

# The Economic Importance of Water-Based Recreation in the Bow River Basin – Update 2022

## Summary:

The Calgary River Users Alliance's (CRUA) first economic assessment of the importance of river recreation activities to the local economy was prepared to support the investment by the City of Calgary for the River Access Strategy (RAS) <sup>(1)</sup> that was approved by the City Council in 2017. The data was updated in 2019 to reflect the current economic conditions at that time. The report, *“The Economic Importance of the Bow River Recreational Use.”* <sup>(2)</sup> estimated the Bow River in and around Calgary contributed more than \$50 million to the local business economy. It was equally split between the fishing and paddling communities. It has become evident that a broader-based, Bow River Basin economic assessment was needed.

CRUA has completed the fishery component with the *“The Bow River Fishery Economic Forecast - Update July 2022”* <sup>(3)</sup> report that showed a 50% increase in the economic contribution to the local economy. From \$26 million in 2016 to \$36 million in 2022.

This report compiles the data from the Tourist Industry Association of Canada (TIAC) report, *“Alberta’s Crown Land Outdoor Recreation Economy”* <sup>(4)</sup>, and the British Columbia’s Fraser Valley District report, *“2019 Outdoor Recreation Economic Impact Assessment in the Fraser Valley District Report”* <sup>(5)</sup> to give a better understanding of the outdoor recreation opportunities and their economic contribution to the South Saskatchewan Land Use Framework District the encompasses the Bow River Basin. Water-based outdoor recreation activities, which included canoe, kayaking, standup paddling, rafting, and an estimate of casual river recreational activities, contributed \$91.5 million to the South Saskatchewan Region’s economy of which \$75.9 million is within the Bow River Basin. The proposed River Wave Park developments and their economic contribution to the region's economy are also discussed.

## 1: Alberta Crown Land Outdoor Recreation Economy:

The Tourist Industry Association of Canada (TIAC) survey in 2021 was designed to better understand the dynamics of outdoor pursuits on Crown land in Alberta. The report, *“Alberta’s Crown Land Outdoor Recreation Economy”* <sup>(4)</sup>, gives a platform for further analysis of the specifics related to the Bow River Basin. A literature review was completed in February 2021 to provide insights into the overall value of the Alberta resident recreation economy in Alberta. The survey was designed for recreational participation in 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). A total of 2,947 participated in the online survey during May 2021 of which a total of 1,399 surveys met the criteria for further analysis. The surveys were completed by predominantly avid outdoor recreation users and therefore did not represent the total Alberta population. Given the limitations of both the literature review and the survey, the data were combined from both the literature review and online survey to give a better understanding of Crown land outdoor recreation use.

## The Economic Importance of Outdoor Recreation

The TIAC report estimated that domestic and international tourists participating in outdoor recreation activities in Alberta in 2017 spent a total of \$6.5 billion. The importance of Albertans in recreational expenditure is seen in this report where \$3.7 billion or 57.1% of the total were residents. 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.

### Average Spending per Recreation Trip – All Crownland 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.** The Alberta Land Use Framework Regions (LUF) was used to define the residency of the respondent ( Table 33). Although higher than what has been reported previously it probably indicates that respondents to the survey were active in outdoor recreation pursuits. The variability in LUF regions is most likely due to the travel distance to a recreation location and whether the destination was a national/provincial park or public land.

**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
<b>Total</b>	<b>\$258.25</b>	<b>\$757.11</b>

Source: TIAC Survey 2021

Estimated spending associated with trips to parks and public lands is shown in Table 36. Although both Nation and Provincial Parks contributed the highest spending at 50.1% and 27.4% respectively, Public Lands accounted for 22.6% of total spending or an estimated \$528 million in 2019/20.

**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%
<b>Total</b>	<b>\$1,289</b>	<b>55.2%</b>	<b>\$1,049</b>	<b>44.9%</b>	<b>\$2,338</b>	<b>100.0%</b>

Source: TIAC Survey 2021

### Household Purchases of Recreational Equipment and Accessories

Table 44 stratifies the household recreation equipment purchases across the broad range of outdoor pursuits. Motorized vehicles represented the highest purchase price and 34.5% of all purchases. More specific to river recreation use, Non-motorised boat purchases at \$1044 or 15.2% of all expenses. The extent to which such purchases can be attributed to only recreational trips on Crown land in Alberta is difficult to assess because the equipment can be used on trips outside of Alberta.

**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%
<b>Total per Household</b>		<b>\$10,282</b>	<b>100.00%</b>

Source: TIAC Survey 2021

### Economic Impacts:

Table 52 summarizes the estimates of day and overnight trips to public lands in each of Alberta’s seven LUF regions. The importance of the South Saskatchewan LUF where 51.5% of all trips and 46.4% of total expenditure, which includes Calgary with 38% of the region's population.

**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%
<b>Total</b>	<b>10.49</b>	<b>2.91</b>	<b>13.40</b>	<b>100.0%</b>	<b>\$2,339</b>	<b>100.0%</b>

Source: TIAC Survey 2021

### CRUA Comments: Tourist Industry Association of Canada Survey:

The survey was limited in the number of households and regional populations. Although standard sample distribution analysis was taken into account in the survey, the results are biased towards the LUF regions with higher urban populations that are younger, higher income earners, and proximity to mountain parks. Therefore the survey reflects the recreational patterns of Albertans who engage in outdoor recreation. Nevertheless, the survey does give information that will be useful to CRUA's assessment of the Bow River Basin outdoor recreational pursuits.

- The South Saskatchewan LUF had 5.65 million day trips and 1.25 million overnight trips generating \$1,085 million expenditure or 46.4% of all recreational expenditure in Alberta. expenditure on day trips where 51.5% of all trips and 46.4% of total expenditure.
- Total spending at all Crown land recreational sites was estimated at \$2,338 million. Trips to public lands accounted for \$528 million or 22.6%.
- Average spending per trip to Crown land amounted to \$258 per day trip and \$757 per overnight trip.
- Motorized vehicles represented the highest purchase price and 34.5% of all purchases. More specific to river recreation use, non-motorized boat purchases at \$1044 or 15.2% of all expenses.

## 2: The Fraser Valley Regional District Recreation Assessment

British Columbia’s Fraser Valley District conducted the “2019 Outdoor Recreation Economic Impact Assessment in the Frase Valley District Report” <sup>(5)</sup> to give a better understanding of the outdoor recreation pursuits in the BC Lower Mainland, east of metropolitan Vancouver. The report goes into a detailed analysis of all recreational activities that take place in the Fraser Valley. Although the resident population in the district of 320,000 is less than Alberta’s South Saskatchewan LUF Region, outdoor recreation pursuits are very similar. Table 7 details the expenditures for the full range of activities.

Table 7: Direct Outdoor Recreation Expenditures by Activity (Independent and Guided)

Activity	Resident	Visitors	Total	% of Total
Camping	\$145,961,428	\$83,669,452	\$229,630,880	24.23%
Sport Fishing	\$115,471,214	\$48,289,584	\$163,760,798	17.28%
Hiking, Trail Running	\$73,658,255	\$63,694,698	\$137,352,952	14.49%
Swimming/Beach/Waterside Activities	\$70,052,439	\$8,021,005	\$78,073,443	8.24%
Walking / Dog Walking	\$25,543,922	\$25,483,757	\$51,027,679	5.38%
Event (Participating, Watching or Volunteering)	\$38,662,148	\$6,062,825	\$44,724,972	4.72%
Motorized Boating/Jet Skiing/Waterskiing/Boat Rentals	\$32,122,036	\$7,801,330	\$39,923,366	4.21%
Canoeing Kayaking, SUP	\$29,452,461	\$8,143,931	\$37,596,392	3.97%
Mountain Biking	\$20,954,099	\$7,552,504	\$28,506,603	3.01%
Park, Picnic, Play in Park	\$18,600,012	\$3,479,485	\$22,079,497	2.33%
Motorized Off Road Vehicles (ATV/dirt bike/other)	\$19,597,922	\$2,295,034	\$21,892,956	2.31%
Photography	\$19,800,772	\$1,474,155	\$21,274,928	2.24%
Sightseeing/General Leisure	\$15,337,649	\$3,602,727	\$18,940,376	2.00%
Nature Interpretation/Ecotours/Wildlife Viewing	\$5,888,330	\$10,393,032	\$16,281,362	1.72%
DH Skiing/Snowboarding, Cross Country and Backcountry Skiing	\$6,539,799	\$1,464,317	\$8,004,115	0.84%
Attraction	\$2,352,693	\$3,745,307	\$6,098,000	0.64%
Road Cycling, Gravel Grinding	\$4,084,966	\$1,548,534	\$5,633,500	0.59%
Caving	\$4,645,062	\$250,965	\$4,896,027	0.52%
Hunting	\$3,238,364	\$129,084	\$3,367,448	0.36%
Rafting	\$763,744	\$2,593,638	\$3,357,382	0.35%
Flight Tours	\$237,517	\$2,653,174	\$2,890,691	0.31%
Snowmobiling	\$1,109,692	\$707,900	\$1,817,593	0.19%
Climbing/Scrambling	\$107,563	\$263,077	\$370,639	0.04%
Sky Diving/ Paragliding	\$84,759	\$45,249	\$130,008	0.01%
Horseback Riding	\$51,712	\$61,601	\$113,314	0.01%
<b>Grand Total</b>	<b>\$654,318,558</b>	<b>\$293,426,365</b>	<b>\$947,744,921</b>	<b>100%</b>

Source: Fraser Valley District Survey 2019

### CRUA Comments: Summary of Fraser Valley Survey:

- Expenditures for the three principal land-based activities of camping, hiking/ trail running, and mountain biking total 41.73% of all recreational expenditures.
- Swimming and water parks, 8.24%, Canoe / Kayaking / Stand-up-Paddling 3.97% and Rafting, 0.35%, for a total of water-based activities of 12.24%.
- There are no “payer-use “ waterparks operating in the Bow River Basin, and therefore the swimming and casual use expenditures of waterways are estimated at 4.12% for our analysis.

### 3: CRUA Bow River Basin Watercraft Economic Recreation Assessment.

The TIAC survey surmised that the South Saskatchewan LUF Region generated recreation expenses of \$1085 million annually for the local community. Using the Fraser Valley estimates for water-based paddle sports, Table 1 gives baseline data for the canoe, kayak, standup paddle board (SUP), rafting, and casual water sports for the region for a total of \$91.47 million:

**Table 1: An Estimate of Annual Expenditure for Non-motorized Water Recreation Pursuits in the South Saskatchewan LUF Region**

Description	Percent of Activities	South Saskatchewan LUF
Canoe – Kayaking Standup paddling (SUP)	3.97%	\$43.07 million
Rafting	0.34%	\$3.70 million
Swimming – casual water activities	4.12%	\$44.70 million
<b>Total</b>	<b>8.43%</b>	<b>\$91.47 million.</b>

#### CRUA Comments:

Approximately 83% of the South Saskatchewan Region population of 2.0 million live in Calgary and surrounding municipalities. We can therefore apply the same percentage, for a total of \$75.92 million to the expenditures for water-based paddle sports within the Bow River Basin upstream of the Carseland Weir.

The 2016 CRUA Report, Economic Importance of Recreation River Use to the City of Calgary <sup>(1)</sup> used data from the 2013 Alberta Culture & Tourism - Alberta Recreation Survey <sup>(6)</sup> to generate the economic contribution of river recreation activities to the City of Calgary. The report estimated that 35.2% of Alberta respondents participated in water sports. Canoeing at 10.9%, Kayaking at 8.1%, and River Rafting at 4.7%. It was estimated that 20% of participants are actively engaged in paddle sports. The CRUA estimated that \$500 per year was applied to canoe and kayak recreational use and \$280 /per year for river rafting. The total expenditure of \$25.96 million (Table 2)

**Table 2: The Number and Percentage of Calgarians who Participate and Actively Engage (20%)  
In Canoeing, Kayaking and River Rafting with Individual and Total \$ Expenditure.**

Sports Discipline	Participation % Population	Calgary Participation	Actively Engage	Annual Expenditure	Total Expenditure
Canoeing	10.90%	130,800	26,160	\$ 500	\$ 13,080,000
Kayaking	8.10%	97,200	19,440	\$ 500	\$ 9,720,000
River Rafting	4.70%	56,400	11,280	\$ 280	\$ 3,158,400
<b>Total</b>	<b>23.70%</b>	<b>284,400</b>	<b>56,880</b>		<b>\$ 25,958,400</b>

### CRUA Comments:

Annual inflation, regional population growth, and an increase in outdoor pursuits would suggest the estimate of a total of \$75.92 million for the expenditures for water-based paddle sports within the Bow River Basin upstream of the Carseland Weir is realistic.

## 4: Future Capital Investment:

New river access and site upgrades will offer improvements for all river recreation pursuits. Calgary's River Access Strategy expanded designated river access sites within the City. The Government of Alberta, with the assistance of stakeholders, has made substantial improvements to river access downstream of Calgary. The focus of CRUA initiatives is to enhance river recreation opportunities upstream of Calgary. The 50 Km reach of the Bow River between Ghost Reservoir and Bearspaw Reservoir has the potential to alleviate the ever-increasing river recreational use on the lower Bow River. The 2021 report, "Bow River Recreational Access Ghost Dam to Bearspaw Reservoirs" <sup>(7)</sup> reviews current and proposed river access sites and the upgrades needed to optimize river recreation use. Public access to the river immediately below the Ghost Reservoir Dam is a priority. Cochrane has become the focal point for future river recreational use with the proposed River Wave Park. Downstream of Cochrane, the new City of Calgary Haskayne Legacy Park may offer the best solution for a take-out point for river use.

The Bow River between Canmore and the Ghost Reservoir offers both fishing and paddle sports opportunities but needs investigation as to the suitability for future capital investment.

The Kananaskis River below Barrier Reservoir has been developed into a whitewater sports center over the past 20 years. Alberta Parks, supported by Alberta Whitewater Association and other stakeholder groups developed "The Lower Kananaskis River-Barrier Lake Redevelopment Plan" <sup>(8)</sup> which has seen substantial investments in site improvements. Proposals are also in place to stabilize the Widow Maker Whitewater Park infrastructure and add a mechanical wave.

### Whitewater and River Wave Park Developments:

Currently, the Bow River Basin has two whitewater parks, the Canyon Meadows-Widow Maher Park on the Kananaskis River and Harvie Passage on the Bow River in Calgary. The addition of mechanical river waves has been proposed for both these sites and a new Cochrane River Wave Park, and Calgary River Frontage Development at either, 10 Street NW or Prince's Island.

The combination of whitewater parks, river waves, recreation, and education, can result in substantial cultural, economic, and environmental benefits that would last generations. The Cochrane River Wave feasibility study <sup>(9)</sup> estimated that the wave developments could generate between \$2.00 million and \$6.20 million in new economic activity. Once operating, the project could generate over \$5.00 million per year in economic contribution to the local economy. Given time, the River Wave development could

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capture some of the global surf tourism which is valued at \$50 billion a year. The Calgary and Kananaskis River Wave proposal shows similar economic forecasts, but Calgary in particular offers the advantage of a large city base of wave surfers and spectators to support a River Wave development. The Initial Design Report for the Calgary River Wave Park <sup>(10)</sup> details the benefits in more detail:

- At 30% usage capacity a river wave park will generate \$1.80 million to the local economy. At 100% capacity, the project will grow to \$6.00 million.
- The market values for the project can be calculated on a pay-for-use model of \$120 per 2-hour session. At 30% capacity, the annual revenue would be \$3.49 million, and at 100% capacity \$11.62 million.
- The number and length of a wave surfer session will depend on the weather conditions. During the winter months wave session would be fewer and shorter in duration. But during the summer months, the river wave park could be used to full capacity during evenings and weekends.
- A literature review indicates that an average wave surfer has an annual income of \$75,000 and will spend \$62.50 per wave session. These data suggest that Calgary with a relatively younger age demographic and high income is well suited to a river wave park development.

Although each of the 4 river wave proposals presents similar annual economic contributions to the local economy of approximately \$5 million annually, it is doubtful that all proposals will be built in the short term. The economic viability of the first river wave park built will govern future development timelines.

### CRUA Comments:

**Although each of the 4 river wave proposals presents similar annual economic contributions to the local economy of approximately \$5 million, it is doubtful that all proposals will be built in the short term. The economic viability of the first river wave park built will govern future development timelines.**



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