recreation”. This may overstate participation in outdoor recreation activities because not everyone who takes a trip for pleasure, vacation holiday purposes may actually be participating in some form of outdoor recreation activity. On the other hand, it is likely that some people who make trips to visit friends or relatives also engage in some form of outdoor recreation. A 2016 study (TNS Canada, 2016) determined that 44% of parties that visited Alberta to visit friends or relatives reported visiting a national or provincial park and 40% reported participating in an outdoor recreation activity. In the absence of any better information, the number of trips for pleasure, vacation holiday purposes is considered to be a reasonable proxy for participation in outdoor recreation activities.

On the basis of this assumption, domestic participation in trips for pleasure, vacation holiday purposes amounted to 9.3 million same day trips and 5.2 million overnight visits in 2017. These would be distributed between Alberta residents and residents of other parts of Canada as shown in Table 2 .

Table 2: Estimated Same Day Visits and Overnight Visits by Albertans and Other Canadians, for Pleasure, Vacation Holiday, 2017

	Same Day Visits	Overnight Visits	Total Visits
	Millions of Visits		
Alberta	9.2	3.6	12.9
Other Canada	0.1	1.5	1.6
TOTAL	9.3	5.2	14.4

These numbers will be the basis for determining annual expenditures related to outdoor recreation.

2.2.1.3 Annual Expenditures

According to Statistics Canada (2018a), domestic visitors spent a total of \$6,918 million in Alberta in 2017. This includes \$2,026 million for same day trips and \$4,891 million for overnight trips (see Table 3). Visitors engaged on trips for pleasure, holiday vacation purposes spent a total of \$2,990 million, of which \$939 million was related to same day visits and \$2,051 million for overnight visits.

Table 3: Estimated Same Day Visits and Overnight Visits by Albertans and Other Canadians, for Pleasure, Vacation Holiday, 2017

	Same Day Visits	Overnight Visits	Total Visits
	Millions		
Total Spending	\$2,027	\$4,891	\$6,918
Pleasure, Vacation Holiday	\$939	\$2,051	\$2,990
	Average Spending per Visit		
Total Spending	\$91.32	\$353.73	\$192.04
Pleasure, Vacation Holiday	\$101.00	\$398.05	\$206.95

In terms of average daily spending, spending associated with overnight visits was nearly four times the average daily spending for same-day visits. People visiting Alberta for purposes of pleasure, vacation holiday spent about 7.8% more per day than did all domestic travellers in Alberta. Daily spending by people travelling for pleasure, vacation holiday spent 10.6% more than average while daily spending for people on overnight visits was 12.5% higher than average.

AEDTT (2019a) reported domestic tourism spending in Alberta to have been \$6,791 million in 2017, including \$4,824 million by Albertans and \$1,967 million by other Canadians. This suggests average spending of \$156.62 per visit for Alberta residents and \$479.76 per visit for other Canadians.

With Table 3 differentiating spending between same day visits and overnight visits for all visits and for visits related to pleasure, vacation holiday and the AEDTT (2019a) data differentiating spending between Alberta residents and other Canadians, it is possible to combine the information from the two sources to estimate spending by Albertans and other Canadians involved in same day and overnight trips for pleasure, vacation holiday. The resulting estimates are shown in Table 4. Based on all the assumptions, it is estimated that in 2017 Albertans spent \$2,149 million on same day and overnight visits in the province on pleasure, vacation holiday trips. Of this, \$933 million was spent on same day visits (43.4% of the total) with \$1,215 million spent on overnight visits (68.6% of the total).

Table 4: Estimated Total Spending by Albertans and Other Canadians on Same Day Visits and Overnight Visits for Pleasure, Vacation Holiday, 2017

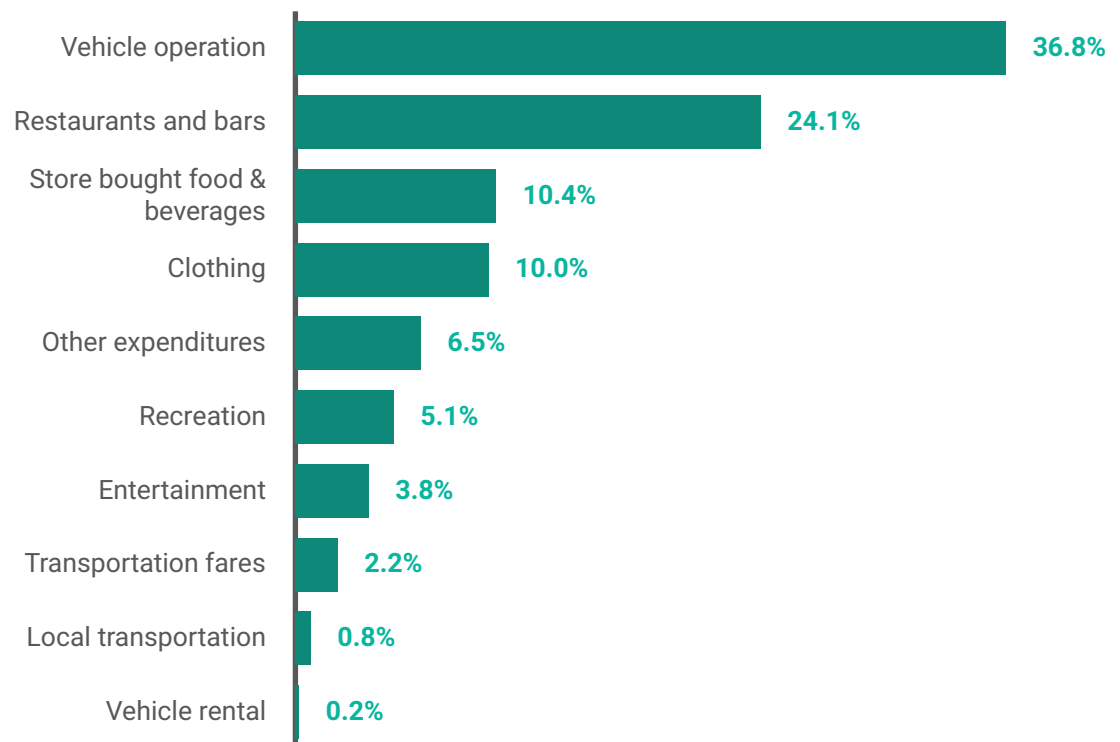
	Same Day Visits	Overnight Visits	Total Visits
	\$Millions		
Alberta	\$933	\$1,216	\$2,149
Other Canada	\$6	\$835	\$841
TOTAL	\$939	\$2,051	\$2,990
Percent of Total Spending	46.3%	41.9%	43.2%
Visits for All Purposes	\$2,027	\$4,891	\$6,918

Table 4 also shows that spending by Albertans accounted for \$2,149 million of the \$2,990 million spent by domestic tourists on pleasure, vacation holiday visits in 2017; Albertans account for 71.9% of the total. It also shows that spending on by domestic tourists on pleasure, vacation holiday visits in 2017 accounts for 43.2% of the \$6,918 million in total domestic tourism spending in the province.

Statistics Canada (2018b) also publishes information on the types of expenditures made by Canadian residents in Alberta based on the type of visit. Figure 7 shows the pattern of expenditures for same day visits while Figure 8 shows the patterns for overnight visits.

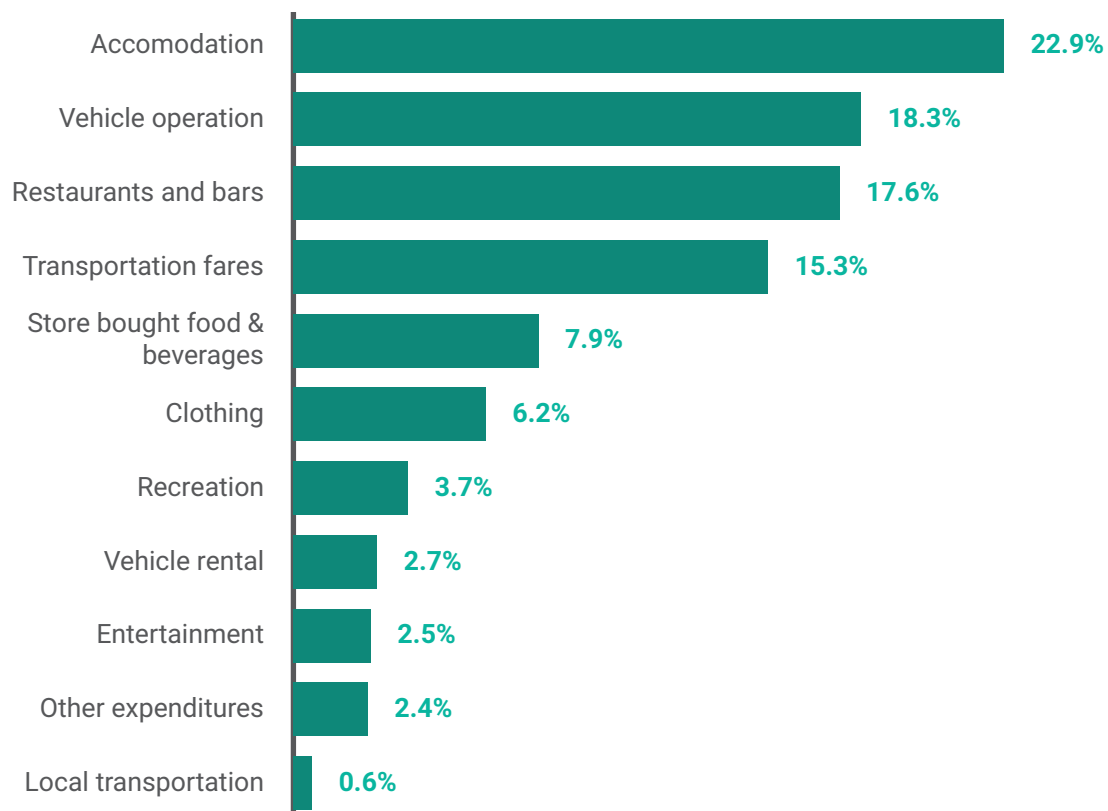
For same day visits, domestic tourists spent the most on vehicle operating costs (fuel and repairs), which accounted for 36.8% of total spending. Restaurant purchases of food and beverages was the second most important item, accounting for 24.1% of spending. The next most important items were purchases of food and beverages in stores (10.4%) and clothing (10.0%). For people overnight visits, spending on accommodation was the most important item, accounting for 22.9% of total spending. This was followed by spending on vehicle operating costs (18.3%, purchases of food and beverages in stores (17.6%) and then transportation fares (airfares, bus fares, etc.) (15.3%).

Figure 7: Expenditure Patterns, Domestic Visitors, Same Day Visits, 2017



Source: Statistics Canada, 2018b

Figure 8: Expenditure Patterns, Domestic Visitors, Overnight Visit, 2017



Source: Statistics Canada, 2018b

While the statistics show that people making trips for pleasure, vacation holiday spent 10.6% more than average per same days visits and 12.5% more than average on overnight visits, there is no information that shows whether the patterns of expenditures made by this group were different than for all travellers. Similarly, there is no information that shows whether the expenditure patterns of Alberta travellers were different from those of other Canadians visiting Canada. In the absence of more detailed information, it is assumed that the expenditure patterns in Figure 7 and Figure 8 apply to Albertans making visits for pleasure, vacation holiday visits. Based on this assumption, Table 5 provides estimates of Alberta spending in Alberta related to pleasure, vacation holiday visits in 2017.

Table 5: Breakdown of Total Spending by Albertans on Same Day Visits and Overnight Visits for Pleasure, Vacation Holiday, 2017

	Same Day Visits	Overnight Visits	Total
	\$Millions		
Accommodation	\$0	\$278	\$347
Vehicle rental	\$2	\$32	\$42
Vehicle operation (including gas and repairs)	\$343	\$223	\$510
Local transportation	\$8	\$7	\$14
Transportation fares (plane, bus, etc.)	\$20	\$186	\$246
Food and beverage, in restaurants and bars	\$225	\$214	\$420
Food and beverage, in stores during trip	\$97	\$96	\$185
Recreation	\$48	\$45	\$89
Entertainment	\$35	\$30	\$61
Clothing	\$94	\$75	\$157
Other expenditures	\$61	\$29	\$78
Total	\$933	\$1,216	\$2,149

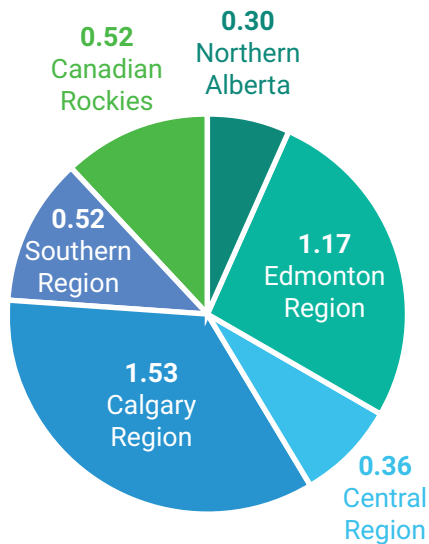
The most important spending categories were vehicle operation (\$210 million), restaurant purchases of food and beverages (\$420 million), accommodation (\$347 million), transportation fares (\$246 million), and store purchases of food and beverages (\$185 million).

2.2.2 Activity and Spending by Other Canadians

2.2.2.1 Annual Activity

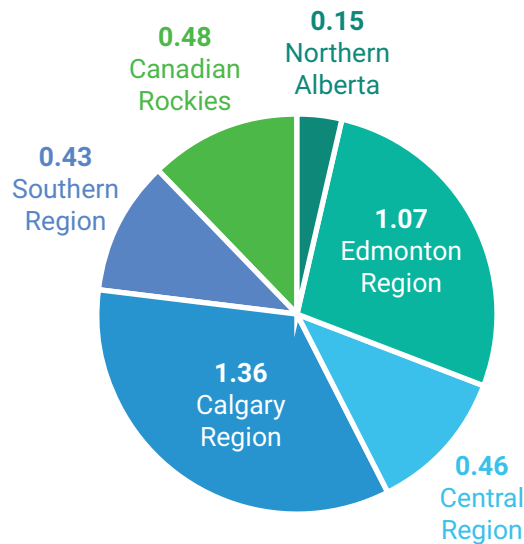
According to AEDTT (2019a), people from other parts of Canada 4.1 million person-visits to Alberta destinations in 2017. These visits were distributed among the six Alberta tourism regions (AEDTT, 2019b) as shown in Figure 9. Other Canadians spent most of their times in the Calgary and Edmonton regions; these two regions accounted for 2.7 million person-visits or 65.8% of the total. Both the Southern Region and the Canadian Rockies Region accounted for 12.8% of total person-visits by other Canadians Alberta residents, followed by the Central Region with 8.8% and the Northern Region with 7.4%.

Figure 9: Regional Visitation by Other Canadians, 2017



Millions of Person Visits
Source: AEDTT, 2019a

Figure 10: Regional Overnight Visits by Other Canadians, 2017



Millions of Overnight Visits
Source: AEDTT, 2019b

While there is no published information on the distribution or number of overnight visits made by visitors from other parts of Canada, estimates were developed using the methodology described in Section 2.2.1.1. Based on this approach, it is estimated that people visiting from other parts of Canada made 3.96 million overnight visits, distributed among the six regions as shown in Figure 10. This shows that overnight visits to the Calgary and Edmonton regions combined for 61.4% of total overnight visits, followed by the Canadian Rockies Region (12.2%), Central Region (11.7%), Southern Region (10.9%) and Northern Region (3.9%).

Based on available information and, as shown in Table 1, it is estimated that in 2017 residents of other parts of Canada made 0.1 million same day visits and 4.0 million overnight visits to Alberta. Thus, overnight visits accounted for 96.7% of all visits made by other Canadians.

2.2.2.2 Purpose of Visit

There is no specific information related to trip purposes for residents of other parts of Canada; available data relate to all domestic travellers. Consequently, as was explained in Section 2.2.1.2, it is assumed that the trip purpose listed for all domestic travellers also applies to visitors from other parts of Canada. As previously shown in Table 2, it is estimated that visitors from other parts of Canada made 1.6 million visits to Alberta for pleasure, holiday vacation purposes, and of these, 0.1 million were same day visits and 1.5 million were overnight visits. Thus, trips for pleasure, holiday vacation purposes accounted for 37.0% of all trips taken to Alberta in 2017 by residents of other parts of Canada.

2.2.2.3 Annual Expenditures

Estimates of spending by visitors from other parts of Canada on trips to Alberta for pleasure, holiday vacation purposes were derived using the methodology described in Section 2.2.1.3. This indicates average spending of \$218 per same day visit and \$1,322 per overnight visit. Based on the number of trips, it is estimated that visitors from other parts of Canada spent a total of \$2,004 million in Alberta, of which \$1,991 million related to overnight visits.

Using the spending patterns for same day trips and overnight trips as shown in Figure 7 and Figure 8 it is possible to calculate the amount of spent by other Canadians on the various expenditure categories. The resulting calculations are shown in Table 6.

Table 6: Breakdown of Total Spending by Other Canadians on Same Day Visits and Overnight Visits for Pleasure, Vacation Holiday, 2017

	Same Day Visits	Overnight Visits	Total
	\$Millions		
Accommodation	\$0	\$455	\$455
Vehicle rental	\$0	\$53	\$53
Vehicle operation (including gas and repairs)	\$5	\$365	\$370
Local transportation	\$0	\$11	\$11
Transportation fares (plane, bus, etc.)	\$0	\$304	\$304
Food and beverage, in restaurants and bars	\$3	\$351	\$354
Food and beverage, in stores during trip	\$1	\$157	\$158
Recreation	\$1	\$74	\$75
Entertainment	\$0	\$49	\$50
Clothing	\$1	\$123	\$125
Other expenditures	\$1	\$48	\$49
Total	\$13	\$1,991	\$2,004

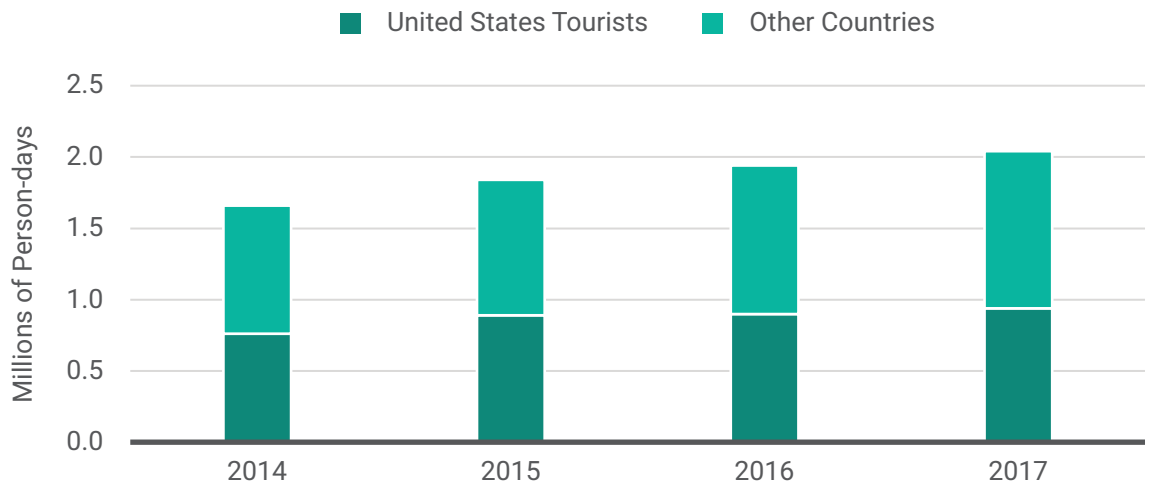
For other Canadians, accommodation represented the highest cost associated with their Alberta visits, accounting for \$455 million or 22.7% of total spending. Next in importance were vehicle operating costs (\$370 million or 18.5%), restaurant purchases of food and beverages (\$354 million or 17.7%), and transportation fares (\$304 million or 15.2%).

2.2.3 Activity and Spending by International Visitors

2.2.3.1 Annual Activity

According to AEDTT (2019a), international travellers made 2.04 million person-visits to Alberta destinations in 2017. This includes 0.94 million person-visits made by visitors from the United States and 1.1 million person-visits by visitors from other countries. Figure 11 shows how the number of person-visits changed over the period from 2014 to 2017. It shows that the number of person days has increased by 22.5% over this period: a net increase of 0.37 million person-days. The rate of increase for visitors from the US (23.1%) was slightly higher than for visitors from other countries (21.9%).

Figure 11: Annual Number of Person-Days for International Tourists in Alberta, 2014 to 2017



Source: Statistics Canada, 2020a

The available data offer no information on what percentage of person-days for international visitors were same day visits versus overnight visits. However, based on the distance travelled to reach Alberta, it is assumed that they are all overnight visits. While there may be some same day visits for international tourists who may be travelling through Alberta to reach a different province, it is expected that this number would be quite small.

There is no information on the regional distribution of international travellers for 2017 but data for 2014 (Government of Alberta, 2016) show the distribution of overnight visits among the six tourism regions for both US visitors and visitors from other countries. While the number of travellers changed between 2014 and 2017, it is unlikely that there were major changes in the regional distribution of activities. Comparing the 2014 and 2017 data for domestic travellers shows that, in 2017, there were fewer as less slightly fewer person-visits in the Edmonton Region and more in the Rocky Mountain Region but otherwise the percentages were quite similar. For this reason, the distribution of international tourists among tourism regions in Alberta in 2017 is assumed to be the same as in 2014. The resulting estimates of international visitation for each of the six tourism regions are shown in Table 7.

Table 7: Estimated Regional Distribution of International Travellers to Alberta, 2017

Tourism Region	US Visitors	Overseas Visitors	Total	
	Millions of Person-Visits			Percent
Alberta North	0.06	0.03	0.09	4.4%
Alberta Central	0.09	0.10	0.19	9.5%
Edmonton	0.26	0.21	0.47	23.1%
Canadian Rockies	0.24	0.29	0.53	26.0%
Calgary	0.16	0.43	0.59	28.9%
Alberta South	0.12	0.03	0.16	7.6%
Total	0.94	1.10	2.04	100.0%

The table shows that the Calgary Region was most visited by international travellers, accounting for 26.0% of total person-visits, although this ranged from 17.0% of US visitors to 43% of overseas visitors. The Canadian Rockies Region was the second most visited by international travellers, accounting for 28.9% of total person-visits, with 26% of both US and overseas travellers visiting that region. The Edmonton Region was third in importance; it attracted 23.1% of person-visits by international travellers, including 28% of US visitors and 19% of overseas visitors.

2.2.3.2 Purpose of Visit

There is no current information on the purpose of international visits to Alberta. However, the statistics for 2014 indicate that leisure was the primary purpose of 35.3% of US visitors and 54.8% of overseas visitors. Based on the assumption that the reasons for visitation are relatively consistent from year to year, it is estimated that trips for leisure purposes accounted for 0.93 million person-visits for Alberta by international tourists. This represents 45.8% of all person-visits in 2017. The number includes 0.33 million person-visits by US residents and 0.60 million person-visits by overseas travellers.

2.2.3.3 Annual Expenditures

According to AEDTT (2019a), international travellers spent \$2,099 million in Alberta in 2017. This includes \$847 million by US travellers and \$1,252 million by overseas travellers. This represents an average of \$904 per person-visit for US visitors and \$1,138 per person for overseas visitors.

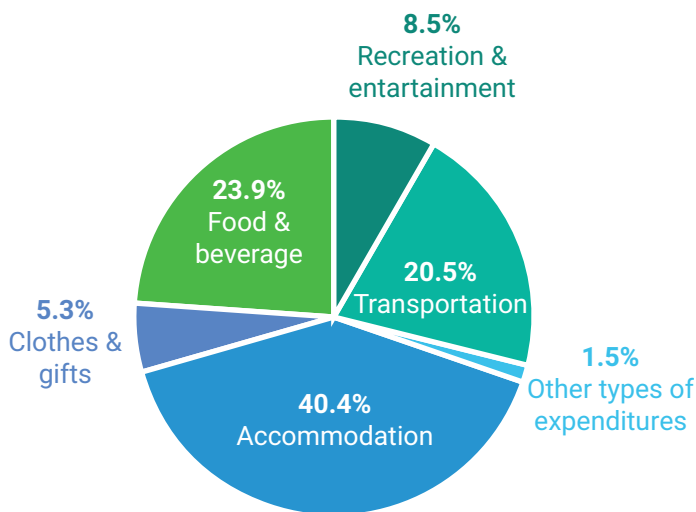
There is no information as to whether international travellers who participate in trips for leisure purposes spend more per person-visit than the overall average. However, the data for domestic tourists showed people visiting Alberta for pleasure, vacation holiday purposes spent 12.5% more per day than the overall average. It is reasonable to believe that a similar pattern exists for international travellers on the expectation that, by spending to participate in outdoor recreation and other leisure activities, people travelling for leisure purposes spend more than those who do not. On this basis, it is estimated that US visitors travelling for leisure purposes spent an average of \$1,014 per person-visit while overseas travellers spent \$1,281 per person visit.

Based on the estimated number of person-visits for leisure purposes and the average daily spending estimates, international tourists spent about \$1,109 million in Alberta in 2017. This includes \$337 million in spending by US visitors and \$772 million in spending by overseas visitors.

Statistics Canada (2020b) reports that spending by international tourists to Alberta amounted to \$2,209 million in 2018 and \$2,186 million in 2019. Spending by US tourists was \$898 million in 2018 and \$863 million in 2019 while overseas visitors spent \$1,311 million in 2018 and \$1,223 million in 2019. The expenditure data also show that, in 2018, 47.2% of this spending occurred in the Canadian Rockies Region (\$1,045 million), with 29.6% in the Calgary Region (\$654 million) and 23.2% in the rest of Alberta (\$512 million). Thus, the 2017 estimate of spending by international tourists visiting Alberta for leisure purposes (\$1,109 million) is slightly higher than spending by all international tourists who visited the Rocky Mountain Region in 2018.

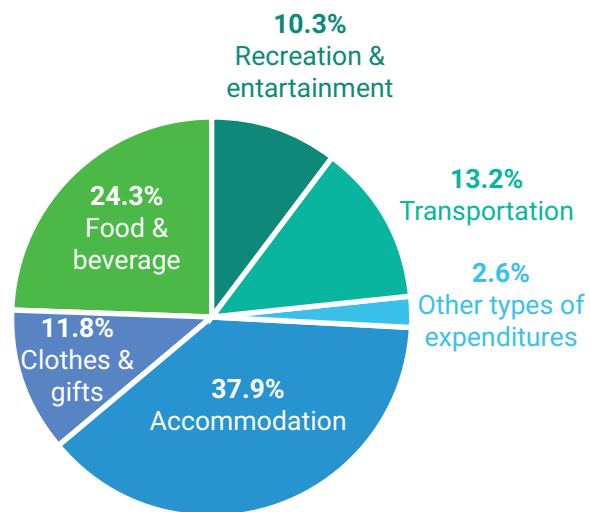
The Statistics Canada (2020b) information also shows tourist spending in terms of six major expenditure categories for 2018. The distribution of spending by US visitors is shown in Figure 12 while the spending pattern for overseas visitors is shown in Figure 13. The overall patterns are very similar, although US visitors spent more on transportation, likely because a high percentage of them drove to Alberta, while overseas tourists spent more on clothing and gifts and recreation and entertainment.

Figure 12: Expenditure Patterns, US Visitors, 2018



Source: Statistics Canada, 2020b

Figure 13: Expenditure Patterns, Overseas Visitors, 2018



Source: Statistics Canada, 2020b

By combining the spending patterns with the total expenditures for US and overseas visitors, it is possible to estimate the total amount of money spent in Alberta for each of the six expenditure categories. The resulting estimates are provided in Table 8. It shows that spending on accommodation amounted to \$428 million, which accounted for 38.6% of total spending. Purchases of food and beverages amounted to \$268 million, or 24.2% of the total. Transportation related spending amounted to \$171 million (15.4% of the total). International tourists spent about the same amount on both clothes and gifts (\$109 million) and recreation and entertainment (\$108 million).

Table 8: Breakdown of Total Spending by International Tourists Leisure Visits to Alberta, 2017

	US Visitors	Overseas Visitors	International Visitors
	\$Millions		
Accommodation	\$136	\$292	\$428
Clothes and gifts	\$18	\$91	\$109
Food and beverage	\$81	\$188	\$268
Recreation and entertainment	\$29	\$80	\$108
Transportation	\$69	\$102	\$171
Other types of expenditures 4	\$5	\$20	\$25
TOTAL	\$337	\$772	\$1,109

2.2.4 Alberta Purchases of Recreation Equipment

While Section 2.2.1 describes recreational activities by Alberta residents engaged in pleasure, vacation holiday visits and estimates their spending on these visits, those estimates do not include what Albertans spent to purchase the capital items (recreational vehicles, boats, camping equipment, etc.) needed to participate in those activities.

According to Statistics Canada (2021), in 2017 Alberta households spent an average of \$4,594 on recreation, including recreational equipment and related services (\$1,115), home entertainment equipment and services (\$264), recreational services (\$2,323) and recreational vehicles and associated services (\$893).

2.2.4.1 Recreational Vehicles

Of these categories, the one of most relevance to outdoor recreation activities consists of purchases related to recreational vehicles, of which households spent an average of \$735 to buy recreational vehicles and another \$158 to operate them. Since operational costs would be part of trip spending, they are not considered capital expenditures and are assumed to be included in the visitor spending estimates. With an assumed 1,557,850 households in 2017¹, this suggests total spending to purchase recreational vehicles totalled \$1,145 million.

According to data related to motor vehicle registrations (Government of Alberta, 2020), there were 24,496 motorhomes registered in 2017 as well as 55,809 tent trailers and 318,998 travel trailers. In terms of off highway vehicles, there were 93,478 ATVs and 29,758 snow vehicles. Albertans also owned 178,870 boat trailers. This means that one in every five households owned a travel trailer, one in nine owned a boat trailer, one in 17 owned an ATV, 1 in 28 owned a tent trailer, one in 52 owned a snowmobile, and one in 64 households owned a motorhome.

2.2.4.2 Recreational Equipment

Another category of importance is spending on recreational equipment and related services, which amounted to \$1,115 per household. This category includes spending to purchase and repair both indoor and outdoor recreational equipment, including team sports, so only a portion of these expenditures can be considered to be related to outdoor recreational activities. For this analysis it is assumed that 25% of this spending (about \$280 per household per year) is related to equipment needed for outdoor recreation. This would be about \$ 436 million in 2017.

2.2.4.3 Summary

Annual capital expenditures related to outdoor recreation by Albertans in 2017 is estimated to be \$1,1171 million, with 62.8% of this being associated with purchases of recreational vehicles.

¹ According to the 2016 Census there were 1,527,675 households in Alberta and the 2011 Census indicates there were 1,390,275 households. Assuming that the same annual growth rate observed between 2011 and 2016 continues, the estimate for 2017 is 1,557,870 households.

While Statistics Canada (2021) also published information on package trips purchased by Alberta households (\$897 per household), these are assumed to be included in the estimates of trip expenditures.

2.2.5 Summary

In total, it is estimated that Alberta residents and visitors from other parts of Canada and other countries made 15.4 million visits in 2017 for outdoor recreation purposes (see Table 9). The table shows that about 60% of these were same-day visits made almost entirely by Albertans while 40% of visits were overnight visits. Albertans accounted for 83.7% of total visits.

Table 9: Estimated Total Visits for Pleasure, Vacation Holiday, 2017

	Same Day Visits	Overnight Visits	Total Visits
	Millions of Visits		
Alberta	9.2	3.6	12.9
Other Canada	0.1	1.5	1.6
US		0.3	0.3
Overseas		0.7	0.7
TOTAL	9.3	6.1	15.4

Table 10 shows how visits for pleasure, holiday purposes were distributed among the six tourism regions for both same-day visits and overnight visits. It shows that the Central Region was most visited (27.6% of total visits) and this was due to the large number of Albertans visiting that region. The Canadian Rockies Region was the second most important, with 24.1% of visits. This was followed by the Calgary Region (16.6% of total visits and the Edmonton Region (15.3% of visits).

Table 10: Estimated Regional Distribution of Total Visits for Pleasure, Vacation Holiday, 2017

	Northern Alberta	Edmonton Region	Central Region	Calgary Region	Southern Alberta	Canadian Rockies	Total
Millions of Visits							
Alberta	0.50	1.72	4.03	1.73	1.63	3.27	12.88
Other Canada	0.11	0.42	0.13	0.54	0.19	0.19	1.57
US	0.02	0.09	0.03	0.06	0.04	0.09	0.33
Overseas	0.02	0.11	0.05	0.24	0.02	0.16	0.60
Total	0.64	2.35	4.24	2.56	1.88	3.70	15.38
	4.2%	15.3%	27.6%	16.6%	12.2%	24.1%	100.0%

Total spending by Alberta residents and visitors to Alberta on trips involving outdoor recreation in 2017 is estimated to have been \$5.3 billion (see Table 11).

Table 11: Estimated Trip-Related Expenditures for Pleasure, Vacation Holiday, 2017

	Same Day Visits	Overnight Visits	Total Visits
Millions of Visits			
Alberta	\$933	\$1,216	\$2,149
Other Canada	\$13	\$1,991	\$2,004
US		\$337	\$337
Overseas		\$772	\$772
TOTAL	\$946	\$4,316	\$5,262

Albertans also spent an estimated \$1.6 billion on recreational vehicles and outdoor recreation equipment in 2017. Thus, total spending associated with outdoor recreation in Alberta in 2017 was estimated to have been \$6.8 billion.

2.3 ECONOMIC IMPACT OF OUTDOOR RECREATION

Visitor spending provides revenues for businesses throughout Alberta, resulting in labour income and jobs and provides companies with profits that generate taxes.

Three types of economic impacts result from tourist spending:

Direct effects occur in the industry where the expenditure is first made. For example, paying for a night in a hotel provides revenues for the hotel that they then use to pay for labour (and employment) and goods and services needed to run the hotel (such as utilities, toiletries, etc.), with anything being left over retained as pre-tax profits.

Indirect effects occur when businesses that directly benefit from tourist spending purchase the goods and services that they need to operate. Using the hotel example, the purchase of utilities and toiletries, etc., needed to operate the hotel generate revenues for the companies that provide those goods and services and these revenues are then used to pay for their labour costs and they goods and services that they purchase in order to produce the goods and services that they directly sell to the hotel.

Induced effects occur when the labour income resulting directly from tourist purchases as well as labour income generated in those businesses that are indirectly supported by tourist spending are spent to purchase consumer items. For the hotel example, this would mean that when the hotel staff meet up with the people working for the utility company that is supplying electricity to the hotel for a dinner and a beer after work, the money to purchase food and beverages provides employment income and profits for the restaurant.

Thus, every dollar spent by tourists will circulate through the economy with additional employment and profits being created with every successive round of spending. This is termed the “multiplier” effect. The total economic impact result from tourist spending consists of the direct, indirect and induced effects. These effects are typically measured in terms of labour income and employment, as well as in terms of gross domestic product (GDP) which is a measure of the value added to the economy and consists of labour income plus the pre-tax profits retained by the companies affected by the spending.

2.3.1 Estimation of Economic impacts

The simplest way to estimate the economic impacts associated with tourist spending is to use published economic multipliers for the various types of industries that are most directly affected by tourist spending. These industries are the ones for which detailed expenditure information is available (such as the expenditure categories used in Table 5, Table 6, and Table 8). Statistics Canada (2021b) routinely constructs input-output tables for the national and provincial economies that show revenues received by one industry (described as outputs) results in the purchases of goods and services from other industries (described as inputs). The most recent input-output model was constructed using information for 2017. Statistics Canada then publishes multiplier tables that provide information on the direct, indirect and induced effects on GDP, labour income and employment that resulted from the expenditure of \$1 in 2017. While the size of the multipliers changes from year, depending on business activity in that industry in that year, the size of the changes is usually pretty minor.

Based on the types of expenditures being made by domestic and international tourists and spending by Alberta households on outdoor recreation equipment, the economic impacts associated with tourist spending were calculated using multipliers for the following industries:

- Air transportation (this would include airfares paid in Alberta)
- Amusement and recreation industries
- Automotive equipment rental and leasing
- Food and beverage stores
- Food services and drinking places
- Gasoline stations
- General merchandise stores
- Motor vehicle and parts dealers
- Other transit and ground passenger transportation and scenic and sightseeing transportation
- Sporting goods, hobby, book and music stores
- Traveller accommodation

Impact estimates were derived by multiplying the spending estimates associated with each industry, based on the data in Table 5, Table 6, and Table 8, by the various multipliers for those industries. Two adjustments were made, however. Table 6 shows that tourists from other parts of Canada spent \$304 million on transportation fares, but it is likely that most of these purchases were made in their home province and were not spent in Alberta. Consequently, these expenditures were not included in the calculation of impacts. Secondly, the data in Table 8, show that US and overseas visitors spent \$171 million on transportation, but this likely includes car rentals as well as purchases of gasoline, and these are two different industries with different multipliers. To derive a better estimate, the spending on transportation by international tourists was divided evenly between the automotive equipment rental and leasing industry and gasoline stations.

2.3.2 Economic Impact Estimates

In total it was estimated that domestic and international tourists participating in outdoor recreation activities in Alberta in 2017 spent a total of \$6.5 billion. It is estimated that Albertans accounted for 57.1% of the total, including \$1.6 billion on recreational vehicles and equipment and \$2.1 billion while on recreation trips. Visitors from other parts of Canada spent \$1.7 billion, which represents 26.0% of the total, while international tourists spent \$1.1 billion or 17.0% of the total. Based on the economic multipliers, this spending is calculated to have generated \$6.5 billion in GDP for the Province of Alberta, created \$3.7 billion in labour income and 88,583 jobs. The basis for these numbers is provided Table 12.

Table 12: Total Economic Impacts Resulting from Spending on Outdoor Recreation in Alberta, 2017

Industry	Visitor Spending	GDP	Labour Income	Employment
	Millions			
Air transportation	\$246	\$198	\$100	1,521
Amusement and recreation industries	\$383	\$352	\$223	7,105
Automotive equipment rental and leasing	\$180	\$130	\$83	1,126
Food and beverage stores	\$344	\$364	\$219	6,243
Food services and drinking places	\$1,042	\$806	\$528	16,733
Gasoline stations	\$966	\$940	\$393	9,296
General merchandise stores	\$542	\$580	\$352	9,112
Motor vehicle and parts dealers	\$1,145	\$1,420	\$897	14,637
Other transit and ground passenger transportation and scenic and sightseeing transportation	\$25	\$24	\$15	298
Sporting goods, hobby, book and music stores	\$436	\$539	\$331	8,620
Traveller accommodation	\$1,230	\$1,108	\$588	13,891
TOTAL	\$6,539	\$6,461	\$3,728	88,583
	Direct Effects	\$3,752	\$2,431	65,552
	Indirect Effects	\$1,405	\$745	12,117
	Induced Effects	\$1,304	\$553	10,914

The table shows that the largest economic impacts are associated with Alberta purchases of recreation vehicles, which accounted for 17.5% of outdoor recreation-related spending and 22.0% of Alberta GDP effects and 16.5% of employment effects. The greatest employment impacts were associated with spending in the food services and drinking places industry (18.9% of total employment). Large employment effects also resulted from spending on traveller accommodation (15.7% of total) and gasoline stations (10.5% of employment).

According to the Government of Alberta (2021), Alberta GDP in 2017 was \$329.9 billion, which means that visitor spending on outdoor recreation accounted for 2.0% of Alberta GDP. This means that this component of the economy was equivalent in size to the entire accommodations and food services industry in Alberta, which accounted for \$6.8 billion in GDP or the other services industry, which accounted for \$6.6 billion in GDP.

In terms of employment, the 88,583 jobs estimated to have resulted from spending on outdoor recreation represented 3.8% of total employment in Alberta as of December 2017 (Government of Alberta, 2018) and 5.1% of all employment in the service industries.

The estimated economic impact of all tourism in Alberta in 2017 (excluding purchases of capital items by Alberta residents) was estimated to be \$7.8 billion, based on estimated spending of \$8.6 billion, with 113,950 jobs. This means that the outdoor recreation component accounted for about 57% of all tourism spending and economic impacts in Alberta.

3.0 Part B: The Survey

While published data provided an estimate of total recreation-based trips by Albertans in Alberta and associated spending, an online survey of households was undertaken to determine how visitation was distributed among LUF regions, the various Crown land types, trip type (day and overnight) and recreational activities, and to obtain better information on trip spending. The survey was designed in February, 2021, pretested in March, and was made available for completion online starting on April 20, 2021. Opportunities to complete the online survey ended on May 31, 2021.

3.1 THE SAMPLE

A total of 2,947 parties attempted to complete the online survey. However, 486 surveys were completed by non-Albertans, 353 surveys were too incomplete to analyze, 69 surveys appeared to be duplicates because they came from the same IP address and had similar use information, and 640 had no recreational use data included in the response. This resulted in a total of 1,399 surveys being used as the basis for analysis.

3.1.1 Geographic Distribution of Results and Weighting

Table 13 shows the residency of the 1,399 survey respondents. Residency was determined based on the IP address of the respondent or the responses to the question about home postal code and was manually coded based on the overlap between residence and the LUF region boundaries. Although it was hoped that there would be sufficient responses to support analysis for residents of all seven LUF regions, there were too few responses for residents of the Lower Athabasca and Lower Peace regions for this to occur. Consequently, the responses were pooled as shown in the table such that the upper and lower regions of the Athabasca and Peace regions were combined into single regions.

Table 13: Survey Response Rates by LUF Region and Sample Weighting Factors

LUF Region of Residence	# Responses	Pooled Responses		Alberta Households 2020		Weighting Factor
		Number	Percent	Number	Percent	
South Saskatchewan	875	875	62.5%	740,760	46.1%	0.7367
Red Deer	85	85	6.1%	93,005	5.8%	0.9521
North Saskatchewan	360	360	25.7%	620,820	38.6%	1.5007
Upper Athabasca	32	47	3.4%	88,570	5.5%	1.6399
Lower Athabasca	15					
Upper Peace	30	32	2.3%	64,525	4.0%	1.7547
Lower Peace	2					
Total	1,399	1,399	100%	1,607,680	100%	

The representativeness of the sample was determined by comparing the distribution of responses by region with the estimated distribution of households by region in 2020. The household distribution was determined by using the population and household counts for individual Alberta communities from the 2016 census, combining these into estimates for the seven LUF Regions and using the growth factors based on the population estimates for 2016 to 2020 provided by Alberta Treasury Board and Finance to scale the 2016 census data to 2020. The resulting number of households by LUF regions is provided in the table.

Comparing the distribution of survey results with the distribution of Alberta households shows that some regions (South Saskatchewan and Red Deer) were over represented in the survey and the others were under-represented. Consequently, survey weighting factors were developed to rebalance the sample results based on the regional population estimates.

3.1.2 Representativeness of the Sample

One of the critical questions arising from voluntary computer-based surveys is whether the households that responded to the survey are in fact truly representative of the population at large. The problem in this case is that there are very few data about recreation characteristics of Alberta households with which to make a comparative analysis.

The 2017 Albertan Recreation Survey (Alberta Culture and Tourism, 2017) offers some information about household participation rates for selected activities, but the analysis of survey responses (unweighted), as shown in Table 14, indicates that respondents to the 2020 survey were much more avid participants in various recreational activities than the general public, which was expected given that the survey was targeted at various recreation groups:

Table 14: Comparison of Survey Household Participation in Selected Outdoor Recreation Activities to the 2017 Alberta Recreation Survey

Activity	2017 Albertan Recreation Survey	2020 Survey
Overnight camping	41%	75.4%
Swimming (in lakes and rivers)	35%	47.1%
Fishing	26%	44.1%
ATV/Off road vehicles	15%	28.5%
Birdwatching	14%	53.8%
Mountain biking (off road)	12%	39.9%
Snowshoeing	10%	21.5%
Cross country skiing	10%	34.7%
Hunting	8%	26.8%
Horseback riding/trail riding	7%	35.3%
Mountain/rock climbing	7%	23.4%
Snowmobiling	6%	5.5%

Another indication that the survey was not representative was that 31.3% of respondents reported belonging to an outdoor recreation club, group, or organization, and this seems very high although there is no information on what percentage of Albertans belong to such organizations.

A third indication is that the households that responded to the survey reported very high levels of use: an average of 39.9 day trips and 11.8 overnight trips per year in 2019/20 and 39.8 day trips and 12.1 overnight trips in 2020/21. While there is no information about extent of recreational trips by all Alberta households with which to compare, the survey results indicate that the households that responded are avid recreational users with use levels that are likely much higher than might be expected for the average Albertan. Part of the reason for the very levels of reported use is that a fairly large portion of survey respondents were residents of Banff, Canmore, Jasper and other communities that are located inside or adjacent to parks and protected areas and public lands who also reported very high levels of use: 130 of the 1,399 respondents reported more than 100 day trips per year in 2019/20. While eliminating the very high responses did bring down the overall average levels of use, the annual number of trips still remained higher than might be expected from an average Albertan household. For example, removing any response that reported more than 30 day or overnight trips per year resulted in an average of 13.2 day trips and 10.4 overnight trips per year in 2019/20 and 12.6 day trips and 9.1 overnight trips in 2020/21.

A fourth indicator is tied to expenditures. Survey respondents reported spending an average (weighted) of \$185 per day trip and \$495 per overnight trip. Based on the total number of trips, this would suggest annual spending of \$10,745 per household. Spending on non-trip related items (equipment and vehicles) averaged another \$9,743 per household for the 58% of households that reported such expenditures. Thus, the households that responded to the survey are not only heavy recreational users, but also high spenders on recreation. This higher spending is partially due to survey households having higher incomes than average Albertans. As shown in Table 15, the survey contained a smaller portion of households earning between \$50,000 and \$75,000 but higher percentages of households with incomes in the range of \$75,000 to \$124,999, although households in the highest income range (incomes in excess of \$150,000 per year) were underrepresented in the sample.

Table 15: Household Income Characteristics of Survey Households Compared to 2016 Census

Household Income	2016 Census	Sample	Difference
Over \$150,000	25.2%	9.0%	-16.2%
\$125,000 to \$150,000	9.4%	14.6%	5.2%
\$100,000 to \$124,999	12.1%	18.7%	6.6%
\$75,000 to \$99,999	14.4%	17.6%	3.2%
\$50,000 to \$74,999	15.5%	13.2%	-2.3%
Under \$50k	23.4%	26.9%	3.5%
Total	100.0%	100.0%	0.0%

Thus, the sample of households included in the survey appears not to be representative of Alberta households but there are no available data that provide a clear picture of the socio-economic characteristics of Alberta households that do participate in outdoor recreation. So, the problem then becomes how do you extrapolate survey data to make estimates at a provincial level? This problem is particularly vexing but also appears in other recent internet surveys related to outdoor recreation activities where the respondents who self selected to respond to the survey have higher levels of interest and participation than would otherwise be found in the Alberta population.

3.2 SURVEY RESULTS: RECREATION ACTIVITY

3.2.1 Estimation of Numbers of Households using Crown Lands for Recreation

It is not possible to estimate the number of Alberta households that participated in outdoor recreation on Crown lands because the sample results reflect the activity patterns of a group of households that are highly active participants in outdoor recreation activities. What can be said is that, as shown in Table 16, 74.8% of the most active Alberta households visited a national park in 2019 or 2020, 83.2% visited a provincial park or recreation area but 92.4% visited public lands for recreational purposes. The highest percentages of households that visited public lands were residents of those LUF regions that did not have national parks (Red Deer) or where national parks were distant from the population centres (Peace).

Table 16: Percent of Survey Households Using Crown Lands for Recreation, by Crown Land Type

LUF Region of Residence	National Parks	Provincial Parks and Protected Areas	Public Lands
South Saskatchewan	83.8%	88.3%	91.3%
Red Deer	90.6%	81.2%	96.5%
North Saskatchewan	82.2%	85.3%	86.1%
Athabasca	74.5%	78.7%	91.5%
Peace	56.3%	84.4%	96.9%
Total	74.8%	83.2%	92.4%

Table 17 shows the top two LUF regions used by residents of each of the LUF regions. It shows that, in most cases, households tended to focus their activities on Crown lands in their home regions. However, residents of the Red Deer LUF region reported higher rates of visitation to locations in the North Saskatchewan and South Saskatchewan LUF regions, and this is likely because there are no national parks in the Red Deer LUF region.

Table 17: Top Two LUF Regions Used for Recreation

LUF Region of Residence	LUF Region of Activity							Total
	South Sask.	Red Deer	North Sask.	Upper Athabasca	Lower Athabasca	Upper Peace	Lower Peace	
South Saskatchewan	94.9%	12.1%	55.5%	6.5%	0.3%	1.8%	1.0%	62.5%
Red Deer	51.8%	41.2%	74.1%	8.2%	0.0%	2.4%	1.2%	6.1%
North Saskatchewan	41.7%	11.1%	78.1%	40.3%	5.3%	6.4%	1.1%	25.7%
Athabasca	27.7%	4.3%	40.4%	70.2%	23.4%	8.5%	4.3%	3.4%
Peace	12.5%	6.3%	6.3%	25.0%	0.0%	81.3%	37.5%	2.3%
Total	37.8%	12.6%	46.5%	35.3%	7.1%	25.8%	11.6%	100.0%

3.2.2 Estimation of Total Recreation Activity

3.2.2.1 Recreational Activity by Crown Land Type

Since there is no basis for extrapolating survey data to obtain estimates of total outdoor recreation activity, it is necessary to rely on other data sources to total activity and then use survey data to interpolate how that activity is distributed among the various land bases in each of the LUF regions.

As was previously shown in Table 1, Albertans are estimated to have made 30.8 million day and overnight visits to Alberta destinations in 2017. Of these, 12.9 million trips were made for pleasure or vacation/holiday purposes (42% of total trips). This consisted of 9.2 million same day trips and 3.6 million overnight visits, such that same day trip accounted for 71.3% of total trips and the remainder (28.7%) were overnight trips. In comparison, survey results (weighted) indicated that 78.4% of the trips taken by households who responded to the survey were day trips and 21.6% were overnight trips. The difference is likely due to the small number of respondents who reported in excess of 100 day trips because they lived either in or adjacent to parks and protected areas or on public land.

Since the base year of the analysis was the summer of 2019 and the winter of 2019/20, it is estimated that activity levels during that time period were higher than in 2017. Population estimates for Alberta suggest that the provincial population increased by 3.9% during that time period. Assuming no change in household recreation activity patterns during that time (i.e. no changes in the number of trips), it is reasonable to assume that Albertans took 13.4 million trips in Alberta for pleasure or vacation/holiday purposes. This will be used as the basis for the analysis.

Based on the reported pattern of day and overnight trips reported by survey respondents (weighted), recreational activity in 2019/20 was distributed among the recreational land types as shown in Table 18.

Table 18: Estimated Distribution of Day and Overnight Trips by Crown Land Type, 2019/20

2019/20	Day Trips		Overnight Trips		Total Trips	
	Millions	Percent	Millions	Percent	Millions	Percent
National Parks	3.1	23.4%	1.0	7.4%	4.1	30.7%
Provincial Parks and Protected Areas	4.0	29.8%	0.9	6.5%	4.9	36.3%
Public Lands	3.4	25.2%	1.0	7.8%	4.4	33.0%
Total	10.5	78.4%	2.9	21.6%	13.4	100%

Thus, public lands are estimated to account for about one-third for total trips by Albertans; this is higher than for national parks. Notably, public lands accounted for the highest percentage of overnight trips.

A more detailed breakdown of trips activity is provided in Table 19.

Table 19: Estimated Distribution of Trips by Home LUF Region and Crown Land Type, 2019/20

Home LUF Region	National Parks		Provincial Parks and Protected Areas		Public Lands		Total	
	Millions	Percent	Millions	Percent	Millions	Percent	Millions	Percent
South Saskatchewan	2.705	33.2%	2.910	35.7%	2.530	31.1%	8.144	60.8%
Red Deer	0.130	20.9%	0.215	34.5%	0.278	44.6%	0.624	4.7%
North Saskatchewan	1.120	32.0%	1.372	39.2%	1.010	28.9%	3.502	26.1%
Athabasca	0.140	19.4%	0.193	26.9%	0.385	53.7%	0.718	5.4%
Peace	0.024	5.7%	0.169	40.8%	0.222	53.5%	0.415	3.1%
Total	4.119	30.7%	4.859	36.3%	4.426	33.0%	13.403	100.0%

Table 19 shows that the highest percentages of trips to national parks (more than 32% of total trips) were reported by residents of the South and North Saskatchewan LUF Regions. Trips to national parks accounted for a relatively lower percentage of trips for residents of the Peace, Athabasca and Red Deer regions, where the larger populations centres are located access at a considerable distance from national parks. The largest percentages of trips to provincial parks and recreation areas were reported by residents of the Peace and North Saskatchewan LUF regions (39% or higher) while fewer than 27% of trips by residents to the Athabasca region were to provincial parks and recreation areas. Public lands were the destination for more than half of all trips reported by residents of the Peace and Athabasca regions and nearly 45% of trips reported by residents of the Red Deer region.

Table 20 summarizes the number of day and overnight trips taken by residents of each LUF region to each Crown land type. The data show that day trips accounted for 76% of total trips to both national parks and public lands, but 82% of trips to provincial parks and recreation areas.

Table 20: Estimated Distribution of Day and Overnight Trips by Home LUF Region and Crown Land Type, 2019/20

Home LUF Region	National Parks		Provincial Parks and Protected Areas		Public Lands		Total	
	Day	Overnight	Day	Overnight	Day	Overnight	Day	Overnight
	(millions of trips)							
South Saskatchewan	2.250	0.455	2.490	0.419	1.939	0.590	6.679	1.465
Red Deer	0.096	0.034	0.155	0.060	0.190	0.089	0.441	0.183
North Saskatchewan	0.675	0.446	1.051	0.320	0.722	0.288	2.448	1.055
Athabasca	0.103	0.037	0.164	0.029	0.321	0.064	0.588	0.130
Peace	0.010	0.014	0.132	0.037	0.193	0.030	0.335	0.080
Total	3.133	0.986	3.993	0.865	3.364	1.061	10.491	2.912

The distribution of trips to different Crown land types by residents of each LUF region during the summer and winter seasons is provided in Table 21. Overall, summer trips accounted for 65% of total trips.

Table 21: Estimated Distribution of Summer and Winter Trips by Home LUF Region and Crown Land Type, 2019/20

Home LUF Region	National Parks		Provincial Parks and Protected Areas		Public Lands		Total	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
	(millions of trips)							
South Saskatchewan	1.600	1.105	1.882	1.028	1.747	0.783	5.229	2.915
Red Deer	0.090	0.040	0.139	0.077	0.192	0.086	0.420	0.203
North Saskatchewan	0.744	0.377	0.914	0.458	0.668	0.342	2.326	1.176
Athabasca	0.091	0.049	0.121	0.072	0.235	0.151	0.446	0.272
Peace	0.022	0.002	0.118	0.052	0.139	0.083	0.279	0.136
Total	2.546	1.573	3.173	1.686	2.981	1.444	8.700	4.703

The lowest percentage of summer trips were reported for the national parks (62% of total trips) while the highest percentage of summer trips (67%) occurred on public lands. Residents of the South Saskatchewan region reported taking only 52% of trips to national parks during the summer months, likely due to high winter use due to proximity to ski facilities in the mountains.

The trip estimates are further disaggregated by the LUF region of activity and Crown land type in Table 22. It shows that public lands accounted for more than half of recreation trips in the Upper Athabasca, Lower Athabasca and Lower Peace LUF regions, but less than 30% of trips in the South Saskatchewan and North Saskatchewan regions where a larger portion of trips were to national parks in those region. Provincial parks and protected areas accounted for the highest percentage of trips within the Red Deer, Lower Athabasca and Upper peace regions which have no national parks.

Table 22: Estimated Distribution of Day and Overnight Trips by LUF Region of Activity and Crown Land Type, 2019/20

LUF Region of Activity	Day Trips (millions)			Overnight Trips (millions)			Total Trips (millions)					
	National Parks	Provincial Parks	Public Lands	Total	National Parks	Provincial Parks	Public Lands	Total	National Parks	Provincial Parks	Public Lands	Total
South Saskatchewan	2.067	2.684	1.932	6.683	0.512	0.492	0.503	1.506	2.579	3.176	2.435	8.189
Red Deer	0.000	0.164	0.146	0.309	0.000	0.057	0.060	0.117	0.000	0.220	0.206	0.426
North Saskatchewan	0.907	0.740	0.579	2.226	0.348	0.184	0.330	0.862	1.255	0.924	0.908	3.088
Upper Athabasca	0.156	0.206	0.448	0.811	0.125	0.068	0.137	0.331	0.282	0.275	0.585	1.141
Lower Athabasca	0.000	0.031	0.047	0.078	0.000	0.011	0.006	0.017	0.000	0.042	0.053	0.094
Upper Peace	0.000	0.147	0.115	0.262	0.000	0.046	0.018	0.063	0.000	0.193	0.133	0.325
Lower Peace	0.003	0.021	0.099	0.122	0.001	0.008	0.008	0.017	0.003	0.029	0.107	0.139
Total	3.133	3.993	3.364	10.491	0.986	0.865	1.061	2.912	4.119	4.859	4.426	13.403
	23.4%	29.8%	25.1%	78.3%	7.4%	6.5%	7.9%	21.7%	30.7%	36.3%	33.0%	100.0%
Regional Distribution of Day and Overnight Trips by Crown Land Type												
South Saskatchewan	30.9%	40.2%	28.9%	100.0%	34.0%	32.7%	33.4%	100.0%	31.5%	38.8%	29.7%	100.0%
Red Deer	0.0%	52.9%	47.1%	100.0%	0.0%	48.6%	51.4%	100.0%	0.0%	51.7%	48.3%	100.0%
North Saskatchewan	40.7%	33.3%	26.0%	100.0%	40.4%	21.3%	38.3%	100.0%	40.6%	29.9%	29.4%	100.0%
Upper Athabasca	19.3%	25.5%	55.2%	100.0%	37.9%	20.6%	41.5%	100.0%	24.7%	24.1%	51.2%	100.0%
Lower Athabasca	0.0%	39.5%	60.5%	100.0%	0.0%	65.4%	34.6%	100.0%	0.0%	44.0%	56.0%	100.0%
Upper Peace	0.0%	56.1%	43.9%	100.0%	0.0%	72.0%	28.0%	100.0%	0.0%	59.2%	40.8%	100.0%
Lower Peace	2.1%	17.3%	80.6%	100.0%	3.0%	47.8%	49.2%	100.0%	2.2%	21.0%	76.8%	100.0%
Total	29.9%	38.1%	32.1%	100.0%	33.8%	29.7%	36.4%	100.0%	30.7%	36.3%	33.0%	100.0%

In terms of overnight visits, Table 23 shows that households visiting public lands spent more nights per visit (an average of 3.46 nights) than on visits to provincial parks (an average of 3.58 nights) or national parks (an average of 3.01 nights)

Table 23: Average Length of Overnight Trips, 2019/20, by Location of Trip

LUF Region of Activity	National Parks	Provincial Parks	Public Lands	Total
South Saskatchewan	2.72	3.40	4.02	3.29
Red Deer		2.70	3.15	2.93
North Saskatchewan	3.45	3.82	3.85	3.67
Upper Athabasca	2.89	3.71	3.92	3.43
Lower Athabasca		5.85	4.56	5.09
Upper Peace		4.74	4.27	4.52
Lower Peace	7.00	2.66	3.31	3.19
Total	3.01	3.58	3.90	3.46

3.2.2.2 Effects of COVID-19 on Recreational Use

A secondary objective of the survey was to compare recreational patterns between 2019/20 and 2020/21 to determine how the effects of the restrictions associated with managing the COVID-19 pandemic affected recreation patterns. Table 24 shows the changes in recreational use patterns for survey households between the two years. It showed that the proportion of households that did not participate in outdoor recreation trips to Crown lands increased by 1.4 percentage points. The proportion of households only taking day trips increased by 1.1 percentage points but the average number of day trips taken by these households dropped by 25.0%. While the proportion of households taking overnight trips only remained the same, the average number of trips taken dropped by 21.7%. And although the proportion of households taking both day and overnight trips decreased by 2.5 percentage points, the average number of trips taken increased by 17.5%, with this mostly being due to a 21.8% increase in day trips and a small increase in the average number of overnight trips.

Table 24: Effect of COVID-19 on Household Recreation Patterns

	Percent of Households			Average Number of Trips		
	2019/20	2020/21	Change	2019/20	2020/21	Change
No Trips	3.3%	4.7%	1.4%			
Day Trips Only	24.4%	25.4%	1.1%	34.7	26.0	-25.0%
Overnight Trips Only	7.4%	7.4%	0.0%	15.0	11.7	-21.7%
Day and Overnight Trips	64.9%	62.5%	-2.5%	50.5	59.3	17.5%
Day				38.7	47.1	21.8%
Overnight				11.8	12.2	3.5%

Not only did household use change from 2019/20 to 2020/21, the pattern of use and levels of activity also changed. Table 25 shows how, based on survey responses, what activity patterns would have looked like in 2020/21, assuming that the overall level of activity (13.4 million trips) remained as it had in 2019/20. A comparison to Table 18 shows that total trips to national parks declined by 6.5%, including a 10.7% reduction in overnight trips and a 5.2% reduction in day trips. The number of trips to provincial parks and protected areas increased by 2.5% although this was the result of a 3.3% increase in day trips and a 1.5% reduction in overnight trips. Recreational activities on public lands actually increased by 3.3% as a result of a 1.8% increase in day trips and an 8.4% increase in overnight visits. Thus, for overnight visits, there was a large shift in overnight visits from national parks to public lands.

Table 25: Estimated Distribution of Day and Overnight Trips Among Crown Land Types, 2020/21

	Day Trips		Overnight Trips		Total Trips	
	Millions	Percent	Millions	Percent	Millions	Percent
National Parks	3.1	23.4%	1.0	7.4%	4.1	30.7%
Provincial Parks and Protected Areas	4.0	29.8%	0.9	6.5%	4.9	36.2%
Public Lands	3.4	25.2%	1.0	7.8%	4.4	33.0%
Total	10.5	78.4%	2.9	21.6%	13.4	100%

3.2.2.3 Recreational Activities Motivating Trips to All Crown Lands Types

Table 26 lists the five recreational activities that were most frequently mentioned as being the motivation for day and overnight trips to all Crown lands according to the home LUF region. Hiking/walking/running is the most frequently mentioned motivating activity for residents of all five regions, and camping was the second most frequently mentioned activity for residents of all but the Peace region, where fishing was second in importance. Skiing/snowboarding was the third most frequently mentioned motivating activity for residents of South Saskatchewan and North Saskatchewan regions but was not included in the top five activities for residents of the Peace region. Hunting was identified as the fifth most frequently mentioned activity in three northern most regions in Alberta.

Table 26: Most Frequently Mentioned Recreational Activities Motivating Trips to All Lands

Top Five Activities	Home LUF Region				
	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace
First	Hike/Run/Walk (31%)	Hike/Run/Walk (34%)	Hike/Run/Walk (33%)	Hike/Run/Walk (30%)	Hike/Run/Walk (19%)
Second	Camping (12%)	Camping (15%)	Camping (12%)	Camping (11%)	Fishing (13%)
Third	Skiing / snowboarding (8%)	Fishing (5%)	Skiing / snowboarding (9%)	Cross-country skiing (9%)	Boating on lakes (11%)
Fourth	Mountain biking (6%)	Mountain biking (6%)	Fishing (6%)	Skiing / snowboarding (7%)	Camping (10%)
Fifth	Cross-country skiing (5%)	Skiing / snowboarding (5%)	Hunting (5%)	Hunting (7%)	Hunting (9%)

3.2.3 Survey Results: Recreation Activity to National Parks

3.2.3.1 Day and Overnight Trips to National Parks

The distribution of day and overnight trips to national parks within each of the seven LUF regions is provided in Table 27. No data are shown for the Red Deer, Lower Athabasca or Upper Peace regions because there are no national parks in these regions. It shows that 62.6% of recreational activities in national parks occurred in the South Saskatchewan LUF Region (Banff National Park) with another 30.5% in the North Saskatchewan LUF Region, 6.8% in the Upper Athabasca LUF Region.

Table 27: Estimated Distribution of Recreational Trips to National Parks, 2019/20

LUF Region of Activity	Day Trips		Overnight Trips		TOTAL	
	Millions	Percent	Millions	Percent	Millions	Percent
South Saskatchewan	2.067	50.2%	0.512	12.4%	2.579	62.6%
Red Deer						
North Saskatchewan	0.907	22.0%	0.348	8.5%	1.255	30.5%
Upper Athabasca	0.156	3.8%	0.125	3.0%	0.282	6.8%
Lower Athabasca						
Upper Peace						
Lower Peace	0.003	0.1%	0.001	0.0%	0.003	0.1%
Total	3.133	76.1%	0.986	23.9%	4.119	100.0%

3.2.3.2 Recreational Activities Motivating Trips to National Parks

Table 28 identifies the five recreational activities that were most frequently mentioned as being the motivation for trips to national parks. The top two activities were hiking/walking/running for residents of all five regions and skiing/snowboarding for residents of four of the regions. Camping was the third most mentioned activity for residents of three regions.

Table 28: Most Frequently Mentioned Recreational Activities Motivating Trips to National Parks

Top Five Activities	Home LUF Region				
	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace
First	Hike/Run/Walk (37%)	Hike/Run/Walk (40%)	Hike/Run/Walk (39%)	Hike/Run/Walk (38%)	Hike/Run/Walk (26%)
Second	Skiing / snowboarding (13%)	Camping (10%)	Skiing / snowboarding (17%)	Skiing / snowboarding (23%)	Skiing / snowboarding (14%)
Third	Camping (9%)	Skiing / snowboarding (9%)	Camping (10%)	Camping (6%)	Boating on lakes (12%)
Fourth	Ski touring (7%)	Wildlife viewing (8%)	Ski touring (5%)	Sightseeing (6%)	Camping (9%)
Fifth	Cross-country skiing (6%)	Sightseeing (5%)	Cross-country skiing (3%)	Ski touring (4%)	Biking (9%)

3.2.4 Survey Results: Recreation Activity on Provincial Parks and Protected Areas

3.2.4.1 Day and Overnight Trips to Provincial Parks and Protected Areas

The distribution of day and overnight trips to provincial parks and protected areas within each of the seven LUF regions is provided in Table 29. It shows that nearly two-thirds of recreational activities in parks and protected areas occurred in the South Saskatchewan LUF Region (65.4%) with 19.0% in the North Saskatchewan LUF Region, 5.7% in the Upper Athabasca LUF Region, and 4.5% in the Red Deer LUF Region.

Table 29: Estimated Distribution of Recreational Trips to Public Lands, 2019/20

LUF Region of Activity	Day Trips		Overnight Trips		TOTAL	
	Millions	Percent	Millions	Percent	Millions	Percent
South Saskatchewan	2.684	55.2%	0.492	10.1%	3.176	65.4%
Red Deer	0.164	3.7%	0.057	1.2%	0.220	4.5%
North Saskatchewan	0.740	16.7%	0.184	3.8%	0.924	19.0%
Upper Athabasca	0.206	4.7%	0.068	1.4%	0.275	5.7%
Lower Athabasca	0.031	0.7%	0.011	0.2%	0.042	0.9%
Upper Peace	0.147	3.3%	0.046	0.9%	0.193	4.0%
Lower Peace	0.021	0.5%	0.008	0.2%	0.029	0.6%
Total	3.993	82.2%	0.865	17.8%	4.859	100.0%

3.2.4.2 Recreational Activities Motivating Trips to Public Lands

Table 30 identifies the five recreational activities that were most frequently mentioned as being the motivation for trips to provincial parks and protected areas. Hiking/walking/running is the most frequently mentioned motivating activity for residents of all five regions, and camping was the second most frequently mentioned activity for residents of all but the Peace region, where fishing was second in importance.

Table 30: Most Frequently Mentioned Recreational Activities Motivating Trips to Provincial Parks and Protected Areas

Top Five Activities	Home LUF Region				
	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace
First	Hike/Run/Walk (31%)	Hike/Run/Walk (36%)	Hike/Run/Walk (33%)	Hike/Run/Walk (31%)	Hike/Run/Walk (19%)
Second	Camping (13%)	Camping (17%)	Camping (14%)	Camping (129%)	Fishing (18%)
Third	Skiing / snowboarding (7%)	Mountain biking (7%)	Fishing (7%)	Cross-country skiing (15%)	Camping (12%)
Fourth	Mountain biking (7%)	Fishing (6%)	Skiing / snowboarding (5%)	Fishing (9%)	Boating on lakes (12%)
Fifth	Cross-country skiing (6%)	Skiing / snowboarding (4%)	Cross-country skiing (5%)	Ski touring (9%)	Skiing / snowboarding (8%)

Fishing was one of the top five motivating factors for trips by people living in all but the South Saskatchewan region. Trips for skiing/snowboarding were also included among the top five motivating activities in all region. Cross-country skiing was listed as a top five activity for households living in the South Saskatchewan and North Saskatchewan regions.

3.2.5 Survey Results: Recreation Activity on Public Land

3.2.5.1 Day and Overnight Trips on Public lands

The distribution of day and overnight trips on public land areas within each of the seven LUF regions is provided in Table 31. It shows that more than half of recreational activities on public land occurred in the South Saskatchewan LUF Region (55.0%) with another 20.5% in the North Saskatchewan LUF Region, 13.2% in the Upper Athabasca LUF Region, and 4.6% in the Red Deer LUF Region.

Table 31: Estimated Distribution of Recreational Trips to Public Lands, 2019/20

LUF Region of Activity	Day Trips		Overnight Trips		TOTAL	
	Millions	Percent	Millions	Percent	Millions	Percent
South Saskatchewan	1.932	43.6%	0.503	11.4%	2.435	55.0%
Red Deer	0.146	3.3%	0.060	1.4%	0.206	4.6%
North Saskatchewan	0.579	13.1%	0.330	7.5%	0.908	20.5%
Upper Athabasca	0.448	10.1%	0.137	3.1%	0.585	13.2%
Lower Athabasca	0.047	1.1%	0.006	0.1%	0.053	1.2%
Upper Peace	0.115	2.6%	0.018	0.4%	0.133	3.0%
Lower Peace	0.099	2.2%	0.008	0.2%	0.107	2.4%
Total	3.364	76.0%	1.061	24.0%	4.426	100.0%

3.2.5.2 Recreational Activities Motivating Trips to Public Lands

Table 32 identifies the five recreational activities that were most frequently mentioned as being the motivation for trips to public lands.

Table 32: Most Frequently Mentioned Recreational Activities Motivating Trips to Public Lands

Top Five Activities	Home LUF Region				
	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace
First	Hike/Run/Walk (22%)	Hike/Run/Walk (25%)	Hike/Run/Walk (26%)	Hike/Run/Walk (31%)	Hunting (20%)
Second	Camping (12%)	Camping (14%)	Hunting (14%)	Hunting (19%)	Hike/Run/Walk (16%)
Third	Hunting (10%)	Fishing (10%)	Fishing (10%)	ATV (14%)	Fishing (12%)
Fourth	ATV (9%)	ATV (9%)	ATV (10%)	Wildlife viewing (10%)	Boating on lakes (8%)
Fifth	Fishing (6%)	Wildlife viewing (8%)	Camping (9%)	Camping (9%)	Camping (8%)

While hiking/walking/running was again the most frequently mentioned motivating activity in four of the five regions, hunting was of particular importance on public land, rating among the top three activities in all regions. No winter sports were identified as being among the top five activities for public lands. However, ATV trips appear as a top five motivating activity for trips to public lands in all but the Peace region.

3.3 SURVEY RESULTS: TOTAL VISITOR EXPENDITURES

3.3.1 Spending on Trips to Crown Lands

3.3.1.1 Average Spending per Recreational Trip, All Crown Land Types

Based on the survey results, average spending per recreational trip to Crown land amounted to \$258 per day trip and \$757 per overnight trip, although this varied according to the residency of the respondent (see Table 33). This is substantially higher than the \$101 per day trip and \$400 per overnight trip reported by Statistics Canada (2018a) for pleasure, vacation holiday trips, and confirms that survey respondents are not representative of Alberta households. The variability in Table 32 may be partly attributable to travel distance: the majority of residents in the North Saskatchewan LUF Region have to travel farther to reach national parks and public lands than to residents of the South Saskatchewan LUF Region. Residents of the Athabasca and Peace LUF regions had the highest overnight trip costs while residents of the Peace LUF region had the lowest cost per day trip.

Table 33: Average Expenditure per Trip by to Crown Land by LUF Region of Residence, 2019/20

LUF Region of Residence	Day Trips	Overnight Trips
South Saskatchewan	\$249.98	\$529.33
Red Deer	\$213.18	\$532.03
North Saskatchewan	\$278.72	\$591.39
Athabasca	\$321.95	\$697.26
Peace	\$184.05	\$805.31
Total	\$258.25	\$757.11

Table 34 shows the same information broken down by the trips to Crown land types.

Table 34: Average Expenditure per Trip by Crown Land Type, 2019/20

Crown Land Type	Day Trips	Overnight
National Park	\$362.09	\$1,345.37
Provincial Parks and Protected Areas	\$227.59	\$503.90
Public Lands	\$197.94	\$417.21
Total	\$258.25	\$757.11

Survey respondents spent much more on trips to the national parks, both for day trips and overnight trips, which likely reflects such things as high overnight accommodation costs in Banff and Jasper, the costs of ski lift passes during the winter months, and the possibility of spending on “tourist” items and merchandise while on visits to Banff and Jasper. The lowest costs per trip were for trips to public land areas, which is likely due to there being few opportunities to spend money at destinations in those public land areas.

The observation that households spent more on trips to national parks and less on trips to public lands is also consistent with the distribution of spending on trips (see Table 35). It shows that more than half of all spending on trips to national parks (51.6%) occurred in the national parks, while only 22.5% of spending on trips to public lands occurred at destinations on public lands. Overall, about one-third of all trip expenditures were made while travelling enroute to the final destination.

Table 35: Distribution of Trip Expenditures by Park and Crown Land Type, 2019/20

Crown Land Type	Home	Enroute	Destination
National Parks	21.8%	26.5%	51.6%
Provincial Parks	33.5%	36.0%	30.5%
Public Lands	38.9%	38.6%	22.5%
Total	28.6%	33.5%	37.9%

3.3.1.2 Total Spending on Recreation Trips, All Crown Land Types

While the survey data on households spending cannot be extrapolated to estimate total provincial spending on outdoor recreation to all Crown land types because the sample is not representative of Alberta households, the results can be used to interpolate what percent of total spending is likely to occur on public lands. As noted in Table 4, Albertans are estimated to have spent a total of \$2,149 million on day and overnight trips for pleasure, recreation holiday trips in 2017. Based on population growth and factoring in inflation, but assuming no change in per capita activity levels or spending patterns, it is estimated that this amount increased to \$2,338 million in 2019/20. Based on trip estimates (see Table 25) and average spending on day and overnight trips (Table 34), estimated spending associated with trips to parks and public lands would be as shown in Table 36. This would see trips to public lands accounting for 22.6% of total spending, or an estimated \$528 million in 2019/20. While Table 25 shows that trips to public lands accounted for 33.0% of total trips, households travelling to public lands spent less per trip than did households travelling to national and/or provincial parks.

Table 36: Estimated Total Spending by Albertans on Outdoor Recreation Trips, 2019/20

	Day Trips		Overnight		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
National Park	\$540	23.1%	\$631	27.0%	\$1,171	50.1%
Provincial Parks	\$432	18.5%	\$207	8.9%	\$640	27.4%
Public Lands	\$317	13.6%	\$211	9.0%	\$528	22.6%
Total	\$1,289	55.2%	\$1,049	44.9%	\$2,338	100.0%

3.3.1.3 Total Spending by Type of Expenditure, Trips to All Crown Land Types

A breakdown of spending on outdoor recreation trips to all Crown land types by expenditure categories is provided in Table 37. For day trips, spending at gasoline was the largest expenditure, accounting for 29.1% of the total. Next in importance was spending on equipment rentals (21.8%), spending at restaurants, bars and cafes (13.2%), food and beverage stores (13.1%) and activity fees (10.5%).

Table 37: Estimated Total Spending by Albertans on Outdoor Recreation Trips to Crown Lands, by Expenditure Category, 2019/20

	Day Trips		Overnight Trips		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
Accommodation	\$25	1.9%	\$225	21.4%	\$250	10.7%
Food and beverage stores	\$168	13.1%	\$149	14.2%	\$318	13.6%
Gasoline Stations	\$376	29.1%	\$209	19.9%	\$584	25.0%
Restaurants, bars and cafes	\$170	13.2%	\$131	12.5%	\$301	12.9%
Car/truck Rental	\$1	0.1%	\$2	0.1%	\$3	0.1%
Activity Fees	\$135	10.5%	\$111	10.6%	\$246	10.5%
Scenic, sightseeing or guided tours	\$15	1.2%	\$13	1.2%	\$28	1.2%
Equipment Rentals	\$282	21.8%	\$116	11.0%	\$397	17.0%
Other retail	\$118	9.2%	\$94	9.0%	\$212	9.1%
Total	\$1,289	100.0%	\$1,049	100.0%	\$2,338	100.0%

For overnight visits, accommodation was the largest expenditure item (21.4% of total spending), followed by purchases at gasoline stores (19.9%), food and beverage stores (14.2%), spending at restaurants, bars and cafes (12.5%), and activity fees (10.6%).

3.3.2 Spending on Recreation Trips to National Parks

3.3.2.1 Total Spending on Recreation Trips, National Parks

As shown in Table 36, Albertans are estimated to have spent a total of \$1,171 million on recreational trips to national parks lands in 2019/20. This includes \$540 million of spending on day trips and \$631 million in spending on overnight trips. This spending was distributed according to the destination of trips to national parks as per Table 38. This shows that 64.1% of spending on day trips and 50.9% of spending on overnight visits was associated with trips to national parks in the South Saskatchewan region. Another 31.2% of spending on trips to national parks were to national parks in the North Saskatchewan region, with 11.7% to national parks in the upper Athabasca region. There was minor spending to visit national parks in the lower Peace region (0.1% of the total).

Table 38: Spending by Albertans on Outdoor Recreation Trips to National Parks, by LUF Region Visited, 2019/20

LUF Region Visited	Day Trips		Overnight Trips		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
South Saskatchewan	\$346	64.1%	\$321	50.9%	\$667	57.0%
Red Deer						
North Saskatchewan	\$150	27.8%	\$215	34.0%	\$365	31.2%
Upper Athabasca	\$43	7.9%	\$94	15.0%	\$137	11.7%
Lower Athabasca						
Upper Peace						
Lower Peace	\$1	0.2%	\$1	0.1%	\$2	0.1%
Total	\$540	100.0%	\$631	100.0%	\$1,171	100.0%

3.3.2.2 Total Spending by Type of Expenditure, National Parks

Table 39 provides a breakdown of spending on trips to national parks by types of expenditures. It shows that equipment purchases accounted for the greatest percentage of total trips costs (19.5%), including 26.4% of spending on day trips and 13.7% of spending on overnight trips. Travel costs (purchases at gasoline stations) were the second most important cost, accounting for 23.0% of spending on day trips to 13.7% of spending on overnight trips. Spending on accommodation was third in importance, accounting for 15.5% of total spending on trips to national parks, and 26.6% of spending associated with overnight visits. Purchases at restaurants, bars and cafes accounted for 14.1% of spending on trips to national parks, followed by activity fees (12.6%) and food and beverage stores (10.9%).

Table 39: Estimated Total Spending by Albertans on Outdoor Recreation Trips to National Parks, by Expenditure Category, 2019/20

	Day Trips		Overnight Trips		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
Accommodation	\$13	2.5%	\$168	26.6%	\$181	15.5%
Food and beverage stores	\$63	11.7%	\$65	10.3%	\$128	10.9%
Gasoline Stations	\$124	23.0%	\$87	13.7%	\$210	18.0%
Restaurants, bars and cafes	\$78	14.4%	\$87	13.8%	\$165	14.1%
Car/truck Rental	\$1	0.2%	\$1	0.2%	\$2	0.2%
Activity Fees	\$74	13.7%	\$73	11.6%	\$147	12.6%
Scenic, sightseeing or guided tours	\$8	1.5%	\$8	1.2%	\$15	1.3%
Equipment Rentals	\$142	26.4%	\$86	13.7%	\$229	19.5%
Other retail	\$37	6.8%	\$56	8.8%	\$92	7.9%
Total	\$540	100.0%	\$631	100.0%	\$1,171	100.0%

Households making trips to public land areas spent more at gasoline stations (37.4% of spending) than did people making trips to all Crown lands (23.4%) while people visiting public lands spent less on activity fees (5.4% compared to 10.6%).

3.3.3 Spending on Recreation Trips to Provincial Parks and Protected Areas

3.3.3.1 Total Spending on Recreation Trips, Provincial Parks and Protected Areas

As estimated in Table 36, Albertans are estimated to have spent a total of \$640 million on recreational trips to provincial parks and protected areas in 2019/20. This includes \$432 million of spending on day trips and \$207 million in spending on overnight trips. Nearly two-thirds of this spending (65.8%) was associated with trips to provincial parks and protected areas in the South Saskatchewan region (see Table 40). Spending associated with trips to provincial parks and protected areas in the North Saskatchewan region accounted for another 19.7%. Trips to provincial parks and recreation areas in the Upper Athabasca region accounted for another 5.4%, followed by spending on trips to the Red Deer region (4.8%).

Table 40: Spending by Albertans on Outdoor Recreation Trips to Provincial Parks and Protected Areas, by LUF Region Visited, 2019/20

LUF Region Visited	Day Trips		Overnight Trips		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
South Saskatchewan	\$300	69.4%	\$121	58.3%	\$421	65.8%
Red Deer	\$21	4.8%	\$10	4.9%	\$31	4.8%
North Saskatchewan	\$74	17.2%	\$52	24.8%	\$126	19.7%
Upper Athabasca	\$20	4.6%	\$15	7.3%	\$35	5.4%
Lower Athabasca	\$8	1.8%	\$1	0.6%	\$9	1.4%
Upper Peace	\$7	1.5%	\$7	3.5%	\$14	2.2%
Lower Peace	\$3	0.8%	\$1	0.5%	\$4	0.7%
Total	\$432	100.0%	\$207	100.0%	\$640	100.0%

3.3.3.2 Total Spending by Type of Expenditure, Provincial Parks and Protected Areas

Table 41 provides a breakdown of spending on trips to provincial parks and protected areas by types of expenditures. It shows that purchases at gasoline stations accounted for 27.6% of the costs of trips to provincial parks and recreation areas. Next in importance was spending on equipment rentals (15.9%), largely associated with day trips, and purchases at food and beverage stores (14.8%). Next in importance was spending on purchases at restaurants, bars and cafes (12.5%) and activity fees (11%). Spending on accommodation accounted for only 4.7% of total trip costs.

Table 41: Estimated Total Spending by Albertans on Outdoor Recreation Trips to Provincial Parks and Protected Areas, by Expenditure Category, 2019/20

	Day Trips		Overnight Trips		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
Accommodation	\$6	1.5%	\$41	19.8%	\$47	7.4%
Food and beverage stores	\$56	13.0%	\$38	18.3%	\$94	14.8%
Gasoline Stations	\$128	29.6%	\$49	23.5%	\$177	27.6%
Restaurants, bars and cafes	\$57	13.1%	\$23	11.2%	\$80	12.5%
Car/truck Rental	\$0	0.0%	\$0	0.1%	\$0	0.1%
Activity Fees	\$45	10.3%	\$26	12.4%	\$70	11.0%
Scenic, sightseeing or guided tours	\$4	1.0%	\$2	1.2%	\$7	1.0%
Equipment Rentals	\$91	21.0%	\$11	5.3%	\$102	15.9%
Other retail	\$46	10.6%	\$17	8.4%	\$63	9.9%
Total	\$432	100.0%	\$207	100.0%	\$640	100.0%

3.3.4 Spending on Recreation Trips to Public Lands

3.3.4.1 Total Spending on Recreation Trips, Public Lands

As shown in Table 36, Albertans are estimated to have spent a total of \$528 million on recreational trips to public lands in 2019/20. This includes \$317 million of spending on day trips and \$211 million in spending on overnight trips. For trips to public lands, Table 42 shows that only half of spending (49.7%) was associated with trips to destinations in the South Saskatchewan region. Spending associated with trips to public lands in the North Saskatchewan region accounted for another 28.2% with trips to public lands in the Upper Athabasca region accounted for 8.5%, followed by spending on trips to the Red Deer region (6.2%).

Table 42: Spending by Albertans on Outdoor Recreation Trips to Public Lands, by LUF Region Visited, 2019/20

LUF Region Visited	Day Trips		Overnight Trips		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
South Saskatchewan	\$168	52.9%	\$94	44.8%	\$262	49.7%
Red Deer	\$20	6.2%	\$13	6.2%	\$33	6.2%
North Saskatchewan	\$84	26.4%	\$65	31.0%	\$149	28.2%
Upper Athabasca	\$25	7.9%	\$20	9.4%	\$45	8.5%
Lower Athabasca	\$4	1.3%	\$3	1.2%	\$7	1.3%
Upper Peace	\$10	3.3%	\$10	4.8%	\$21	3.9%
Lower Peace	\$7	2.1%	\$5	2.6%	\$12	2.3%
Total	\$317	100.0%	\$211	100.0%	\$528	100.0%

3.3.4.2 Total Spending by Type of Expenditure, Public Lands

Table 43 provides a breakdown of spending on trips to public lands by types of expenditures. It shows that travel costs (purchases at gasoline stations) accounted to the greatest percentage of trip costs, ranging from 39.1% of spending on day trips to 34.8% of spending on overnight trips. Spending at food and beverage stores was second in importance, accounting for 18.0% of spending. Very little was spent on accommodation (4.0% of all trip costs) but this was because 77.3% of visits to public lands were day trips, and people on overnight trips were camping rather than using commercial accommodation. In comparison, accommodation costs accounted for 15.5% of total trip costs to national parks.

Table 43: Estimated Total Spending by Albertans on Outdoor Recreation Trips to Public Lands, by Expenditure Category, 2019/20

	Day Trips		Overnight Trips		Total	
	Millions	Percent	Millions	Percent	Millions	Percent
Accommodation	\$5	1.6%	\$16	7.7%	\$21	4.0%
Food and beverage stores	\$49	15.5%	\$46	21.8%	\$95	18.0%
Gasoline Stations	\$124	39.1%	\$73	34.8%	\$197	37.4%
Restaurants, bars and cafes	\$35	11.2%	\$21	9.9%	\$56	10.7%
Car/truck Rental	\$0	0.0%	\$0	0.0%	\$0	0.0%
Activity Fees	\$17	5.3%	\$12	5.6%	\$28	5.4%
Scenic, sightseeing or guided tours	\$3	0.9%	\$3	1.3%	\$6	1.1%
Equipment Rentals	\$48	15.2%	\$19	8.8%	\$67	12.6%
Other retail	\$36	11.2%	\$21	10.2%	\$57	10.8%
Total	\$317	100.0%	\$211	100.0%	\$528	100.0%

3.3.5 Spending on Outdoor Recreational Equipment and Accessories

During the survey, households were asked how much they had spent during the previous 12 months on outdoor recreational equipment and accessories where the purchases were not directly associated with a particular day trip or overnight trip. The survey results are provided in Table 44. Information on such purchases were provided by 812 of the 1,399 respondents (58%), but it is not known whether households who did not answer the question had not incurred any such costs or just did not answer the question. According to survey responses, the average spending on equipment and accessories amounted to \$10,282 per household, which represents a blend of all the different types of equipment and accessories bought by different percentages of households.

The survey responses indicate that the most commonly purchased item (72.7% of responses) consisted of outdoor specific clothing, although such expenses only accounted for 4.8% of total spending. The most expensive items (ATVs, side by sides, 4x4 and snowmobiles) were purchased by a relatively few households (less than 16%) but collectively they accounted for 29.4% of total purchases. Bicycles/mountain bikes were purchased by 38.6% of survey households and accounted for 13.8% of total spending. Other important purchases consisted of camping equipment (13.4% of total purchase made by 62.4% of households) and fishing and hunting equipment (4.7% of total purchases made by 41.8% of households). Watercraft accounted for 7.2% of total purchases but, while three times as many households purchased non-motorized boats as purchases motor boats, households spent four times more on motor boats than on non-motorized boats. A large component of “other” consisted of purchases of horses and their ongoing feeding and maintenance

Table 44: Survey Household Purchases of Outdoor Recreational Equipment and Accessories

Purchase Item	Percent of Households	Average Expense	Percent of Total Spending
ATV/side by side	15.9%	\$6,862	11.7%
4X4	8.6%	\$11,320	10.8%
Snowmobile	8.6%	\$8,194	6.9%
Dual Sport/Off Road Motorcycle/Snow bike	6.6%	\$5,413	6.1%
Bicycle/mountain bike	38.6%	\$3,258	13.8%
Protective equipment	37.2%	\$514	2.1%
Motorized boat	5.6%	\$4,348	5.1%
Non-motorized boat	15.2%	\$1,044	2.1%
Snowshoes	15.8%	\$268	0.4%
Skis/Poles/Boots	34.7%	\$656	3.4%
Camping equipment	62.4%	\$1,909	13.4%
Fishing and Hunting equipment	41.8%	\$902	4.7%
Outdoor specific clothing	72.7%	\$547	4.8%
Equipment and recreational vehicle repairs and maintenance	44.4%	\$1,348	6.6%
Equipment and recreational vehicle insurance	42.3%	\$903	4.3%
Other	9.3%	\$5,841	3.8%
Total per Household		\$10,282	100.00%

As reported in Section 2.2.4, Alberta households spent an average of \$4,594 on recreation in 2017, including recreational equipment and related services (\$1,115 per household), home entertainment equipment and services (\$264), recreational services (\$2,323) and recreational vehicles and associated services (\$893) (Statistics Canada, 2021). Average spending to purchase recreational vehicles was \$35 per household and, based on the number of households in 2017, this suggested total annual spending on recreational vehicles totalled \$1,145 million. Based on a 3.9% increase in the number of households and observed inflation of 4.9%, this spending would have increased to \$1,246 million in 2019/20. Purchases of recreational equipment were previously estimated to be \$436 million in 2017 (Section 2.2.4.2), or \$474 million in 2019/20. Combined purchases of recreational vehicle and recreational equipment is estimated to have been \$1,720 million in 2019/20.

The extent to which such purchases can be attributed to recreational trips to Crown land in Alberta is difficult to assess because the equipment can be used on trips anywhere in Canada or on trips to the US and other countries. Data from 2014 indicates that 62.2% of tourism spending in Canada by Albertans occurred in Alberta (Statistics Canada, 2021b). Once spending in other countries is factored in, the percentage of Alberta tourism spending in Alberta could drop to 50% of the total. The results of the literature review (see Table 4) noted Albertans spent \$4,891 million on trips in Alberta, of which \$2,149 million (43.7%) was spent on pleasure, vacation holiday purposes. This would suggest that \$376 million in recreational vehicle and equipment purchases can be attributed to recreational activities on Crown land in Alberta in 2019/20. And, based on the percentages of trips to the various Crown land types (see Table 18), this would suggest that \$115 million would be associated with trips to national parks, \$136 million for trips to provincial parks and protected areas, and \$124 million could be attributable to recreational activities on public land.

3.4 ECONOMIC IMPACTS

The economic impacts resulting from spending associated with activities on all Crown Land types can be estimated by combining published economic multipliers for those industries that correspond most closely with the expenditures categories used in the survey with the estimates of recreational spending associated with those categories. This was done for both trip-related costs and purchases of outdoor recreation and accessories.

Three types of impacts were assessed:

- Direct effects occur in the industry where the expenditure is first made. For example, paying for a night in a hotel provides revenues for the hotel that they then use to pay for labour (and employment) and goods and services needed to run the hotel (such as utilities, toiletries, etc.), with anything being left over retained as pre-tax profits.
- Indirect effects occur when businesses that directly benefit from tourist spending purchase the goods and services that they need to operate. Using the hotel example, the purchase of utilities and toiletries, etc., needed to operate the hotel generate revenues for the companies that provide those goods and services and these revenues are then used to pay for their labour costs and they goods and services that they purchase in order to produce the goods and services that they directly sell to the hotel.
- Induced effects occur when the labour income resulting directly from tourist purchases as well as labour income generated in those businesses that are indirectly supported by tourist spending are spent to purchase consumer items. For the hotel example, this would mean that when the hotel staff meet up with the people working for the utility company that is supplying electricity to the hotel for a dinner and a beer after work, the money to purchase food and beverages provides employment income and profits for the restaurant.

Thus, every dollar spent by recreationists will circulate through the economy with additional employment and profits being created with every successive round of spending. This is termed the “multiplier” effect. These effects are typically measured in terms of labour income and employment, as well as in terms of gross domestic product (GDP) which is a measure of the value added to the economy and consists of labour income, taxes on production, and operating surplus (the pre-tax profits retained by the companies affected by the spending).

3.4.1 Impacts of Trip-Related Spending

To estimate the impacts of trip-related expenditures, the expenditure categories used in the survey were matched with the Statistics Canada industry multipliers as follows:

Survey Category	Statistics Canada Industry Classification
Accommodation	Traveller accommodation [BS721100]
Food and beverage stores	Food and beverage stores [BS445000]
Gasoline Stations	Gasoline stations [BS447000]
Restaurants, bars and cafes	Food services and drinking places [BS722000]
Activity Fees	Amusement and recreation industries [BS713A00]
Scenic, sightseeing or guided tours	Other transit and ground passenger transportation and scenic and sightseeing transportation [BS48A000]
Car/truck Rental	Automotive equipment rental and leasing [BS532100]
Equipment Rentals	Rental and leasing services (except automotive equipment) [BS532A00]
Other retail	General merchandise stores [BS452000]

The most recent published multipliers are for 2017 and, although the overall percentages of spending that go to things like labour income and operating surplus don't change much from year to year, the employment effects may be overstated because wage rates have risen since 2017.

3.4.1.1 Economic Impact of Recreational Trips to All Crown Land Types

Based on the expenditure estimates in Table 37, the economic impacts resulting from trips by Albertans to all Crown land types in 2019/20 are provided in Table 45. This shows that the total effect of \$2,338 million in recreation spending on trips to Crown lands would account for \$2,355 million of Alberta GDP, including \$75 million in taxes on products. GDP at basic prices (excluding production taxes such as taxes on alcohol sales) would be \$2,283 million and this includes \$1,233 million in labour income and \$85 million in taxes on production (such as payroll and property taxes), leaving affected companies with an operating surplus of \$969 million. This spending would account for more than 31,100 full-time equivalent jobs in Alberta, 76% of which would be direct jobs, with an average wage (including benefits) of \$39,618.

Table 45: Economic Impact of Trip-Related Spending for Trips to All Public Land Types, 2019/20

Type of Impact	Direct	Indirect	Induced	Total
	(\$ millions)			
Gross domestic product (GDP) at market prices	\$1,424	\$488	\$446	\$2,355
Taxes on products	\$21	\$7	\$48	\$75
Gross domestic product (GDP) at basic prices	\$1,403	\$482	\$400	\$2,283
Labour Income	\$815	\$254	\$164	\$1,233
Gross operating surplus	\$550	\$210	\$209	\$969
Taxes on production	\$38	\$20	\$26	\$85
Jobs (Full-time equivalents)	23,736	4,114	3,273	31,112
Average Labour Income/Job	\$34,354	\$61,825	\$50,040	\$39,618

Government revenues would consist of taxes on products (\$75 million), taxes on production (\$85 million), income taxes on labour income (\$186 million)¹, and corporate income taxes (\$97 million)², or a total of \$443 million.

3.4.1.2 Economic Impact of Recreational Trips to National Parks

The economic impacts resulting from trips by Albertans to national parks in 2019/20 are provided in Table 46. This shows that the total effect of \$1,168 million in recreation spending on trips to national parks would account for \$1,172 million of Alberta GDP, including \$39 million in taxes on products. GDP at basic prices (excluding production taxes such as taxes on alcohol sales) would be \$1,134 million and this includes \$621 million in labour income and \$42 million in taxes on production (such as payroll and property taxes), leaving affected companies with an operating surplus of \$473 million. This spending would account for nearly 15,600 full-time equivalent jobs in Alberta, 76% of which would be direct jobs, with an average wage (including benefits) of \$39,828.

1 Calculated using the Fidelity tax calculator for Alberta for 2020 based on 31,112 workers receiving an average income of \$39,618. https://www.fidelity.ca/fidca/en/taxcalculator?ef_id=CjwKCAjwz_WGBhA1EiwAUxlcRic_ag8dlqYmbIDOUhHGZAV1rwzV7EfK56UbCLh45tW6BBD65MpRRoCkWUQAvD_BwE:G:s&s_kwid=AL!10784!3!490978807916!p!!g!!income%20tax%20calculator!11969289573!118597061969&gclid=CjwKCAjwz_WGBhA1EiwAUxlcRic_ag8dlqYmbIDOUhHGZAV1rwzV7EfK56UbCLh45tW6BBD65MpRRoCkWUQAvD_BwE

2 Calculated using the net operating surplus, as calculated using the ratio between net and gross operating surplus as per Statistics Canada. Table 36-10-0221-01 Gross domestic product, income-based, provincial and territorial, annual (x 1,000,000), and applying an Alberta corporate tax rate of 11% and a Federal corporate tax rate of 15%.

Table 46: Economic Impact of Trip-Related Spending for Trips to National Parks, 2019/20

Type of Impact	Direct	Indirect	Induced	Total
	(\$ millions)			
Gross domestic product (GDP) at market prices	\$705	\$243	\$225	\$1,172
Taxes on products	\$12	\$3	\$24	\$39
Gross domestic product (GDP) at basic prices	\$693	\$240	\$202	\$1,134
Labour Income	\$411	\$127	\$83	\$621
Gross operating surplus	\$263	\$104	\$106	\$473
Taxes on production	\$19	\$10	\$13	\$42
Jobs (Full-time equivalents)	11,856	2,087	1,655	15,587
Average Labour Income/Job	\$34,686	\$61,061	\$50,055	\$39,828

Government revenues associated with spending related to trips to national parks would consist of taxes on products (\$39 million), taxes on production (\$42 million), income taxes on labour income (\$94 million)³, and corporate income taxes (\$48 million), or a total of \$223 million.

3.4.1.3 Economic Impact of Recreational Trips to Provincial Parks and Protected Areas

The economic impacts resulting from trips by Albertans to provincial parks and protected areas in 2019/20 are provided in Table 47. This shows that the total effect of \$640 million in recreation spending on trips to provincial parks and protected areas would account for \$647 million of Alberta GDP, including \$20 million in taxes on products. GDP at basic prices (excluding production taxes such as taxes on alcohol sales) would be \$627 million and this includes \$338 million in labour income and \$23 million in taxes on production (such as payroll and property taxes), leaving affected companies with an operating surplus of \$267 million. This spending would account for just over 8,600 full-time equivalent jobs in Alberta, 77% of which would be direct jobs, with an average wage (including benefits) of \$39,304.

³ Calculated using the Fidelity tax calculator for Alberta for 2020 based on 15,587 workers receiving an average income of \$39,828.

Table 47: Economic Impact of Trip-Related Spending for Trips to Provincial Parks and Protected Areas, 2019/20

Type of Impact	Direct	Indirect	Induced	Total
	(\$ millions)			
Gross domestic product (GDP) at market prices	\$391	\$135	\$122	\$647
Taxes on products	\$5	\$2	\$13	\$20
Gross domestic product (GDP) at basic prices	\$385	\$133	\$109	\$627
Labour Income	\$224	\$70	\$45	\$338
Gross operating surplus	\$152	\$58	\$57	\$267
Taxes on production	\$10	\$6	\$7	\$23
Jobs (Full-time equivalents)	6,582	1,127	896	8,604
Average Labour Income/Job	\$33,962	\$62,113	\$50,022	\$39,304

Government revenues associated with spending related to trips to provincial parks and recreation areas would consist of taxes on products (\$20 million), taxes on production (\$23 million), income taxes on labour income (\$51 million)⁴, and corporate income taxes (\$27 million), or a total of \$121 million.

3.4.1.4 Economic Impact of Recreational Trips to Public Lands

The corresponding economic impacts for spending associated with trips by Albertans to public lands in 2019/20 are provided in Table 48. This shows that the total effect of \$528 million in recreation spending on trips to public lands would account for \$537 million of Alberta GDP, including \$16 million in taxes on products.

⁴ Calculated using the Fidelity tax calculator for Alberta for 2020 based on 8,607 workers receiving an average income of \$39,304.

Table 48: Economic Impact of Trip-Related Spending for Trips to Public Lands, 2019/20

Type of Impact	Direct	Indirect	Induced	Total
	(\$ millions)			
Gross domestic product (GDP) at market prices	\$328	\$110	\$98	\$537
Taxes on products	\$4	\$2	\$11	\$16
Gross domestic product (GDP) at basic prices	\$325	\$109	\$88	\$521
Labour Income	\$181	\$57	\$36	\$274
Gross operating surplus	\$135	\$47	\$46	\$229
Taxes on production	\$9	\$5	\$6	\$20
Jobs (Full-time equivalents)	5298	900	723	6921
Average Labour Income/Job	\$34,099	\$63,237	\$50,023	\$39,534

GDP at basic prices (excluding production taxes such as taxes on alcohol sales) would be \$521 million and this includes \$274 million in labour income and \$20 million in taxes on production (such as payroll and property taxes), leaving affected companies with an operating surplus of \$229 million. This spending would account for more than 6,900 full-time equivalent jobs in Alberta, 77% of which would be direct jobs, with an average wage (including benefits) of \$39,534.

Government revenues would consist of taxes on products (\$16 million), taxes on production (\$20 million), income taxes on labour income (\$41 million)⁵, and corporate income taxes (\$23 million), or a total of \$100 million.

5 Calculated using the Fidelity tax calculator for Alberta for 2020 based on 6,902 workers receiving an average income of \$39,541 https://www.fidelity.ca/fidca/en/taxcalculator?ef_id=CjwKCAjwz_WGBhA1EiwAUAXlcRic_ag8dlqYmbIDOUhHGZAV1rwzV7EfK56UbCLh45tW6BBD65MpRRoCkWUQAvD_BwE:G:s&s_kwid=AL!10784!3!490978807916!p!!g!!income%20tax%20calculator!11969289573!118597061969&gclid=CjwKCAjwz_WGBhA1EiwAUAXlcRic_ag8dlqYmbIDOUhHGZAV1rwzV7EfK56UbCLh45tW6BBD65MpRRoCkWUQAvD_BwE

3.4.2 Spending on Outdoor Recreational Equipment and Accessories

As noted previously, it is estimated that \$376 million in spending on outdoor recreation equipment and accessories could be attributed to activities on Crown Land, of which \$124 million could be attributed to activities on public land. The impacts associated with these expenditures were estimated by matching the survey expenditures categories shown in Table 44 with the Statistics Canada industry multipliers as follows:

Survey Category	Statistics Canada Industry Classification
ATV/side by side	Motor vehicle and parts dealers [BS441000]
4X4	Motor vehicle and parts dealers [BS441000]
Snowmobile	Motor vehicle and parts dealers [BS441000]
Dual Sport/Off Road Motorcycle/ Snow bike	Motor vehicle and parts dealers [BS441000]
Bicycle/mountain bike	Sporting goods, hobby, book and music stores [BS451000]
Protective equipment	Sporting goods, hobby, book and music stores [BS451000]
Motorized boat	Motor vehicle and parts dealers [BS441000]
Non-motorized boat	Motor vehicle and parts dealers [BS441000]
Snowshoes	Sporting goods, hobby, book and music stores [BS451000]
Skis/Poles/Boots	Sporting goods, hobby, book and music stores [BS451000]
Camping equipment	Sporting goods, hobby, book and music stores [BS451000]
Fishing and Hunting equipment	Sporting goods, hobby, book and music stores [BS451000]
Outdoor specific clothing	Sporting goods, hobby, book and music stores [BS451000]
Equipment and recreational vehicle repairs and maintenance	Automotive repair and maintenance [BS811100]
Equipment and recreational vehicle insurance	Agencies, brokerages and other insurance related activities [BS524200]
Other	Sporting goods, hobby, book and music stores [BS451000]

3.4.2.1 Economic Impact of Purchases of Equipment Related to Recreational Trips to All Crown Land Types

Table 49 shows the resulting estimate of the economic impacts of \$376 million in spending on outdoor recreation equipment and accessories related to trips to Crown lands, based on the patterns and type of expenditures made by survey households. It shows that these purchases of outdoor recreation equipment and accessories would account for \$485 million of Alberta GDP, including \$16 million in taxes on products. GDP at basic prices (excluding production taxes such as taxes on alcohol sales) would be \$470 million and this includes \$297 million in labour income and \$17 million in taxes on production (such as payroll and property taxes), leaving affected companies with an operating surplus of \$158 million. This spending would account for about 4,850 full-time equivalent jobs in Alberta, 61% of which would be direct jobs, with an average wage (including benefits) of \$61,202.

Table 49: Economic Impact of Expenditures on Outdoor Recreation Equipment and Accessories Related to Trips to Crown Lands, 2019/20

Type of Impact	Direct	Indirect	Induced	Total
	(\$ millions)			
Gross domestic product (GDP) at market prices	\$252	\$100	\$133	\$485
Taxes on products	\$2	\$2	\$13	\$16
Gross domestic product (GDP) at basic prices	\$251	\$99	\$121	\$470
Labour Income	\$188	\$55	\$54	\$297
Gross operating surplus	\$57	\$40	\$60	\$158
Taxes on production	\$5	\$4	\$8	\$17
Jobs	2936	868	1043	4847
Average Labour Income/Job	\$64,185	\$62,989	\$51,662	\$61,202

Government revenues would consist of taxes on products (\$16 million), taxes on production (\$17 million), income taxes on labour income (\$59 million), and corporate income taxes (\$16 million), or a total of \$108 million.

3.4.3 Summary of Economic Impacts

3.4.3.1 Economic Impact of Spending on Recreational Trips to Crown Land

When the impacts of trip-related spending associated with all trips to Crown land in Alberta with the impacts of household spending on outdoor recreation equipment and accessories, the results are shown in Table 50. It shows that, overall, recreation on public lands is directly and indirectly responsible for \$2,840 million in GDP, labour income valued at \$1,529 million, and the equivalent of nearly 36,000 full time jobs equivalents. The government tax revenues resulting from these expenditures would total \$551 million, of which 80% would be related to trip-related spending. This amount includes \$245 million in income tax, \$113 million in corporate income tax, \$91 million in taxes on products, and \$102 million in taxes on production.

Table 50: Economic Impact of Spending on Recreational Trips to All Crown Land Types, 2019/20

	Expenditures on		
	Trips	Equipment	Total
	(\$ millions)		
Gross domestic product (GDP) at market prices	\$2,355	\$485	\$2,840
Taxes on products	\$75	\$16	\$91
Gross domestic product (GDP) at basic prices	\$2,283	\$470	\$2,753
Labour Income	\$1,233	\$297	\$1,529
Gross operating surplus	\$969	\$158	\$1,127
Taxes on production	\$85	\$17	\$102
Jobs	31,112	4,847	35,959
Average Labour Income/Job	\$39,618	\$61,202	\$42,527

3.4.3.2 Distribution of Economic Impacts Among Crown Land Types

Table 51 shows how the economic impacts related to trip expenditures would be distributed based on the expenditures associated with recreational trips to each Crown land type. In general, about 50% of the impacts would be associated with spending on trips to national parks, 28% would be associated with trips to provincial parks and protected areas, and 22% would be associated with trips to public lands.

Table 51: Distribution of Economic Impacts of Trip Expenditures by Crown Land Type, 2019/20

	National Parks	Parks and Protected Areas	Public Lands	Total
	(\$ millions)			
Gross domestic product (GDP) at market prices	\$1,172	\$647	\$537	\$2,355
Taxes on products	\$39	\$20	\$16	\$75
Gross domestic product (GDP) at basic prices	\$1,134	\$627	\$521	\$2,283
Labour Income	\$621	\$338	\$274	\$1,233
Gross operating surplus	\$473	\$267	\$229	\$969
Taxes on production	\$42	\$23	\$20	\$85
Jobs	15587	8604	6921	31112
Average Labour Income/Job	\$39,828	\$39,304	\$39,534	\$39,618

It is not possible to allocate the economic impacts of purchases of recreational equipment and accessories among the different Crown land types because such capital purchases can be used in any or all of national parks, provincial parks and protected areas and public lands.

3.4.3.3 Significance of the Economic Impacts Associated with Outdoor Recreation

To put the economic impacts associated with spending by Albertans on outdoor recreational trips and equipment into perspective, the estimates in Table 49 can be compared to published information about the economic contributions of various industries in Alberta. According to the Government of Alberta (2021), Alberta GDP at basic prices in 2019 was \$334.5 billion. This means that spending associated with trips to Crown lands accounted for 0.8% of Alberta GDP, while spending associated with trips to public lands accounted for 0.2%. These GDP effects for spending associated with recreational spending on Crown lands were equivalent to 57% of the GDP associated with the utilities industry (\$4.7 billion), 44% of GDP associated with the agriculture, forestry, fishing and hunting industry (\$6.1 billion) and 3% of the GDP associated with the mining, quarrying and oil and gas industry (\$91.0 billion).

In terms of employment, the 31,100 direct jobs associated with recreational spending on Crown lands in 2019 was 6.1 times larger than direct employment in the forest and logging industry (5,100 jobs), 31% larger than employment in the utilities industry (23,700 jobs), equivalent to nearly 63% of jobs in the agriculture industry (49,000 jobs), and equivalent to 23% of employment in the mining, quarrying and oil and gas industry (138,000 jobs). Overall, the 32,800 jobs directly or indirectly related to spending by Albertans on trips to Crown lands accounted for 1.5% of total employment in 2019 (2.39 million jobs) (Government of Alberta (2021a).

3.5 REGIONAL DISTRIBUTION OF ACTIVITY, SPENDING AND IMPACTS

3.5.1 All Crown Land Types

Table 52 summarizes the estimates of day and overnight trips to public lands in each of Alberta's the seven LUF regions. Overall, more than half of all trips (51.5%) were to destinations in the South Saskatchewan region. Next in importance were Crown lands types in the North Saskatchewan region (29.9% of trips), the Upper Athabasca region (11.1% of trips) and the Red Deer region(3.1%). The distribution of trips by region tends to match the distribution of the Alberta population by region.

Table 52: Regional Distribution of Activity and Spending from Trips to All Crown Land Types, 2019/20

LUF Region Where Spending Occurred	Day Trips	Overnight Trips	Total Trips		Expenditures	
	Millions	Millions	Millions	Percent	Millions	Percent
South Saskatchewan	5.67	1.24	6.91	51.5%	\$1,085	46.4%
Red Deer	0.34	0.08	0.42	3.1%	\$68	2.9%
North Saskatchewan	3.00	1.01	4.01	29.9%	\$761	32.5%
Upper Athabasca	1.03	0.46	1.49	11.1%	\$323	13.8%
Lower Athabasca	0.14	0.02	0.16	1.2%	\$20	0.8%
Upper Peace	0.20	0.08	0.28	2.1%	\$60	2.6%
Lower Peace	0.12	0.02	0.14	1.1%	\$21	0.9%
Total	10.49	2.91	13.40	100.0%	\$2,339	100.0%

Table 52 also summarizes the estimated spending that occurred in each LUF region on trips to all Crown land types in 2019/20. The spending estimates reflect the number of day use and overnight trips to each region, the amount of spending associated with day and overnight visits to each region, and the spatial spending patterns of households involved in day and overnight visits to each region, with spending enroute being split between the home and destination regions. The distribution of expenditures tends to match the pattern of trips, although the South Saskatchewan Region accounted for a slightly smaller percentage of spending (47.7%) compared to 54.9% of trips, with higher percentages of spending occurring in the North Saskatchewan Region (23.1%) and the Upper Athabasca Region (13.1%)

It is possible to estimate how the economic impacts of these expenditures would be distributed among the LUF regions by combining the information on the pattern of expenditures with the estimated provincial impacts (Table 44). These estimates are provided in Table 53 with the distribution of the impacts matching the distribution of the expenditures. These estimates probably overstate the total impacts in the smaller regions because the indirect and induced effects are more likely to occur in the regions with the largest populations and the greatest economic diversity, but there is no way of being able to differentiate these effects.

Table 53: Regional Distribution Spending and Total Impacts from Trips to All Crown Land Types, 2019/20

LUF Region Where Spending Occurred	Expenditures		GDP	Labour Income	Employment
	Millions	Percent	Millions	Millions	FTEs
South Saskatchewan	\$1,085	46.4%	\$1,093	\$572	14,433
Red Deer	\$68	2.9%	\$69	\$36	911
North Saskatchewan	\$761	32.5%	\$766	\$401	10,124
Upper Athabasca	\$323	13.8%	\$326	\$170	4,301
Lower Athabasca	\$20	0.8%	\$20	\$10	263
Upper Peace	\$60	2.6%	\$60	\$32	796
Lower Peace	\$21	0.9%	\$21	\$11	283
Total	\$2,339	100.0%	\$2,355	\$1,233	31,112

3.5.2 National Parks

The regional distribution of spending and economic impacts associated with trips to national parks is provided in Table 54.

Table 54: Regional Distribution Spending and Total Impacts from Trips to National Parks

LUF Region Where Spending Occurred	Expenditures		GDP	Labour Income	Employment
	Millions	Percent	Millions	Millions	FTEs
South Saskatchewan	\$658	56.0%	\$643	\$341	8,560
Red Deer	\$0	0.0%	\$0	\$0	0
North Saskatchewan	\$375	31.9%	\$367	\$194	4,880
Upper Athabasca	\$138	11.8%	\$135	\$72	1,799
Lower Athabasca	\$3	0.2%	\$2	\$1	33
Upper Peace	\$0	0.0%	\$0	\$0	0
Lower Peace	\$0	0.0%	\$0	\$0	5
Total	\$1,174	100.0%	\$1,172	\$621	15,587

3.5.3 Provincial Parks and Protected Areas

Table 55 summarizes the regional distribution of spending and economic impacts associated with trips to public lands.

Table 55: Regional Distribution Spending and Total Impacts from Trips to Provincial Parks and Protected Areas, 2019/20

LUF Region Where Spending Occurred	Expenditures		GDP	Labour Income	Employment
	Millions	Percent	Millions	Millions	FTEs
South Saskatchewan	\$443	69.5%	\$426	\$223	5670
Red Deer	\$23	3.7%	\$23	\$12	299
North Saskatchewan	\$105	16.5%	\$101	\$53	1348
Upper Athabasca	\$39	6.1%	\$38	\$20	499
Lower Athabasca	\$6	1.0%	\$6	\$3	78
Upper Peace	\$18	2.9%	\$18	\$9	236
Lower Peace	\$2	0.4%	\$2	\$1	30
Total	\$640	100.0%	\$647	\$338	8604

3.5.4 Public Lands

Table 56 summarizes the regional distribution of spending and economic impacts associated with trips to public lands.

Table 56: Regional Distribution Spending and Total Impacts from Trips to Public Lands, 2019/20

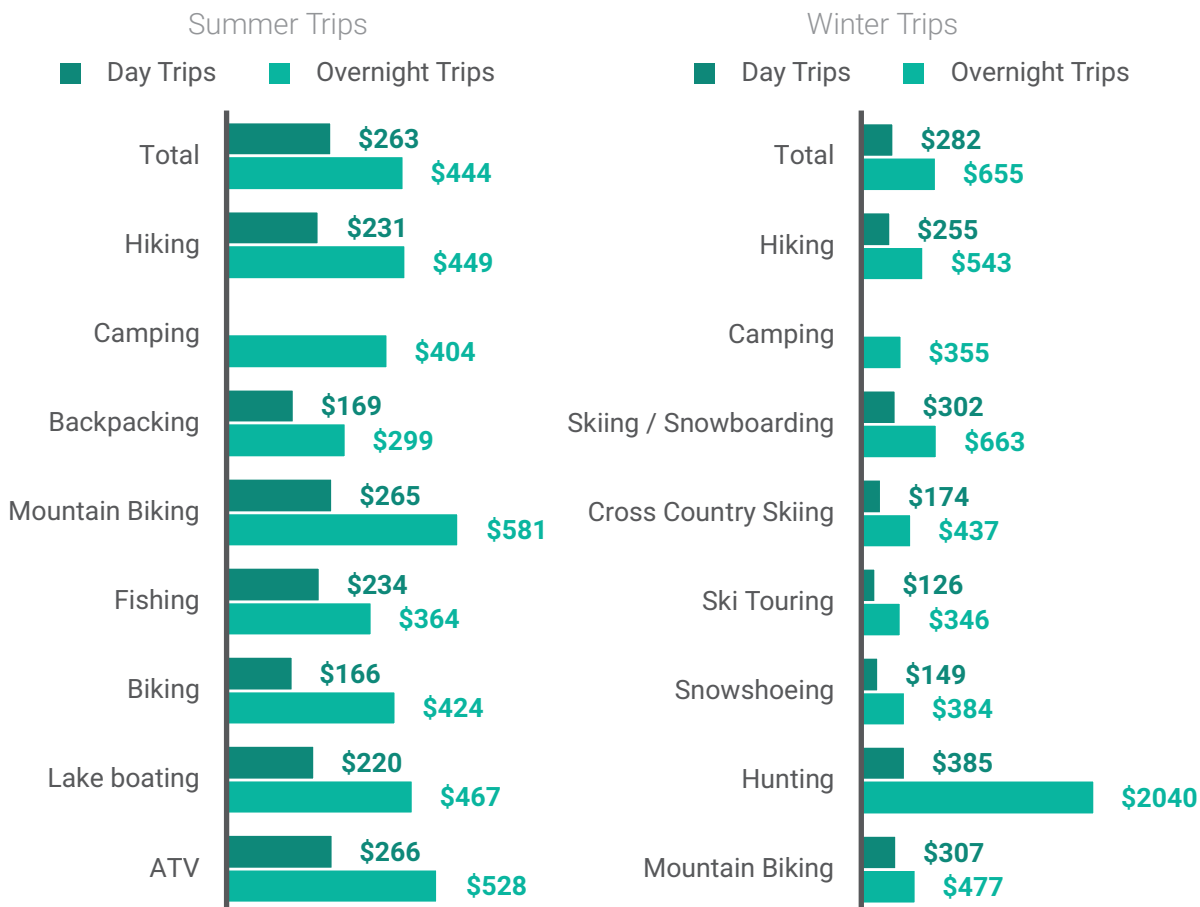
LUF Region Where Spending Occurred	Expenditures		GDP	Labour Income	Employment
	Millions	Percent	Millions	Millions	FTEs
South Saskatchewan	\$252	47.7%	\$255	\$131	3,293
Red Deer	\$20	3.8%	\$20	\$10	260
North Saskatchewan	\$122	23.1%	\$123	\$63	1,592
Upper Athabasca	\$69	13.1%	\$70	\$36	906
Lower Athabasca	\$6	1.1%	\$6	\$3	76
Upper Peace	\$41	7.8%	\$42	\$21	537
Lower Peace	\$18	3.5%	\$18	\$9	238
Total	\$528	100.0%	\$535	\$274	6,900

3.6 SPENDING BY ACTIVITY

3.6.1 Average Spending per Trip

The survey data showed that trips expenditures also varied to some degree depending on the primary recreational activity for the trip. Figure 14 shows the average trips expenditures for summer and winter trips based on the eight most frequently mentioned activities that were listed as the primary reason for the trip. It shows that, for the summer months, average spending on day trips was \$263 compared to \$444 for overnight trips. For trips during the winter months, average spending varied from \$282 per day trip to \$655 per overnight trip.

Figure 14: Average Spending per Summer Trip by Activity, Total Trips and Trips to Public Lands



The lowest cost day trips during the summer months involved biking (\$166 per trip), backpacking (\$169) and boating on lakes (\$220) while the highest trips cost was associated with mountain biking (\$265). For overnight trips during the summer, the highest costs were also associated with mountain biking (\$581 per trip). The average cost of an overnight ATV trips was also quite high (\$528) while the lowest trip costs were for backpacking (\$299) and fishing (\$364).

During the winter months, the lowest costs for day trips were for activities like ski touring (\$126 per trip) and snowshoeing (\$149). Ski/snowboarding day trips cost an average of \$302 per trip, but the highest cost was associated with hunting (\$385). Hunting on overnight trips had very high costs (an average of \$2,040 per trip) while ski touring trips cost the least (\$346 per trip). Overnight trips for skiing/snowboarding cost an average of \$663 per trip.

It should be noted that, while Figure 14 shows differences in spending among different recreational activities and different destinations for day and overnight trips, none of these differences is statistically significant because of the relatively small sample sizes and high variability in the expenditure data.

3.6.2 Total Spending by Activity

Table 57 provides an estimate of the total number of trips taken to all Crown land types in 2019/20 by the primary recreational activity that motivated the trip as well as an estimate of total expenditures associated with those trips.

Table 57: Total Visits and Expenditures by Primary Recreational Trip, 2019/20

Primary Motivating Activity per Trip	Visits		Household Participation Rate	Expenditures		
	Millions	Percent		Average per Trip	Millions	Percent
Hiking/Walking/Running	4.171	31.1%	85.5%	\$298	\$581	24.9%
Camping	1.594	11.9%	60.1%	\$396	\$295	12.6%
Skiing/snowboarding	1.066	8.0%	39.9%	\$467	\$233	10.0%
Fishing	0.711	5.3%	44.1%	\$301	\$100	4.3%
Mountain biking	0.676	5.0%	39.9%	\$345	\$109	4.7%
Cross-country skiing	0.639	4.8%	34.7%	\$250	\$75	3.2%
Hunting	0.556	4.2%	26.8%	\$1,011	\$263	11.3%
Ski touring	0.529	3.9%	30.1%	\$264	\$65	2.8%
ATV	0.462	3.4%	28.5%	\$1,318	\$83	3.6%
Snowshoeing	0.341	2.5%	21.5%	\$207	\$33	1.4%
Lake boating	0.328	2.4%	33.1%	\$324	\$50	2.1%
Biking	0.306	2.3%	28.9%	\$247	\$35	1.5%
Equestrian	0.305	2.3%	35.3%	\$341	\$49	2.1%
Sightseeing	0.281	2.1%	na	\$519	\$68	2.9%
Backpacking	0.229	1.7%	63.9%	\$286	\$31	1.3%
Climbing	0.177	1.3%	23.4%	\$312	\$26	1.1%
Wildlife viewing	0.154	1.1%	53.8%	\$475	\$34	1.5%
Photography	0.136	1.0%	51.5%	\$388	\$25	1.1%
4x4	0.114	0.9%	28.0%	\$1,318	\$70	3.0%
Snowmobiling	0.106	0.8%	5.5%	\$390	\$19	0.8%
Random camping	0.091	0.7%	55.6%	\$305	\$13	0.6%
Ice climbing	0.089	0.7%	na	\$340	\$14	0.6%
River boating	0.079	0.6%	23.2%	\$242	\$9	0.4%
Motorcycle riding	0.076	0.6%	18.2%	\$347	\$12	0.5%
Mountaineering	0.055	0.4%	30.6%	\$211	\$5	0.2%
Skating/sledding	0.049	0.4%	na	\$289	\$7	0.3%
Dirt biking	0.044	0.3%	15.8%	\$1,371	\$28	1.2%
Picnicking	0.021	0.2%	na	\$167	\$2	0.1%
Swimming	0.010	0.1%	47.1%	\$465	\$2	0.1%
Power boating	0.006	0.0%	7.4%	\$46	\$0	0.0%
Total	13.400	100.0%			\$2,338	100.0%

While trips are classified according to the primary activity motivating the trip, households typically engaged in other activities while on the trip. The household participation rate provided in Table 56 identifies the percentage of households that engaged in specific recreational activities while on their trips. These participation rates are similar to the household participation rates provided in the 2017 Albertan Recreation Survey (Alberta Culture and Tourism, 2017).

It is important to note that, for some activities, the estimated percentage of total recreational spending was different from the percentage of total trips taken, and this is because average trip costs for some activities was lower or higher than others. For example, while hiking/walking/ running was the most frequent activity, accounting for 31.1% of total trips, spending on such trips only accounted for 24.9% of total spending, due to an average cost of \$396 per trip. On the other hand, hunting accounted for 4.2% of total trips but 11.3% of total spending. The economic impacts associated with these expenditures would be distributed among activities according to their percentage contribution to total spending and the resulting estimates are provided in Table 58.

Table 58: Total Visits and Expenditures by Primary Recreational Trip, 2019/20

Primary Motivating Activity per Trip	Expenditures		GDP	Labour Income	Employment
	Millions	Percent	Millions	Millions	FTEs
Hiking	\$581	24.9%	\$586	\$307	7738
Camping	\$295	12.6%	\$297	\$156	3929
Skiing/snowboarding	\$233	10.0%	\$235	\$123	3100
Fishing	\$100	4.3%	\$101	\$53	1333
Mountain biking	\$109	4.7%	\$110	\$58	1453
Cross-country skiing	\$75	3.2%	\$75	\$39	995
Hunting	\$263	11.3%	\$265	\$139	3503
Ski touring	\$65	2.8%	\$66	\$34	869
ATV	\$83	3.6%	\$84	\$44	1108
Snowshoeing	\$33	1.4%	\$33	\$17	439
Lake boating	\$50	2.1%	\$50	\$26	662
Biking	\$35	1.5%	\$36	\$19	472
Equestrian	\$49	2.1%	\$49	\$26	649
Sightseeing	\$68	2.9%	\$69	\$36	907
Backpacking	\$31	1.3%	\$31	\$16	408
Climbing	\$26	1.1%	\$26	\$14	343
Wildlife viewing	\$34	1.5%	\$34	\$18	455
Photography	\$25	1.1%	\$25	\$13	329
4x4	\$70	3.0%	\$71	\$37	937
Snowmobiling	\$19	0.8%	\$19	\$10	258
Random camping	\$13	0.6%	\$13	\$7	172
Ice climbing	\$14	0.6%	\$14	\$7	188
River boating	\$9	0.4%	\$9	\$5	119
Motorcycle riding	\$12	0.5%	\$12	\$6	164
Mountaineering	\$5	0.2%	\$5	\$3	72
Skating/sledding	\$7	0.3%	\$7	\$3	87
Dirt biking	\$28	1.2%	\$28	\$15	373
Picnicking	\$2	0.1%	\$2	\$1	22
Swimming	\$2	0.1%	\$2	\$1	29
Power boating	\$0	0.0%	\$0	\$0	2
Total	\$2,338	100.0%	\$2,355	\$1,233	31,110

3.7 SOCIO-ECONOMIC PROFILE OF THE SURVEY RESPONDENTS

3.7.1 Place of Residence

Table 59 summarizes the distribution of survey households by LUF region and type of community in which they resided. It shows that 56.4% of the surveys were completed by households that lived in cities, 22.6% were completed by households that lived in towns, 16.8% were completed by households that lived in municipal districts or counties, 2.5% were completed by households that lived in villages, and the remainder (1.7%) were completed by households that lived in summer villages or specialized municipalities.

Table 59: Distribution of Survey Households by LUF Region and Community Type

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
City	37.8%	2.9%	14.0%	0.9%	0.9%	56.4%
Municipal district or county	7.1%	1.3%	6.8%	1.0%	0.6%	16.8%
Specialized municipality	0.9%	0.0%	0.4%	0.0%	0.1%	1.3%
Summer village	0.1%	0.0%	0.2%	0.0%	0.0%	0.4%
Town	15.1%	1.7%	3.8%	1.4%	0.6%	22.6%
Village	1.5%	0.2%	0.6%	0.1%	0.1%	2.5%
Total	62.5%	6.1%	25.8%	3.4%	2.3%	100.0%

The representativeness of the survey households can be assessed by comparing the data in Table 59 with the distribution of Alberta households based on the 2016 census. This comparison is shown in Table 60. It shows that the sample included a much higher proportion of households in the South Saskatchewan region than was observed in the 2016 census, especially in terms of households living in towns and municipal districts and counties.

Table 60: Comparison of the Distribution of Survey Households and Alberta Households by LUF Region and Community Type

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
City	0.9%	-0.1%	-14.7%	0.5%	-0.7%	-14.0%
Municipal district or county	3.9%	0.1%	3.2%	-1.0%	-0.5%	5.6%
Specialized municipality	0.7%	0.0%	-2.0%	-1.8%	-0.1%	-3.2%
Summer village	0.1%	0.0%	0.2%	-0.1%	0.0%	0.2%
Town	10.1%	0.2%	1.0%	0.0%	-0.4%	10.8%
Village	1.2%	0.1%	0.2%	0.1%	0.0%	1.5%
Reserves	-0.2%	-0.1%	-0.2%	-0.2%	-0.2%	-0.8%
Metis Settlements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16.7%	0.2%	-12.4%	-2.6%	-1.9%	0.0%

While the North Saskatchewan region was under represented in the sample, it had a higher than expected proportion of households from municipal districts and counties and much lower portion of households that lived in cities. The Athabasca region was also underrepresented in the survey, especially in terms of households that lived in specialized municipalities, while the Peace region was underrepresented, mostly in terms of households that lived in cities.

3.7.2 Size of Household

Table 61 summarizes the average number of people per household for households that participated in the survey and compares this to the results of the 2016 census.

Table 61: Average Household Size for Survey Respondents

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
City	2.59	2.82	2.61	2.42	2.5	2.60
Municipal district or county	2.68	2.89	2.65	2.43	3.1	2.69
Specialized municipality	2.08		2.4		3	2.22
Summer village	4		3.67			3.80
Town	2.59	2.83	2.54	2.42	1.67	2.56
Village	2.24	3	2.5	2.5	2	2.37
Average	2.59	2.84	2.61	2.43	2.44	2.60
2016 Census	2.68	2.59	2.63	2.73	2.80	2.66

It shows that survey households, which had an average of 2.60 people per household, were slightly smaller than the Alberta average of 2.66 people per household. This pattern was consistent throughout most of the LUF regions, with survey households in the Red Deer Region being slightly larger than shown in the 2016 census.

As shown in Table 62, there were an average of 0.5 children under the age of 18 years living in survey households. This number was relatively consistent throughout the LUF Regions and among the types of communities although higher numbers of children per household were found in responses from households in the Red Deer and region and lower numbers in the Athabasca region. Lower numbers were also found in responses from households that lived in specialized municipalities and in villages.

Table 62: Average Number of Children Under 18 Years of Age Size for Survey Respondents

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
City	0.5	0.6	0.5	0.4	0.5	0.5
Municipal district or county	0.5	0.8	0.6	0.3	1.0	0.5
Specialized municipality	0.2		0.0		0.0	0.1
Summer village	3.5		1.3			2.2
Town	0.5	0.7	0.4	0.2	0.1	0.5
Village	0.2	1.3	0.6	0.5	0.0	0.4
Average	0.5	0.7	0.5	0.3	0.5	0.5

3.7.3 Gender

The gender of survey respondents is provided in Table 63. The table shows that about 60% of the respondents from all LUF regions were male, less than 40% were female and less than 1% were non-binary. The Peace LUF region, where more than three-quarters of the respondents (76.2%) were male, was the only exception to the pattern

Table 63: Gender of Survey Respondents

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
Male	64.0%	62.3%	59.3%	59.3%	76.2%	62.8%
Female	35.7%	37.0%	39.7%	40.7%	23.8%	36.6%
Non-Binary	0.4%	1.9%	1.0%	0.0%	0.0%	0.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

3.7.4 Age

Age characteristics of survey respondents is provided in Table 64. It shows that 62.7% of all respondents were between the ages of 35 to 64 years of age and only 17.5% of the respondents were under the age of 34 years.

Table 64: Age Characteristics of Survey Respondents

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
18 to 24	1.6%	1.9%	3.3%	3.6%	0.0%	2.1%
25 to 34	16.7%	5.7%	14.7%	14.3%	14.3%	15.4%
35 to 44	23.0%	17.0%	19.0%	14.3%	33.3%	21.6%
45 to 54	18.3%	24.5%	19.9%	14.3%	9.5%	18.7%
55 to 64	20.5%	22.6%	27.5%	17.9%	23.8%	22.3%
65 to 74	16.5%	26.4%	12.8%	28.6%	19.0%	16.6%
75 and older	3.4%	1.9%	2.8%	7.1%	0.0%	3.2%
Total	100%	100%	100%	100%	100%	100%

The age characteristics of the survey respondents were compared to the age structure of the 2016 Census in Table 65. The table cells shown in blue are underrepresented in the survey while the cells shown in green are overrepresented. The overall pattern indicates that, in general, people under the age of 35 years and over the age of 74 were under-represented in the survey, especially people under the age of 24 years. In contrast, people aged 35 to 74 were overrepresented, especially for 65 to 74 and 55 to 64-year age groups.

Table 65: Age Characteristics of Survey Respondents Compared to Age Structure of 2016 Census

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
18 to 24	-9.4%	-9.3%	-8.4%	-7.5%	-13.1%	-9.3%
25 to 34	-3.4%	-13.8%	-6.0%	-7.1%	-8.3%	-5.1%
35 to 44	3.8%	-0.4%	0.9%	-4.6%	14.3%	3.0%
45 to 54	0.4%	7.3%	2.8%	-4.6%	-7.8%	1.1%
55 to 64	4.5%	5.4%	11.6%	1.6%	8.9%	6.4%
65 to 74	7.2%	16.3%	3.4%	20.4%	11.2%	7.4%
75 and older	-3.1%	-5.6%	-4.2%	1.9%	-5.3%	-3.4%

3.7.5 Education

Table 66 shows the educational characteristics of survey respondents. It shows that the survey was not completed by any adult with less than some post-secondary education with the highest percentage of responses (37.3%) coming from people who had a university undergraduate degree, including 41.7% of respondents from the South Saskatchewan LUF region. Overall, 18.0% of survey respondents had a post graduate degree, including 19.4% of respondents from the South Saskatchewan LUF region.

Table 66: Educational Characteristics of Survey Respondents

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
High school (includes some high school)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Some post-secondary	10.1%	19.2%	12.7%	15.4%	11.8%	11.5%
College or technical school graduation	28.8%	40.4%	40.1%	46.2%	47.1%	33.2%
University undergraduate degree	41.7%	25.0%	29.9%	30.8%	35.3%	37.3%
Post graduate degree (Masters, PhD, MD)	19.4%	15.4%	17.3%	7.7%	5.9%	18.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The educational characteristics of people who answered the survey are compared to the educational characteristics of the Alberta population, as per the 2016 Census, in Table 67. The table cells shown in blue are underrepresented in the survey while the cells shown in green are overrepresented. It shows that people who had less than a college or technical school education were very underrepresented in the survey and that people who had an undergraduate or graduate degree were overrepresented. This pattern was consistent for respondents from among all five LUF regions.

Table 67: Educational Characteristics of Survey Respondents Compared to Educational Composition of 2016 Census

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
High school (includes some high school)	-15.2%	-19.0%	-16.7%	-21.0%	-28.6%	-16.9%
Some post-secondary	-17.0%	-12.1%	-15.5%	-13.5%	-17.1%	-16.4%
College or technical school graduation	-1.0%	3.7%	7.2%	10.8%	15.1%	1.4%
University undergraduate degree	22.1%	15.1%	14.5%	19.8%	27.0%	20.8%
Post graduate degree (Masters, PhD, MD)	11.2%	12.3%	10.6%	4.0%	3.5%	11.1%

3.7.6 Income

Table 68 summarizes the household income characteristics of survey respondents. It shows that the highest percentage of surveys (26.9%) were completed with households reporting incomes of less than \$50,000, with another 36.3% of household reporting incomes ranging from \$75,000 to less than \$125,000.

Table 68: Household Income Characteristics of Survey Respondents

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
under \$50,000	27.4%	23.5%	27.9%	22.2%	19.0%	26.9%
\$50,000 to less than \$75,000	15.2%	11.8%	8.8%	14.8%	4.8%	13.2%
\$75,000 to less than \$100,000	18.4%	19.6%	14.7%	14.8%	23.8%	17.6%
\$100,000 to less than \$125,000	17.1%	19.6%	21.6%	25.9%	19.0%	18.7%
\$125,000 to \$150,000	12.6%	21.6%	17.6%	11.1%	23.8%	14.6%
More than \$150,000	9.2%	3.9%	9.3%	11.1%	9.5%	9.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

These household income characteristics are compared in Table 69 to the household income characteristics of all Alberta households, as reported in the 2016 census. The table cells shown in blue are underrepresented in the survey while the cells shown in green are overrepresented. The table shows that households with incomes in excess of \$150,000 were vastly underrepresented by the survey respondents. There was also small underrepresentation of households having incomes of \$50,000 to \$74,999. The survey overrepresented households in the lowest income range (less than \$50,000) as well as households with incomes in the ranges of \$75,000 to \$150,000. Overrepresentation of households having incomes of \$125,000 to \$150,000 was most pronounced in the Peace and Red Deer regions.

Table 69: Household Income Characteristics of Survey Respondents Compared to Household Income Characteristics of the 2016 Census

	South Saskatchewan	Red Deer	North Saskatchewan	Athabasca	Peace	Total
under \$50,000	4.4%	-1.9%	4.2%	-0.7%	-3.9%	3.5%
\$50,000 to less than \$75,000	-0.4%	-4.8%	-6.9%	1.9%	-9.2%	-2.3%
\$75,000 to less than \$100,000	3.9%	4.6%	0.2%	2.9%	9.6%	3.2%
\$100,000 to less than \$125,000	5.1%	7.0%	9.3%	15.3%	6.0%	6.6%
\$125,000 to \$150,000	3.5%	12.0%	8.0%	2.5%	13.2%	5.2%
More than \$150,000	-16.5%	-16.9%	-14.8%	-21.9%	-15.7%	-16.2%

3.7.7 Affiliation with an Outdoor Club or Association

Overall, 31.3% of survey respondents reported being affiliated with an outdoor club or association. Table 70 shows that this ranged from 23.4% of respondents in the Athabasca region to 34.4% of respondents from the Peace region. There is no information that allows comparison to the Alberta population, but it is expected that these percentages would be much higher than for typical Alberta households.

Table 70: Household Affiliation with Outdoor Clubs or Association

	Yes	Total	Percent
South Saskatchewan	289	874	33.1%
Red Deer	21	85	24.7%
North Saskatchewan	105	360	29.2%
Athabasca	11	47	23.4%
Peace	11	32	34.4%
Total	437	1398	31.3%

The clubs or associations identified by survey respondents are listed in Appendix A.

3.7.8 Summary

Analysis of the socio-economic characteristics for survey households shows some key differences between survey households and the Alberta population. The first and most important difference was that the sample included a much higher proportion of households in the South Saskatchewan and Red Deer regions than was indicated by the 2016 census and lower proportions of households in the North Saskatchewan, Athabasca and Peace regions. However, knowing how the sample distribution differed from the Alberta distribution allowed regional data to be weighted in order to general provincial estimates that better reflected the actual distribution of Alberta households. While the survey results also showed differences in terms of the distribution of households among, cities, towns, villages and rural areas within the regions Alberta, no attempts were made to weight the data to reflect these differences because the sample size was too small.

The comparison of socio-economic characteristics also showed that the sample population of households differed from Alberta households in a number of different ways:

- Survey households, which had an average of 2.60 people per household, were slightly smaller than the Alberta average of 2.66 people per household.
- About 60% of the respondents from all LUF regions were male, less than 40% were female.
- People under the age of 35 years and over the age of 74 were underrepresented in the survey, especially people under the age of 24 years, while people aged 35 to 74 were overrepresented, especially for 65 to 74 and 55 to 64-year age groups.
- People who had less than a college or technical school education were very underrepresented in the survey and that people who had an undergraduate or graduate degree were overrepresented.
- Households with incomes in excess of \$150,000 were underrepresented in the survey as were households having incomes of \$50,000 to \$74,999. The survey overrepresented households in the lowest income range (less than \$50,000) as well as households with incomes in the ranges of \$75,000 to \$150,000.
- A very higher percentage (31.3%) of survey respondents reported being affiliated with an outdoor club or association.

Thus, it is evident that the survey population represents a distinct subset of the Alberta population. But, without knowing the socio-economic characteristics of Alberta households that do participate in outdoor recreation in Alberta, it is not possible to know for certain how well the survey responses reflect the recreational patterns and preferences of Albertans who engage in outdoor recreation.

3.8 CONFIDENCE IN SAMPLE ESTIMATES

As noted previously, there are questions about whether the households that responded to the survey are representative of Alberta households or Alberta households that recreated. For that reason, survey results were used to interpolate available information about total recreational visits and associated spending to draw inferences about the use and economic importance of public lands for recreational purposes. However, since the information is based on a sample and there is variability within survey results, it is important to understand the confidence levels associated with survey estimates.

3.8.1 Confidence in Estimates of Proportions

Confidence in estimates of proportions is dependent on two factors: the size of the sample, with larger sample sizes yielding more reliable estimates, and the estimated proportion, where larger sample sizes are required where the estimates of proportion approach 50%. For instance, it takes a larger sample size to know with confidence that a sample is split 45%/55% than for a sample that is split 10%/90%.

The 95% confidence interval for the estimate of the proportion of households that visited public lands in Alberta in 2019/20 is shown in Table 71. It shows that, for the South Saskatchewan LUF region, which has a very large sample size, it is estimated that, for a 95% level of confidence, between 55.8% and 62.3% of households visited public lands in 2019, which is the estimated proportion (59.1%) \pm 5.5%. The next largest sample size was for households in the North Saskatchewan where it was estimated that, for the 95% confidence interval, between 43.7% and 54.0% of households visited public lands, which is the estimated proportion (48.9%) \pm 10.5%.

Table 71: 95% Confidence Interval for Estimates of the Proportion of Households that Visited Public Lands in 2019/20

Home LUF Region	Visited Public Lands	Sample Size	Estimate of Proportion	95% Confidence Interval		
				Lower Bound	Upper Bound	Percent
South Saskatchewan	517	875	59.1%	55.8%	62.3%	\pm 5.5%
Red Deer	55	85	64.7%	54.5%	74.9%	\pm 15.8%
North Saskatchewan	176	360	48.9%	43.7%	54.0%	\pm 10.5%
Athabasca	28	47	59.6%	45.5%	73.6%	\pm 23.5%
Peace	22	32	68.8%	52.7%	84.8%	\pm 23.3%
Total	798	1,399	57.0%	54.4%	59.6%	\pm 4.5%

The third largest sample size was for the Red Deer region, where the 95% confidence interval suggests that the proportion of households visiting public lands was between 54.5% and 74.9%, which is the estimated proportion (54.5%) \pm 15.8%. Both the Athabasca and Peace regions had very small sample sizes such that the 95% confidence interval was the estimated proportion \pm 23.5%. However, for an estimate for the entire sample, not broken down by region, the 95% confidence interval was the estimate of the proportion (57.0%) \pm 4.5%.

Based on these results, it should be observed that the estimates of proportions for the entire sample and the sample of households from the South Saskatchewan region are very reliable (\pm 5%), the estimates for the North Saskatchewan are moderately reliable (\pm 10%) and the estimates for the Red Deer, Athabasca and Peace regions should be interpreted with caution because the 95% confidence interval is \pm 15% or greater. These levels of confidence would apply to all estimates of proportion (percentages) for the sample and the five LUF regions contained in this report.

3.8.2 Confidence in Estimates of Means

Confidence in estimates of means (averages) is also dependent on sample size, with better reliability associated with bigger samples. However, confidence is also related to the range of values used to calculate a mean. For example, there is will be higher confidence in an average where the possible answers could range from 1 to 10 than from a sample where the answers could range from 1 to 100.

The 95% confidence intervals for the average numbers of day trips and overnight trips taken by Alberta households to Crown lands in 2019/20 are shown in Table 72. It shows that, in terms of day trips, we are 95% confident that the average number of trips per household for the entire sample was 30.9 trips \pm 2.2, which is in the range of 28.8 to 33.1 trips per year.

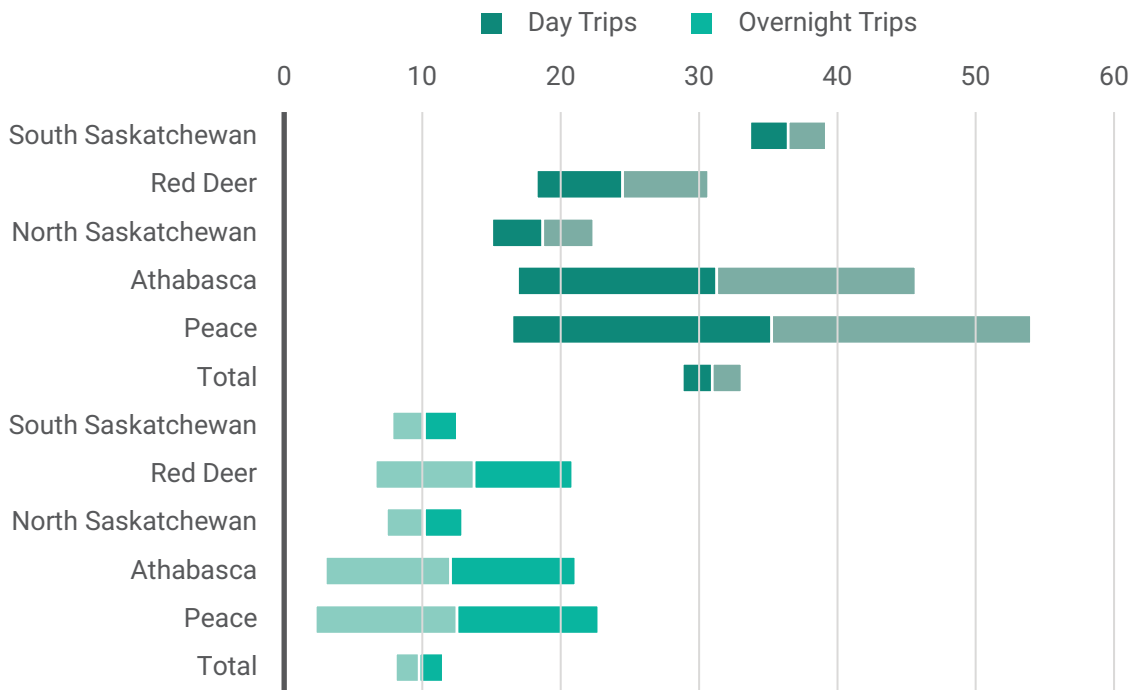
Table 72: 95% Confidence Interval for Estimates of the Average Number of Trips Taken to Public Lands in 2019/20

Home LUF Region	Day Trips			Overnight Trips		
	Sample Size	Average	95% CI	Sample Size	Average	95% CI
South Saskatchewan	813	36.4	2.76	662	9.0	1.18
Red Deer	78	24.5	6.22	65	10.2	3.57
North Saskatchewan	287	18.7	3.69	304	8.8	1.38
Athabasca	42	31.3	14.40	35	7.5	4.53
Peace	28	35.3	18.78	18	7.4	5.13
Total	1,249	30.9	2.16	1084	8.9	0.86

While the average number of day trips reported by households in the South Saskatchewan region falls outside this range, the 95% confidence interval for that region is 36.4 ±2.8 trips, which is in the range of 33.7 to 39.2 trips per year, leading to the conclusion that households in the South Saskatchewan region reported numbers of day use trips that were significantly higher than the overall average. This is expected, however, because numerous survey respondents were residents of relatively large communities inside or adjacent to national parks and reported very high levels of annual use. Similarly, households in the North Saskatchewan region took an average number of day trips (18.7 ±3.7) that was significantly less than the overall average as well as the South Saskatchewan region average. For the other three regions, the average number of day trips appears to be lower/higher than the overall sample average but due to the overlapping confidence intervals, they are not significantly different.

The confidence intervals associated with survey data related to average number of day trips and overnight trips is presented graphically in Figure 15. It shows that there was higher variability in the estimates of day trips than for overnight trips. It also shows that, for day trips, the estimates for the South Saskatchewan were higher than for the total survey while the estimates for the North Saskatchewan region were lower than for the total survey, with no overlap in the confidence intervals. For the overnight trips, the confidence intervals overlapped for each region indicating no significant differences.

Figure 15: 95% Confidence Interval for Estimates of the Average Number of Trips Taken to Public Lands in 2019/20



In percentage terms, the 95% confidence intervals for the number of day trips represented $\pm 7.0\%$ of the average for the entire survey, $\pm 7.6\%$ of the average for the South Saskatchewan, $\pm 19.7\%$ for the North Saskatchewan region, $\pm 25.4\%$ for the Red Deer region, $\pm 46.0\%$ for the Athabasca region and $\pm 53.3\%$ for the Peace region. This shows that confidence intervals are narrower for samples with larger sample sizes and indicates reasonably reliable levels of confidence in the estimates for the sample as a whole and for the South Saskatchewan region. The estimates for the North Saskatchewan can be considered moderately reliable ($\pm 20\%$) and the estimates for the Red Deer, Athabasca and Peace regions should be interpreted with caution because the 95% confidence interval is $\pm 25\%$ or greater.

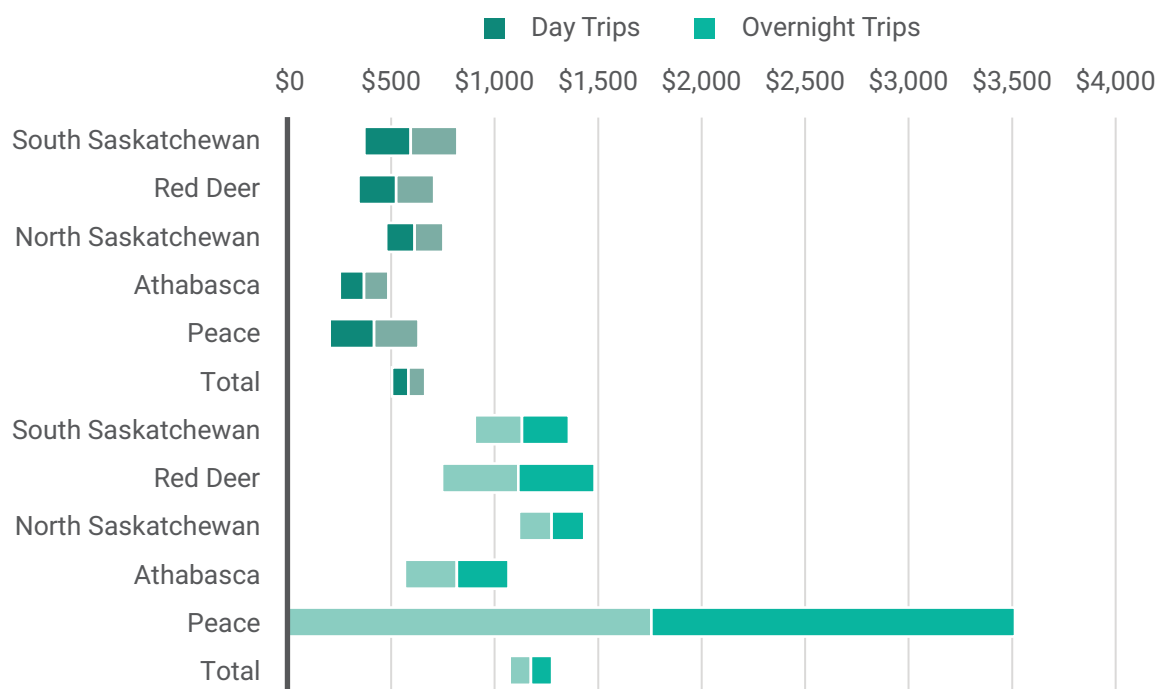
While the range of possible values for the number of day trips taken in a year ranged from 1 to 240 trips per respondent, the estimates of spending showed an even greater range and more variability. Table 73 shows the 95% confidence intervals for the estimates of average spending on day and overnight trips to Crown lands in 2019/20.

Table 73: 95% Confidence Interval for Estimates of the Average Spending on Trips Taken to Public Lands in 2019/20

LUF Region of Residence	Day Trips			Overnight Trips		
	Count	Average	95% CI	Count	Average	95% CI
South Saskatchewan	729	\$595.28	\$224.77	647	\$1,131.47	\$227.23
Red Deer	67	\$524.99	\$183.38	63	\$1,114.74	\$368.82
North Saskatchewan	261	\$614.03	\$138.72	308	\$1,274.95	\$158.38
Athabasca	34	\$369.29	\$116.98	32	\$817.26	\$250.60
Peace	26	\$417.65	\$214.53	22	\$1,757.05	\$2,396.05
Total	1,117	\$584.43	\$80.45	1,072	\$1,175.17	\$102.15

The data show that, for day trips, households in the North Saskatchewan region reported average spending that was lower than for the other regions but the confidence range overlapped with the study average (see Figure 16), indicating that any differences were not significant. There was even greater variability in the data for spending on overnight trips, with extremely wide confidence intervals for the Peace region, due to both a small sample size and the wide range of survey responses. There was overlap in the confidence intervals for spending on overnight trips for all regions, indicating no significant differences in spending patterns among regions.

Figure 16: 95% Confidence Interval for Estimates of the Average Spending on Trips Taken to Public Lands in 2019/20



In percentage terms, the 95% confidence intervals for average spending on day trips represented $\pm 13.8\%$ of the average for the entire survey, $\pm 22.6\%$ of the average for the North Saskatchewan region, $\pm 31.7\%$ for the Athabasca region, $\pm 34.9\%$ for the Red Deer region, $\pm 37.8\%$ of the average for the South Saskatchewan, and $\pm 51.4\%$ for the Peace region. This shows that despite the large sample size for the South Saskatchewan region, there was much higher variability in the reported data than for other regions which, despite having smaller sample sizes, had greater variability in the data. The estimates of average day trip spending for the survey as a whole and for the North Saskatchewan can be considered moderately reliable ($\pm 23\%$ or less) but the estimates for the South Saskatchewan, Red Deer, Athabasca and Peace regions should be interpreted with caution because the 95% confidence interval is $\pm 30\%$ or greater.

For spending on overnight trips, the 95% confidence intervals for average spending on day trips represented $\pm 8.7\%$ of the average for the entire survey, $\pm 12.4\%$ of the average for the North Saskatchewan region, $\pm 20.1\%$ of the average for the South Saskatchewan region, $\pm 30.7\%$ for the Athabasca region, $\pm 333.1\%$ for the Red Deer region, and $\pm 136\%$ for the Peace region. The estimates of average overnight trip spending for the survey as a whole and for the North Saskatchewan region can be considered fairly reliable ($\pm 12.4\%$ or less), the estimates for the South Saskatchewan can be considered moderately reliable ($\pm 20\%$) but the estimates for the Red Deer and the Athabasca regions should be interpreted with caution because the 95% confidence interval is $\pm 30\%$ or greater. The confidence interval for estimates of overnight spending for the Peace region (more than $\pm 100\%$) should be considered unreliable.

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Appendix A

South Saskatchewan Region: Affiliations with an Outdoor Club or Association

- 670 Collective Mountain Bike Club (2)
- A Hiking Meetup
- Alpine Club of Canada (21)
- ACC,GMMC
- AFGA
- afga
- AFGA and ODFGA
- AFGA, Sherwood Park Fish & Game Association
- aheia
- AHIA
- Alberta Backcountry Hunters & Anglers
- Alberta Backcountry Hunters and Anglers, Nature Calgary, Nature Alberta
- Alberta Backcountry Hunters and Anglers, Trout Unlimited Canada
- Alberta Backcountry Hunters and Anglers, Trout Unlimited Canada, Canadian Parks and Wilderness Society, Alberta Wilderness Association
- Alberta BHA, Wild Sheep Foundation Alberta
- Alberta Equestrian Federation, Bragg Ck Trails
- Alberta Equestrian Federation, Canadian Horse Breeders Association Rocky Mountain District
- Alberta Fish and Game Association (2)
- Alberta hunters instructor s crownest quad squad
- Alberta Mycological Society, Alberta Fish & Game Assoc., Alberta Bowunters Assoc.

- Alberta OHV Riders
- alberta trail net
- Alberta white water, waterwerks kayak club, bow waters canoe club
- Alberta Whitewater Association
- Alberta Whitewater Association, Pinch-o-Crow Creekers, Castle Mountain Ski Club
- Alberta Wilderness Association
- Alpine Club of Canada, Calgary Scrambling and Mountaineering Club/Co
- Alpine Club of Canada, Friends of Kananaskis, Bow Valley Naturalists
- Alpine Club of Canada, Hiking & Climbing Meetup.com Groups,
- Alpine Club of Canada, Moose Mountain Bike Society
- Alpine Club of Canada, Spin Sisters
- Alpine Club of Canada, The Association of Bow Valley Rock Climbers
- Alpine Club of Canada; Kicking Horse Ski Club
- AOGAA
- AVOC Quad squad
- AWA, OCC
- AWA, Paddle Junkies
- Backcountry Hunters & Anglers; Alberta Fish and Game Association
- Backcountry Hunters and Anglers (4)
- Backcountry hunters and anglers, moose mountain trail society, wild sheep society alberta
- Backcountry Hunters and Anglers, Wild Sheep Foundation Alberta
- Backside Tours
- Banff Ski Runners, Friends of Kananaskis, World Cup Academy
- Barrhead F&G
- Barrhead Fish and Game
- Bckcountry Hunters and Anglers Alberta
- BHA- Alberta/ Dunvegan River Rats
- BHA Uleth, Lethbridge Fish and Game Association
- BHA, AHEIA, MMBTS
- Bike Cochrane, Cochrane BMX
- Bow River Trout Foundation

- Bow Valley Kayak Club
- Bow Valley Riding Association
- bowwaters canoe club
- Bragg Creek Trail Association
- Bragg Creek Trails
- brooks fish and game association
- Calgary ATC association
- Calgary atv association
- Calgary ATV Riders Association
- Calgary Jeep Association
- Calgary Jeep Association, Trails for Tomorrow
- Calgary Mountain Bike Alliance, Canmore & Area Mountain Bike Association, Alpine Club of Canada
- Calgary River Users Alliance, Bow River Trout Foundation, Calgary Fish and Game Association
- Calgary Ski Club
- Calgary Women Fly Fishers Club
- Calgary Women's Fly Fishers Club
- CAMBA
- camba
- CAMBA
- CAMBA
- Camba
- CAMBA, Friends of Kananaskis Country, Bow Valley Park Stewards
- Camba, Friends of Kananaskis, PMBIA, PSUPA
- CAMBA, MMBTS
- CAMBA, MMBTS, UROC, Steedz Enduro Mountain Bike Team
- Canmore and Area Mountain Bike Association
- Canmore Nordic , Canmore Mtn Bike Association, Canmore Nordic Centre Ski Host ,
- Canmore Trail Culture, Bow Valley Dirtbag Runners, CAMBA
- Castle Mountain Community Association
- CFGA, SFGA, Bow River Trout Foundation, Pheasants Forever, Delta Waterfowl,

Backcountry Hunters and Anglers.

- Chinook outdoor club, half fast hikers, CNP cross country
- CMBA
- CMBA, orca, spin sisters
- CNP Quad squad
- CNP Quad Squad
- CNP QUAD SQUAD
- CNP Quad Squad
- CNP quad Squad, Hillcrest Fish and Game
- CNP Quad Squad, LFGA
- CNP Quad Squad, UROC
- Cnp quad squad/
- Cochrane Camera Club
- Coulee hikers
- CPAWS, AB Hiking
- CPAWS, private group
- Crow Snow Riders, CNP Quad Squad
- crow snow riders. crowsnest quad squad, fernie snowmobile club
- Crowsness quadsquad, Alverta OHV, Calgary ATV
- Crowsnest Nordic Ski Club (4)
- Crowsnest Outdoors
- Crowsnest Outdoors Society, Crowsnest Nordic Ski Club
- Crowsnest Pass Nordic ski club
- Crowsnest Pass Quad Squad (11)
- Crowsnestpass quad squad , Alberta snowmobile association, Lethbridge Fish and Game
- Cycling club
- ERAC, SOOc
- Evergreen Seniors Club of Calgary, Seniors Outdoor Club of Calgary
- Evergreens Seniors Outdoor Club; MnM Seniors Outdoor Club
- Fishing
- Fishing, Orienteering, Calary Jeep Association

- Foothills Nordic Ski Club, Space Dogs Ski Club
- Foothills nordic, Calgary mtn bike alliance, W Bragg Creek trails, Moose mtn bike trail society, Alberta Nordic, Ab Cycling Assoc.
- Foothills Orienteering
- Friends of Fish Creek Park
- Friends of Kananaskis Country, Rundle Mountain Cycling Club
- Good Sam Club
- Great Divide Trail Assoc
- Great Divide Trail Association, Arizona Trail Association, CPAWS
- Hiking group
- Hillcrest Fish and Game
- Junior Forest Wardens, Rocky Mtn. Eagle Research Foundation, Alberta Hunter Ed..
- Lethbridge Motorcycle Club
- Lethbridge Fish & Game, Alberta Climbing Association
- lethbridge fish and game
- Livingstone Porcupine Hills Castle RAG, Crowsnest Nordic Ski Club, UROC mountain bike club
- LMC, Alberta Enduro Riders, UROC
- MMBTS and Baseline Mountain Bike
- MMBTS, Bike Cochrane, Bragg Creek Trail
- MMBTS, CAMBA
- MMBTS, CMBA, UROC, CAMBA
- MMBTS, Spin Sisters
- mnm
- MnM hiking
- MnM Outdoor Club
- MnM Senior Outdoor Club
- MnM Skrastins Seniors alpine
- MnM. Outdoor Club
- Moose Mountain Bike Trails Society (MMBTS) (11)
- Mountain bike group
- Mountains on Mondays

- Mountainview SAR, Cochrane Camera Club
- Nature Calgary
- Norseman Ski Club, Greater Bragg Creek Trails Association, Nature Calgary
- ORB
- ORCA
- Outdoor Recreation Council of Alberta, Backcountry Hunters and Anglers, Calgary Women's Flyfishers
- Overland Alberta, Calgary 4x4, Calgary FPV
- Paddle Junkies
- Phat Basturds
- Pheasants Forever, Alberta Fish & Game Association
- Pirate offroad nation. Gas city wheelers. Lethbridge jeep club. Alberta xj/mj.
- Quad Squad (8)
- Ramblers
- Rifle sport shooting
- RMDRA
- RMDRA
- RMDRA
- RMDRA, AMSA, SGC
- RMDRA,CJA,T4T
- Rocky Mountain Dirt Riders
- rocky mountain dirt riders
- Rocky Mountain Dirt Riders Association
- Rocky Mountain Dirt Riders, Second Gear Club, Elk Valley Dirt Riders, South Okanagan Dirt Riders,
- Rocky Mountain Land Cruiser Association
- Rocky Mountain Land Cruisers, Trails 4 Tomorrow
- Rocky Mountain Trailblazers
- Rocky Mtn Ramblers, MnM Outdoor Seniors
- S.O.C.C.
- SATRA
- SATRA

- Second Gear Club, AMSA, Rocky Mountain Dirt Riders, Rocky Mountain Motorcycle club
- Second gear club, Rocky MTN dirt riders
- Second Sixties Outdoor Club, Friends of Kananaskis
- Seniors' Outdoor Club of Calgary
- Sherwood Park Fish and Game Association
- Skrastins, MnM
- Skyline hikers of Canadian Rockies, Canmore Meanderthals
- Southern AB Adventure riders, Calpaddle,
- Southern Alberta ACC
- Southern Alberta Bow Hunters Association
- southern alberta campers, calgary sxs, alberta sledders
- Southern Alberta Trail Riders Association
- Spin Sisters
- Spin Sisters Mountain Bike Club, Moose Mountain Bike Trail Society, Canmore Area Mountain Bike Association, United Riders of Crowsnest Pass
- Stettler Gun Club
- Strathcona Fish and Game Association
- TOL OKO
- TOL0Z0
- The Moose mountain Bike trail society
- Timberline Canadian Alpine Academy
- TRAC, ERA
- Trail Riding Alberta Conference
- Trails 4 Tomorrow
- Trout Unlimited (6)
- United Riders of Crowsnest Club (UROC) (19)
- UROC, Crowsnest Nordic
- UROC, Headwinds Cycling,
- UROC, MMBTS,
- UROC, MMBTS, SORCA
- UROC, Quad Squad

- vulcan fish and game
- wellspring hiking group
- West Bragg Creek
- Western Canadian Wagon Train
- Wild Sheep Foundation Alberta
- YYCMTB
- yycmtb, mmbts
- YYCMTB, MMBTS, UROC, CAMBA, CMBA

Red Deer Region: Affiliations with an Outdoor Club or Association

- AFGA, Wildwood & District Rod & Gun Club, Edmonton Trout Fishing Club
- Alberta Fish & Game Association, Backcountry Hunters & Anglers
- Alberta Hiking Association
- Alpine Club of Canada, Outdoor Council of Canada
- Baseline MTB, Red Deer BMX, MMBT
- Bighorn Heritage ATV Society, Alberta Off Highway Vehicle Association
- Buffalo Lake Nature Club
- Calgary ATV Association
- Cross country ski club
- overland alberta
- Quad Squad
- Red Deer Fish & Game (3)
- Red Deer Ramblers
- RED DEER RIVER NATURALIST, CANADIAN WILDLIFE FEDERATION, NATURE ALBERTA, NATURE CANADA, CANADIAN GEOGRAPHY
- Rocky Wednesday Hikers, Rocky Gun Club
- Sundre Bike n Ski Club; Sundre Paddle Club; Sundre Search and Rescue Assoc.
- Trails 4 Tomorrow
- United Riders of Crowsnest, Baseline Mountain Bike Club, Hinton Mountain Bike Association
- waskhegan trail,

North Saskatchewan Region: Affiliations with an Outdoor Club or Association

- 670 Collective Mountain Bike Club
- AB TrailNet
- ACC, AHA, EMBA
- afga
- AFGA Trout Unlimited Canada
- AFGA, Wild Sheep foundation
- Albert Equestrian Federation, Alberta Trail Riding Association
- Alberta Beach Snowmobile Association,
- Alberta chapter of the Wildlife association
- Alberta Chapter of the Wildlife Society
- Alberta Fish and Game
- Alberta Fish and Game association, Wabamun Gun Range
- Alberta Hiking Association (3)
- Alberta Junior Forest Wardens Association
- Alberta Overtland Facebook
- Alberta Wildlife, Alpine Club of Canada
- Alpine Club of Canada (6)
- Alpine Club of Canada, UAPS Paddling
- AOHVA
- AOHVA, ASA, Pembina Nordic ski club
- Apos
- AWhA
- Backcountry Hunters & Anglers (3)
- Baseline Mountain Bike Club
- Bighorn bowhunters archery club , Rocky Mountain Longbow association, Alberta traditional archers association, Alberta bowhunters association
- Bragg Creek Trails
- Bruderheim Riding Association
- Buffalo Lake Club
- cads
- Ceyana Canoe club, United Alberta Paddlers, Alberta Whitewater Association, Alpine

Club of Canada

- Ceyana Canoe Club; Edmonton Paddling Centres Association
- CNP Quad Squad
- Crown Land Camping, Friends of the eastern Slopes
- Crowsnest Pass Quad Squad (3)
- Dirt Church, Trails for Tomorrow
- Ducks unlimited
- DV paddle club
- Edmonton Bike, Vermilion Nordic
- Edmonton Mountain Bike Assoc
- Edmonton Nature Club
- Edmonton Nordic Ski Club
- Edmonton Sheriff's Posse Association
- emba,mmmts
- ERA(endurance riders of alberta)
- Facebook- Crown Land Camping Alberta
- FOES
- FORRA, NWV,ENG
- Fort Sask Fish'n Game Assoc
- Fort Saskatchewan Nordic Ski club
- Friends of the Eastern Slopes
- Great Divide Trail Hikers Association
- Hardcore Bikes
- Hinton Nordic Skiers, Hinton Mountain Bike Association (HMBA)
- juventus cycling
- Ladies Flyfishing
- Land of the Lakes Recreation Association
- Moose Mountain bike society, friends of Kananaskis, Calgary Mountain bike alliance
- Northwest Voyageurs Cane and Kayak Club
- Northwest Voyageurs Canoe and Kayak Club, Girl Guides of Canada, Edmonton Outdoor Club
- numerous offroad/jeep clubs

- Paints Plus Trail Ride Group
- Pioneer Trail North Foundation, Rainbow Equitation Society
- Protect your trails AB
- Quad Squad
- Red Deer Ramblers
- ridgeriders , TRAC
- Rimbey & Ponoka fish & game association
- rmdra
- Rocky ATV Club
- Rocky Canoe Club
- rocky canoe club, Alberta Whitewater Association, Paddle Alberta, Rocky Rod and Gun Club
- running room. Red Deer Ramblers
- Sherwood Park Fish & Game Association (4)
- snow and mud.com
- Social media groups, non-incorporated cycling groups
- Spin Sisters
- St Paul Fish and Game, Alberta Fish and Game
- Tricounty Snowmobile Club
- Trout Unlimited (2)
- True North Trail runners
- United Riders of Crowsnest Pass
- Waskahegan Trail Association
- Wild Horse Society of AB
- Wild Sheep Foundation, Alberta Conservation Association, Alberta backcountry Hunters & Anglers, Southern Alberta Bowhunters Association, GOABC
- Willow Valley Trophy Club, Alberta Bow Hunters Association

Athabasca Region: Affiliations with an Outdoor Club or Association

- AFGA, TUC, BHA, ABS AWA
- Alberta Fish and Game (2)
- Athabasca River Voyageur Canoe Brigade Society
- Borealis Paddling Club
- CMBA
- Edson 4H Multi Club - Alberta Percheron Club - Alberta Equestrian Federation
- Lac Ste Anne ATV Club
- Muskeg Flyers Nordic
- Whisky-jack Club
- Peace Region: Affiliations with an Outdoor Club or Association
- Backcountry Hunters and Anglers
- Grande Prairie Canoe Club (2)
- Misery mountain bike association
- Peace Valley Snow Riders
- South Peace Horse Club
- spring lake equestrian camp
- Trail Riding Alberta Conference , Southern Alberta Trail Riding ASSOC.
- Wapiti Nordic Ski Club





