

The Need for a Bow River Basin Recreation Management Plan

**A proposal for inclusion in the revisions of the South
Saskatchewan Region Plan**

1. The CRUA Bow River Recreational Use Policy:

The Calgary River Users' Alliance (CRUA) was formed in January 2016 to improve recreational boating access to the Bow and Elbow Rivers in Calgary. It has now expanded the scope of engagement to the entire Bow River Basin and its water management and recreational use policy. The CRUA consists of representatives of recreation and conservation groups and businesses in the city, including canoeing, kayaking, rafting, paddleboarding, river surfing, and fishing. The first objective was to improve recreational river use within Calgary. The reports, "The Economic Importance of Recreational River Use to the City of Calgary" ⁽¹⁾, and "The Need for a River Recreation Management Plan" ⁽²⁾ paved the way for the Calgary River Access Strategy that was approved by Calgary City Council in February 2017.

The same guiding principles that were agreed to for the development of the Calgary River Access Strategy applied to the proposed Bow River Basin Recreation Management Plan. The 2016 reports showed the direct annual economic contribution of the Bow River fishing community to the City of Calgary businesses exceeds \$24.5M, and regional fishing-related activities a total of \$114M. The total contribution that all river users make to Calgary's business sector was estimated at \$50M annually. The CRUA 2019 update "The Economic Importance of the Bow River Recreational Use – a \$50 Million Annual Contribution to the Local Economy" ⁽³⁾, reviews the Bow River Basin recreation needs and the contribution it makes to the local economy will expand at the same rate of population growth.

Two reports prepared by CRUA in 2022 suggest the economic importance of river recreation pursuits within the Bow River Basin far exceeds what had previously been thought. The report, "The Bow River Fishery Economic Forecast Update July 2022" ⁽⁴⁾ forecasts growth from \$26 million in 2016 to \$39 million in 2024, a 50% increase in eight years. The second report, "The Economic Importance of Water-Based Recreation in the Bow River Basin – Update 2022" ⁽⁵⁾ gives an analysis of non-motorized water-based outdoor recreation activities, which included canoe, kayaking, standup paddling, rafting, and casual river recreational activities. An estimated \$76 million to the Bow River Basin economy. When the two reports are combined, outdoor recreation activities could contribute \$115 million annually to the region's economy.

These reports also emphasize that an in-depth assessment of river recreation use is paramount to achieving much-needed financial resources to enhance infrastructure and develop strategies to protect a very valuable recreational resource and economic driver to the local business community. To achieve this, CRUA believes that the inclusion of the Bow River Basin recreation management objectives should be included in the South Saskatchewan Regional Plan (SSRP).

This report will address the importance of the recreational activity to support the well-being of Canadians, the economic importance of recreational activities to the local economy, and the resource management directives that would support improvements to recreational river use infrastructure.

2. The Importance of Recreation Activities:

The importance of recreational activity has been well documented in research papers, government surveys, and city development plans. As the dynamics of a population change there is a need to revise recreation delivery models:

- The relationship of recreation to wellness and the economic benefits derived from investing in recreation facilities has been documented in the paper **“A Pathway to Wellness”** ⁽⁶⁾, presented by the Interprovincial Sport and Recreation Council.
- The Canadian Parks and Wilderness Association survey, **“Albertans’ Values and Attitudes towards Recreation and the Wilderness, 2015”** ⁽⁷⁾, gives an insight into the recreation activity chosen by location and proximity to home.
- Calgary’s recreational needs have been captured in the **“Recreation Master Plan”** ⁽⁸⁾. Further discussion on these documents follows:

A Pathway to Wellness:

The relationship between population wellness and available recreation is discussed in a joint initiative of the Interprovincial Sport and Recreation Council and the Canadian Parks and Recreation Association, Pathways to Wellbeing a National Framework for Recreation in Canada. This paper was designed to:

“Guide and stimulate effective, coordinated policies and practices in recreation that improve the wellbeing of individuals, communities and places and spaces in Canada”.

The current challenges that address recreation use are; population demographics, urbanization, health, and increasing inequities. social challenges and infrastructure deficit.

The benefits of recreation and parks can address all of the above challenges with policies and practices that:

Enhance mental and physical wellbeing.

Help build communities that are healthy, inclusive, welcoming, and resilient

Help people connect with nature.

The report also recognizes the importance of recreation as an economic generator for society:

In 2012, the average Canadian household spent \$3,773.00 on recreation, in comparison to \$7,739.00 on food.

In 2009, it is estimated that Canada's national, provincial and territorial parks created over 64,000 full time equivalent jobs resulting in \$2.9 billion dollars in labor income and a \$4.6-billion-dollar contribution to the country's Gross Domestic Product (GDP).

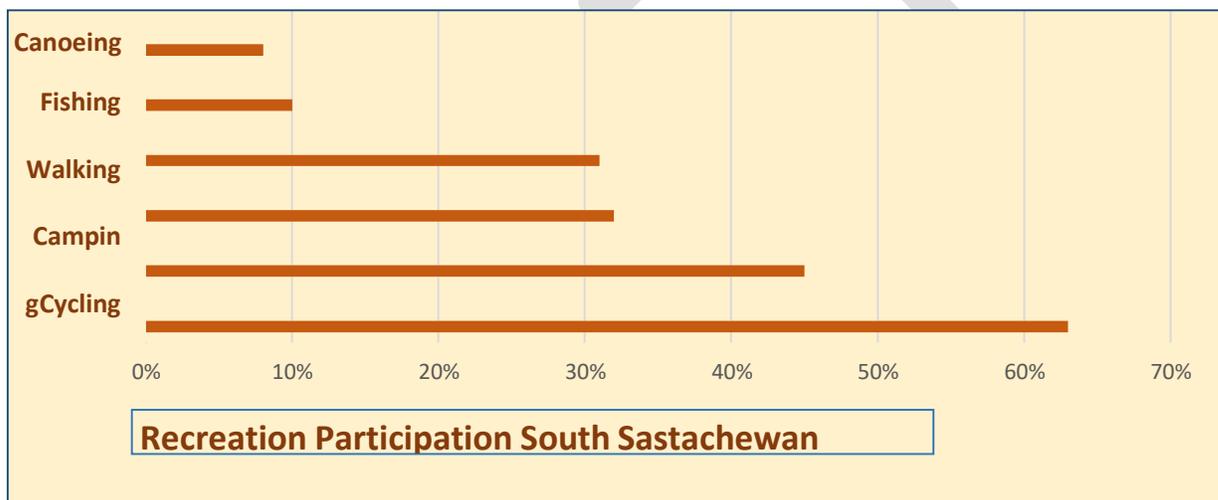
Anglers contributed a total of \$8.3 billion to various local economies in Canadian provinces and territories in 2010. Of this amount, \$5.8 billion was in the form of purchases of durable goods related to recreational fishing activities. The remaining \$2.5 billion covered direct expenditures during recreational fishing trips, such as transportation, food, lodging, fishing services and fishing supplies.

The importance of the relationship between recreational activity and wellness within a community is critical to society's future. In addition, investment in recreational infrastructure will contribute to the economic well-being of the city.

Attitudes Towards Recreation and the Wilderness:

The Canadian Parks and Wilderness Association survey, Albertans' Values and Attitudes towards Recreation and the Wilderness, 2015. The telephone survey reports recreation uses in Alberta. The report highlights;

“The most frequent outdoor recreational activities tend to occur close to home. As such, the extent and type of activities are related to supply and opportunity. Cycling for example is a frequent activity among those living in Calgary, whereas fishing, hunting, and off-highway vehicle (OHV) use are the most popular activities among those living in northern areas away from large cities. Similarly, those living closest to national parks tend to visit the parks most often. Proximity to parks and protected areas is an important driver in use”.



An important finding from the survey was that even when national and provincial parks were nearby as is the case with Calgary, 79% of respondents preferred to use community parks and pathways. Although Calgary's hiking, cycling, boating, and walking activities are well serviced by the city, the river recreational opportunity offered within proximity to the city is limited by access.

The Calgary Recreation Master Plan:

The City of Calgary's **Recreation Master Plan – 2010 to 2020** details the importance of the recreational activity to the city's population. The plan positions recreation to respond to the diverse needs of its population while continuing to help build a prosperous and vibrant city. The Recreation Master plan developed a **“Platform for**

Change” that details 4 components:



Corporate Context: The need to establish a strong organizational culture that defines success as the ability to provide quality services to all Calgarians.

Calgary's Changing Dynamics: The demographic composition of Calgary communities will govern changes in recreational service delivery. The city's population will grow, with a larger number of seniors that will shift the importance of accessible recreation opportunities.

The Impact of the Economic Climate: Economic development in Calgary is largely driven by energy prices. Global economics affect Calgary's economic climate and the capacity to deliver municipal services.

Recreation in Calgary: Listening to Citizens: Calgarians participate in a diverse range of recreation activities, and certain activities span generations. The top four recreation activities are; swimming, cycling, fitness training/working out, and walking for pleasure. The importance of meeting the needs of ever-changing recreational needs of its citizens needs to be met.

It is important to recognize that a framework for change in direction of recreation services will be driven by the provincial and local governments' annual budgetary process, as much as the needs for future development. Stakeholder advocacy for change in the direction of recreation services can serve an ever-increasing user base.

In 2017, CRUA advocacy resulted in the City of Calgary recognizing the importance of recreation river use with the approval of the Calgary River Access Strategy (CRAS) with a budget of 7.60 million over 5 years. The Government of Alberta followed with the Bow River Access Plan (BRAP) with a sizable budget to improve the McKinnon Flats River Access Site.

3. The Economics of the Bow River Recreation Use:

Fishing:

Where and how many people fish in Alberta and what is the contribution to the provincial economy? The CRUA Report, “The Alberta Trout Fishery- A Vision For The Future”⁽⁹⁾, reviews the Alberta Environment and Parks, Fisheries Management Branch’s Sports Fishing in Alberta, 2010 Survey⁽¹⁰⁾ and outlines decisions that need to be made to enhance recreational fishing activities in Alberta. There were 239,310 licensed adult anglers in Alberta, Table 1. The 2015 survey⁽¹¹⁾ reported that Alberta has 301,531 licensed adult anglers, a 26% increase from 2010. Alberta residents spent \$2,018 per year on their sport in 2010, fishing for 14.8 days, and an average cost of \$137 per day. But unfortunately, a detailed expense analysis is not available for 2015, therefore an annual inflation rate of 1.7% was used to derive the 2015 angler expense data. Alberta anglers spent a total of \$482.93 million and their fishing activities in 2010 which increased to \$660.35 million in 2015.

Table 1: The Number of Fishing Licenses and Angler Expenses by Fish Management Zones in Alberta.

Fish Management Zones	Anglers		Expenses	
	2010	2015	2010	2015
East Slopes 1 - (ES1)	56,519	71,214	\$ 114,055,342	\$ 155,958,529
East Slopes 2 - (ES2)	9,280	11,693	\$ 18,727,040	\$ 25,607,232
East Slopes 3 - (ES3)	7,205	9,078	\$ 14,539,690	\$ 19,881,477
East Slopes 4 - (ES4)	12,432	15,664	\$ 25,087,776	\$ 34,304,861
<u>Subtotal</u>	<u>85,436</u>	<u>107,649</u>	<u>\$ 172,409,848</u>	<u>\$ 235,752,098</u>
Parkland Prairie 1 - (PP1)	21,786	27,450	\$ 43,964,148	\$ 60,116,288
Parkland Prairie 2 - (PP2)	90,404	113,909	\$ 182,435,272	\$ 249,460,798
<u>Subtotal</u>	<u>112,190</u>	<u>141,359</u>	<u>\$ 226,399,420</u>	<u>\$ 309,577,086</u>
Northern Boreal 1 (NB1)	14,581	18,372	\$ 29,424,458	\$ 40,234,811
Northern Boreal 2 (NB2)	13,895	17,508	\$ 28,040,110	\$ 38,341,863
Northern Boreal 3 (NB3)	9,606	12,104	\$ 19,384,908	\$ 26,506,796
Northern Boreal 4 (NB4)	3,602	4,539	\$ 7,268,836	\$ 9,939,359
<u>Subtotal</u>	<u>41,684</u>	<u>52,522</u>	<u>\$ 84,118,312</u>	<u>\$ 115,022,830</u>
TOTAL ALBERTA RESIDENTS	239,310	301,531	\$ 482,927,580	\$ 660,352,014
Non-Resident Canadian	8,887	9,065	\$ 8,247,136	\$ 9,128,193
Non-Resident Foreigners	4,354	4,441	\$ 5,708,094	\$ 6,315,216
TOTAL NON-RESIDENT	13,241	13,506	\$ 13,955,230	\$ 15,443,409

The Economic Contribution of the Bow River Recreational Fishing:

The CRUA report, “The Bow River Fishery Economic Forecast Update July 2022” ⁽⁴⁾ documents the economic importance of recreational fishing in the lower Bow River. A review of the literature sheds light on just how many anglers use the Bow River. AEP conducted a creel survey in 2018 that focused on the distribution of angling pressure by guided boat anglers, recreation boat anglers, and shore anglers. The ground-based survey reported approximately 15% higher angling trips than what was reported in 2006 for the same months and sections of the river. During the 2018 survey angling effort was mainly from shore anglers (49%), followed by non-guided boat anglers (31%), and last, guided boat anglers (20%). Fishery management practices need to recognize that shore and non-guided recreational anglers outway the historical importance of the guided angler.

The growth of the Bow River fishery and the contribution it makes to the Calgary regional economy is presented in Table 2. From \$25.90 million in 2016, it has increased each year to a forecast of \$38.92 million in 2024, a growth of \$13.01 million (50%). Certainly, there was an increase in outdoor pursuits during the Covid-19 pandemic from 2019 -21, which increased the purchase of fishing licenses and fishing gear, but only time will tell if the increase in license holders observed will continue.

Table 2: Revised Forecast of the Growth of Calgary and Region Recreational Fishing Activities.

<u>Year</u>	<u>2016</u>	<u>2018</u>	<u>2020</u>	<u>2022</u>	<u>2024</u>
Bow River Anglers	12,000	13,000	14,000	15,000	16,000
Expenses / Year	\$2,165	\$2230	\$2297	\$2366	\$2,437
Fishing Revenue	\$25,980,000	\$28,990,000	\$32,158,000	\$35,490,000	\$38,992,000
<u>Increase over 2016</u>		<u>\$3,010,000</u>	<u>\$6,178,000</u>	<u>\$9,510,000</u>	<u>\$13,012,000</u>

A significant number of these residents in the Parkland Prairie Zones fish in the East Slopes Zones which would add to the economic importance of the East Slopes fishery. The Bow River Basin that includes an urban population of more than 2 million in close proximity to the both East Slopes Zone 1 and 2 may well represent more than 25% of Alberta’s fishing economy.

The Diversity of Outdoor Recreation Plays an Important Role.

The 2017 Alberta Recreation Survey ⁽¹²⁾, conducted by Alberta Culture & Tourism reported that 30.7 % of Alberta respondents participated in swimming (lakes & rivers), fishing 19.2%, motor boating 13.9%, and canoeing 11.7%, and kayaking 8.5%. These data suggest that there are large numbers of participants outside of the fishing community using lakes and rivers near major cities.

Table 3 shows the number of Calgarian and regional urban residents (2 million) who participate in the 5 most popular water-based activities. There is a widerange of expenditure on sports and recreational activities depending on what level of participation and competition takes place. For example, members of Alberta Slalom Canoe Kayak do spend anywhere in the range of \$100 to \$20,000 / per year. For this data set, a conservative estimate of \$800 per year was applied to all categories except for swimming which would generally be supplemental to other outdoor pursuits. The total economic contribution of water-based activities to Calgary and area residents is approximately \$103 million per year.

Table 3: The Number and Percentage of Calgary Region Urban Population (2.0 Million) who Participate and Actively Engage (20%) In Water Based Activities.

Sports Discipline	Participation % Population	Calgary Participation	Actively Engage	Total Expenditure
Swimming	30.7%	614,000	122,800	
Fishing	19.2%	384,000	76,800	\$61,440,000
Powerboating	13.3%	266,000	53,200	\$16,492,000
Canoeing	11.7%	234,000	46,800	\$14,508,000
Kayaking	8.5%	170,000	34,000	\$10,540,000
		Total		\$102,980,000

No single outdoor recreation pursuit can be discussed in isolation without impacting other user groups, but when combined offer a powerful voice for the benefit of all recreational users. This was accomplished with Calgary River Users’ Alliance advocacy and support for the Calgary River Access Strategy (CRAS) ⁽¹³⁾. Two documents were presented to the Calgary City Council ^(1,2) that delivered a comprehensive analysis of the benefits of all river recreation activities with an integrated approach to the protection of the river’s habitat and fish population while developing river access infrastructure and amenities. A public debate and approval by City Council reached a satisfactory outcome with the 2017 City Council’s \$7.60 million commitment to develop a series of designated boat and hand launchsites throughout Calgary.

The Alberta Environment and Park started a dialogue with stakeholder groups in 2017 to develop the Bow River Access Plan (BRAP) ⁽¹⁴⁾. Although discussions were held with a variety of user and interest groups the decision-making process was kept within the AEP and focused on fishing access needs. The Bow River Access Plan was finally approved in the spring of 2019 as an existing site maintenance plan, with no new river access sites that would disperse the fishing boat traffic across the river from Calgary downstream to Carseland. Other outdoor and water-based activities were not considered major users of river access sites. Unfortunately, it is not clear why this happened, but there appeared to be a focus solely on recreation angling needs and not a broader-based outdoor recreational initiative. The McKinnon Flats public land access site has seen infrastructure improvements in recent years. A new road was built in the fall of 2020 and river access and parking lot improvements in 2021. A more comprehensive assessment of all recreation activities at the site is needed in the future.

The BRAP offers a framework for the proposed Bow River Basin Recreation Management Plan. But it needs to be expanded to include all water-based and adjacent land-based recreation activities. A more diverse engagement process should be considered to include fishery management and environmental protection while meeting the needs for the expansion of recreational land use.

CRUA Bow River Basin Watercraft Economic Recreation Assessment.

The CRUA report, “The Economic Importance of Water-Based Recreation in the Bow River Basin – Update 2022” ⁽⁵⁾ compiles the data from the Tourist Industry Association of Canada and British Columbia’s Fraser Valley District surveys to give a better understanding of the outdoor recreation opportunities and their economic contribution to the South Saskatchewan Land Use Framework District that encompasses the Bow River Basin. The surveys 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 4 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 4: 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
Total	8.43%	\$91.47 million.

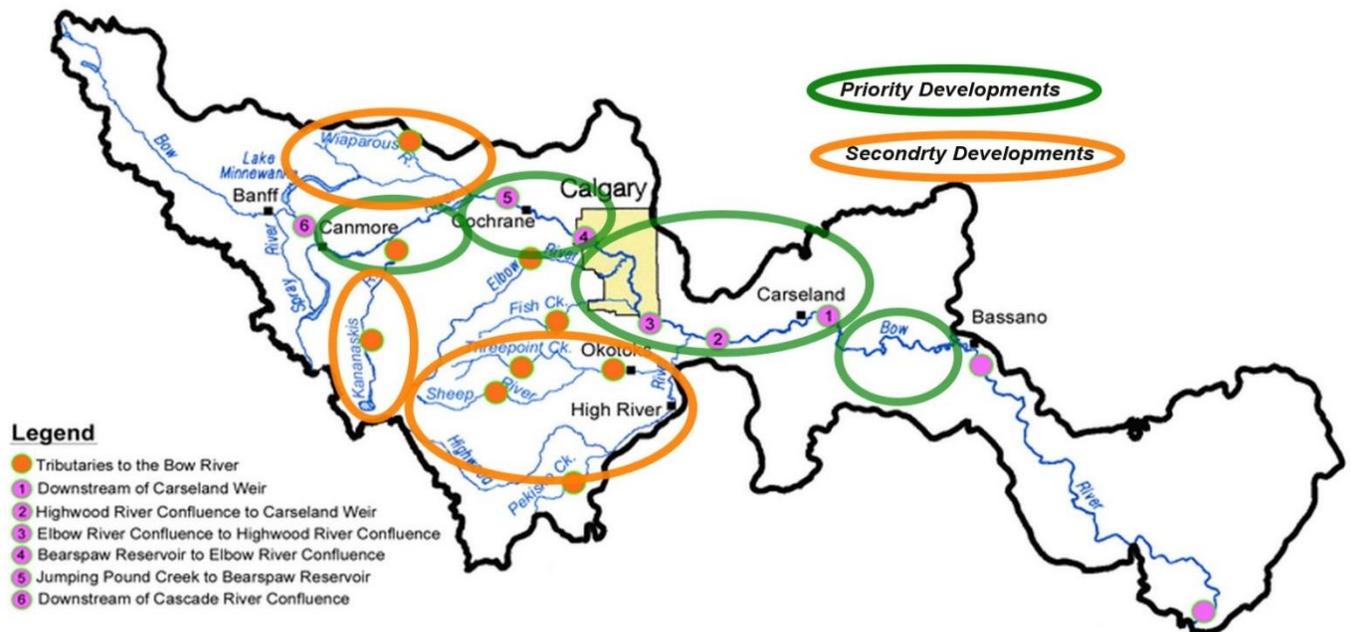
Approximately 83% of the South Saskatchewan Region population of 2.0 million live in Calgary and surrounding municipalities within the Bow River Basin, therefore we can apply the same percentage to water-based outdoor recreation activities for a total of \$75.9 million. The proposed River Wave Park developments and their economic contribution to the region's economy are also discussed in the report and could contribute further once complete.

When the two CRUA reports for the economic contribution of the fishery, at \$39 million , and water-based sport, at \$76 million are combined, outdoor recreation activities within the Bow River Basin could contribute \$115 million annually.

4. Bow River Basin Recreation Development Plan:

If the proposed Bow River Basin Recreation Management Plan (BRBRMP) is to be included in the South Saskatchewan Regional Plan there is a need to define the geographic scope of the plan’s development. Figure 1 divides the Bow River Basin into either priority or secondary development importance:

Figure 1: The Bow River and Tributaries Map - Categorized by Primary or Secondary Importance for River Recreation Development.



Priority Developments:

Ranked in order of importance:

The Bow River – Bears paw Reservoir to Carseland Western Irrigation Weir:

This reach of the Bow River has the highest recreational river use within the Bow Basin. The combination of fishing, paddling, and random float tubing creates a challenge for both recreational planning and the river user community. The CRAS⁽¹³⁾ and BRAP⁽¹⁴⁾ laid the groundwork for river access development. The Fish Creek and Wyndham-Carseland Provincial Parks have river access sites, and the Harvie Passage Whitewater Park in Calgary is administered under a joint agreement between Calgary Parks and Alberta Environment & Parks. Stewardship-partnership agreements are in place to manage or support the maintenance of Policeman’s Flats, McKinnon Flats, and Legacy Island. Harvie Passage would be suited to the same support initiative. A new river access site has been proposed for the Ricardo Ranch Community⁽¹¹⁾ in southeast Calgary. The BRBRMP would offer a platform for coordinating future development and enhancement of maintenance to all river access sites.

The Bow River – Ghost Reservoir to Bears paw Reservoir:

Expansion of river access sites close to Calgary will reduce the pressure on the Lower Bow River's declining fish population and expand all river recreation opportunities upstream. A CRUA Report⁽¹⁵⁾ has proposed new public river access immediately below Ghost Reservoir and close to the Wildcats Island public land site. The City of Cochrane has proposed a River Park⁽¹⁶⁾, and the City of Calgary is developing the Haskayne Legacy Park⁽¹⁷⁾ adjacent to Bears paw Reservoir. The BRBRMP will offer a platform to ensure the protection of natural resources and develop projects that commit to the enhancement of river recreational use. Any development within this reach of the Bow River is subject to the water management policy for the Ghost hydropower plant and flood protection dam proposals for this reach of the river.

The Bow River – Canmore to Ghost Reservoir and the Kananaskis River Below Barrier Reservoir:

This reach of the Bow River is undeveloped and needs assessment as to the feasibility to maintain the passage between the braided islands. Each year deadfall from trees uprooted during spring runoff builds up to where the river becomes impassable. A survey for the potential enhancement of recreation river use needs to be undertaken.

The lower Kananaskis River below the Barrier Reservoir is home to Canoe Meadows ⁽¹⁸⁾, one of Alberta's primary whitewater parks. Managed under a stewardship agreement between Alberta Parks and the Alberta Whitewater Association, the maintenance of the instream infrastructure is challenged by the provincial and TransAlta's hydropower operations. A capital improvement strategy needs to be developed to enhance the facility to a level where annual maintenance costs are reduced to a more manageable level. The BRBRMP should also supply oversight in infrastructure upgrades.

The Bow River – Downstream of the Caresland Weir:

This reach of the Bow River is home to a good population of trout and further downstream warm water species of fish. As with the reach of the Bow River upstream of Calgary, it offers an expansion to recreation river use, taking pressure off the upstream reach of the Bow River between Calgary and Carseland. Jetboat fishing and pleasure trips are the primary recreational activities. The only publically available casual river access site is adjacent to Highway 24. CRUA was able to secure public access to the privately-owned access river until a more permanent solution can be secured. A CRUA proposal ⁽¹⁹⁾ has been presented to Alberta Parks to enhance and include the AEP Weir service boat ramp into the Wyndham-Carseland Provincial Park. An assessment is currently underway that could see a new public boat ramp completed within 2 years. Additional river access locations further downstream have been discussed for some time, but are limited by the Indian Reserve. The BRBRMP could play a role in securing future public access sites.

Secondary Developments

Each of the three sub-basins listed as secondary development should be considered in the BRBRMP planning process for the potential to enhance river recreation in the future.

Kananaskis River:

Water management policy and specifically the TransAlta Pocaterra Power Plant agreement has devastated a thriving Westslope Cutthroat Trout and Bull Trout Fishery when the Lower Kananaskis Reservoir dam was built in 1957. The management of the

water level in the reservoir to supply water for the power plant is referred to as hydropeaking. The supply of water to the downstream Kananaskis River is cut off overnight to build up sufficient water storage to optimize power generation during peak electrical demand in the afternoon and early evening. The CRUA Report ⁽²⁰⁾ reviews two detailed investigations from 2005 and 2010 that demonstrated with a modification to the hydropeaking operation, water flow variants could be reduced substantially to allow for the revitalization of the fishery. A cost-benefit analysis showed that with an improvement to the sport fishery, the economic contribution to the local tourist trade would outway the cost to modify the power plant's operations.

Ghost – Wiaporous Rivers:

Under high river flows during and immediately after spring snowmelt, the Ghost River is navigable by paddlers. Although not a high-use area for recreational paddlers, this river use needs to be built into the Land Use Framework for the area.

Highwood - Sheep Rivers:

Very little is known of the recreational paddle activities in this watershed, but considering the proximity to the urban centers of High River and Okotoks, we can assume that there could well be a sizable river floating community in the summer months. Walk & wade angling is popular throughout the sub-basin. The two rivers and their tributaries are home to the native Bull Trout and the Sheep River and its tributaries are considered the primary spawning habitat for the Bow River's migrating Rainbow Trout population. The 2013 flood devastated the Highwood River drainage, including the fish habitat which may be impacting the recruitment of the Bow River trout population. CRUA considers this river drainage worthy of more investigation to ascertain the potential for enhanced river recreation use.

5. CRUA Proposal:

What is evident is the need for an all-encompassing management plan that documents the current river recreational infrastructure, and a way forward to meet future needs. Although CRUA has estimated the economic contribution made by the paddling community to the region, there are shortcomings in this report. Limited data is available to determine the extent of the economic contribution paddle activities makes across the Bow River Basin.

Although the Bow and Kananaskis Rivers will continue to be CRUA's primary focus, the Ghost- Wiaporous, Highwood, and possibly the Elbow River need to be included in our proposed Bow River Basin Recreational Management Plan.

A River Recreation Management Plan needs to address the following issues:

- Bankside and recreational river use need to be integrated within park developments, capitalizing on the recreational resource available to meet multi-discipline recreation and river pursuits.
- Well-designed river recreation infrastructure should include the use of the adjacent property by other land-based users. Cycle paths, local amenities, and sufficient parking are important considerations.
- Historically, riverbank development projects appear to have limited scope, are often viewed in isolation, and do not take into account the relationship with other user groups. There is an interdependency between access points for recreational river use and therefore broader stakeholder input is needed.
- There is a need for information and promotion of facilities available to the public with a “River Recreational Use Policy” that covers regulations and safety operations. Reference is needed to respect other river users and public and private lands. Regulatory protection and enforcement of the environment and wildlife habitat must be documented.

CRUA is open to further discussions and involvement as a stakeholder in the review of the South Saskatchewan Region Plan to include the importance of the Bow River recreational use.

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