



## **THE POTENTIAL FOR SUSTAINABLE ECOTOURISM ON THE SOUTH SASKATCHEWAN RIVER**

*Draft for Review*

### **SEAWA Watershed Report 2010-6 SEAWA Web-based State of the Watershed Report**

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## Executive Summary

The South Saskatchewan River originates at the confluence of the Bow and Oldman Rivers, cutting an impressive swath through the southeast corner of Alberta and runs for 320 kilometres continuing on into Saskatchewan. In spite of its impressive valley, it remains one of the least recognized tourism assets.

One of the key areas that have been identified to meet government economic, social and environmental objectives for the river is to promote sustainable tourism development such as ecotourism. Ecotourism promotes sustainable economic, social and environmental development while encouraging education for the conservation of natural resources.

This report examines what potential for ecotourism exists along the Alberta reaches of the South Saskatchewan River.

Three major components were used to gather and illustrate data and make recommendations regarding the future potential for ecotourism along the South Saskatchewan River:

1. A river research trip to map current boundaries and resources of the South Saskatchewan River.
2. A river recreation survey to gain insight into local river knowledge and recreation activities.
3. An exploration research component to understand non-profit and commercial recreational river use.

In summary, the following findings support the potential for sustainable ecotourism on the South Saskatchewan River.

- The reaches of the South Saskatchewan River from Medicine Hat to Empress offer a unique river-scape and the most scenic opportunities for ecotourism development.
- The demand for recreational tourism exists.
- Concern for the South Saskatchewan River environment presented itself in the River Recreation Survey.
- The current river recreation use, both non-profit and commercial, is not saturated.
- Two barriers to recreation that were listed in the results section included a lack of skill/knowledge and a lack of infrastructure (both land and river based). Although these are barriers they also present opportunities.

To supplement the research, an analysis of literature including guidelines by the Government of Alberta, Alberta Tourism, Parks and Recreation, and Canadian Badlands Ltd. clearly demonstrate that the development of an ecotourism industry can support

tourism and recreation targets that endorse provincial sustainability objectives for the South Saskatchewan River. It has been shown that through public support ecotourism can promote:

- A healthy economy supported by our land and natural resources
- People-friendly communities with ample recreational and cultural opportunities
- Healthy ecosystems and environments

Ecotourism can provide the balance for a spectrum of key government objectives. From an increase in water conservation to multi-billion dollar tourism targets, development scenarios that recognize both water conservation and economic growth are the key to realizing sustainable, long-term government plans for the South Saskatchewan River.

Three recommendations for action have been identified that support current government policy and utilize the Canadian Badlands Tourism Development Strategy for developing infrastructure to support ecotourism on the South Saskatchewan River:

1. SEAWA, Medicine Hat College Ecotourism and Outdoor Leadership program (ETOL) and Canadian Badlands Ltd. Partnership. Joining forces in a three way partnership will provide a unified approach that draws on the strengths from each of the partners. Conservation, education and tourism development are three areas that can be joined together to promote better awareness for new and sustainable ecotourism opportunities.
2. Provincial park development. Lobby the provincial government to develop a provincial park that reinforces a healthy economy through responsible public use of the South Saskatchewan River and surrounding land.
3. Additional research. The findings in this report provide preliminary results that illustrate the potential for ecotourism exists along the South Saskatchewan River. To support the report's recommendations, further research should be conducted to get a complete picture of the demand for ecotourism along the South Saskatchewan River, to investigate the specific findings uncovered in this report and to actually test ideas that will resonate with the public on developing ecotourism in the region.

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## Introduction

The South Saskatchewan River originates at the confluence of the Bow and Oldman Rivers, cutting an impressive swath through the southeast corner of Alberta and runs for 320 kilometres continuing on into Saskatchewan. In spite of its impressive valley, it remains one of the least recognized tourism assets (see Figure 1).

As a major provincial waterway in southeast Alberta, the South Saskatchewan River is primarily allocated to provide water for municipalities and communities as well as irrigation (see Figure 2). Recently, the Government of Alberta has shown a decrease in water quality and overextended water-use allocations, which can present some very serious problems for the economies and quality of life for communities that depend on water from the river.

Currently, the Government of Alberta is working on a policy for developing the South Saskatchewan Region that will focus on a land-use framework to achieve long-term environmental, social and economic goals. The South Saskatchewan River is part of the region, and as such, an *Approved Water Management Plan for the South Saskatchewan River Basin* (Alberta Environment, 2006) has been developed to meet the objectives of the proposed land-use framework including how to address water quality issues.

One of the key areas that have been identified to meet government economic, social and environmental objectives for the river is to promote sustainable tourism development such as ecotourism. Ecotourism promotes sustainable economic, social and environmental development while encouraging education for conservation of the natural resources. These ecotourism concepts parallel the objectives of the Alberta Government in developing the South Saskatchewan Region.

This report determines what the potential for ecotourism exists along the Alberta reaches of the South Saskatchewan River.

Three major components were used to gather and illustrate data, and make recommendations regarding the future potential for ecotourism along the South Saskatchewan River:

1. A river research trip where Medicine Hat College Ecotourism and Outdoor Leadership (ETOL) program personnel observed numerous points of interest along all of the Alberta reaches of the South Saskatchewan River. These points were marked using the Global Positioning System (GPS). The raw data were transferred on to a map that provides a visual representation of the river highlighting current boundaries and resources to support future potential for sustainable ecotourism development.
2. A river recreation survey was conducted on behalf of the Medicine Hat College Ecotourism & Outdoor Leadership Program to gain insight into local river knowledge and recreation activities.

3. An exploration research component performed in conjunction with the ETOL 112, Outdoor Recreation Management and ETOL 220, Sustainable Ecotourism Operations courses at Medicine Hat College to understand non-profit and commercial recreational river use.

In addition guidelines from the Government of Alberta, Alberta Tourism, Parks and Recreation, and Canadian Badlands Ltd (a compilation of over 55 municipal stakeholders) are reviewed and discussed for the South Saskatchewan Region and South Saskatchewan River.

## Literature Review

This section reviews current literature and provides an analysis on improving sustainable development and opportunities for ecotourism on the South Saskatchewan River. Specific guidelines by the Government of Alberta, Alberta Tourism, Parks and Recreation, and Canadian Badlands Ltd (a compilation of over 55 municipal shareholders) are acknowledged and reviewed as they relate specifically to development policy and water management for the South Saskatchewan Region and South Saskatchewan River.

### Renewing water policy objectives

In 2003 a collaborative effort of several regional bodies interested in Alberta's waterways produced a report entailing sustainability strategies for managing this valuable resource. Four years later the report was revisited and the *Recommendations for Renewal of Water for Life: Alberta's Strategy for Sustainability* (Alberta Wilderness Association et al., 2007) was produced. "*Water for Life* is a well-designed strategy but unbalanced progress in implementing the strategy's actions has limited its effectiveness to date. Implementation of the strategy requires renewed focus" (Alberta Wilderness Association et al., 2007, p. 2) to meet its "provincial target of 30 percent improvement in water conservation, efficiency and productivity by 2015, from 2005 levels" (Government of Alberta, 2009, p. 14).

The sustainability of waterways within Alberta is essential to our quality of life. The environment, our communities, and our economic health depend on a safe and sustainable supply of water. With a provincial population exceeding 3.3 million people and an annual growth rate of approximately 3.1 percent, several of Alberta's rivers are experiencing detrimental impacts where water leaving the river for human use is not being replenished fast enough, resulting in reduced flow rates and severe impacts in aquatic and riparian environments (Alberta Environment, 2006; Government of Alberta, 2009).

The South Saskatchewan Region as shown in Figure 3, is home to approximately 45 percent of Alberta's population (Government of Alberta, 2009) and contains within it 320 kilometers of the South Saskatchewan River (Dickinson & Baresco, 1996), and is home to the Canadian Badlands Region as shown in Figure 4. Stretching from Grand Forks (the confluence of the Bow and Old Man Rivers) to the Saskatchewan border near Empress, the Alberta reaches of the South Saskatchewan River have been recognized as being heavily impacted in the aquatic environment, water quality, and water allocation,

with further decline expected if actions for sustainability and conservation are not taken (Alberta Environment, 2006). With between 60-70 percent of its natural flow allocated (Alberta Waterportal, 2010), the South Saskatchewan River is used to support local economies and a way of life for local communities. Unfortunately through unsustainable allocation of water for growing communities and irrigation, socio-economic benefits and quality of life are endangered unless solutions can be realized to mitigate environmental impacts (Alberta Environment, 2006; Alberta Wilderness Association et al., 2007; Government of Alberta, 2009).

### **Strategies for meeting provincial objectives**

In light of the declining river environment, *Terms of Reference for Developing the South Saskatchewan Region* (Government of Alberta, 2009) is currently being developed in part as a “new approach for managing public and private lands and natural resources to achieve Alberta’s long-term economic, environmental and social goals” (p. 1). It has also been developed in conjunction with the *Approved Water Management Plan for the South Saskatchewan River Basin* (Alberta Environment, 2006) which highlights several strategies where collaboration is paramount for regional and provincial success. Recognizing that water supply and demand and population growth are significant drivers for change in the South Saskatchewan Region, the Government of Alberta (2009) has outlined development scenarios that highlight four specific areas:

1. Population growth
2. Water supply and demand
3. Conservation of valued landscapes and biodiversity
4. Economic growth

In each of the areas listed above recreation and tourism is noted as having the opportunity to play a significant role in positively influencing a sustainable outcome (see Figure 5). Furthermore the Government of Alberta (2009) maintains that “the South Saskatchewan Region is an international caliber destination and is critical to ensuring the ongoing growth of the provincial and national tourism industries” (p. 20). The South Saskatchewan Region is expected to play a key role for the tourism industry by 2011-2012 with a provincial target of \$6.3 billion in tourism dollars.

### **Tourism and recreation**

With strong consideration being given to tourism and recreation as a viable and crucial strategy for bringing about economic, social and environmental benefit, a sustainable tourism approach is needed to meet 2011-2012 tourism and recreation growth targets. Sustainable development should meet “the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p. 8). According to the Government of Alberta (2009) the South Saskatchewan Regional plan “will forecast at least 50 years into the future” (p. 3) and will provide sustainability for a land-use framework with three desired outcomes for the province:

- A healthy economy supported by our land and natural resources (see Figure 6).

- People-friendly communities with ample recreational and cultural opportunities (see Figure 7); and
- Healthy ecosystems and environment (see Figure 8) (p. 7).

“The plan will be effective for a [five] to 10-year period, after which it will be reviewed and updated as needed to address the realities of the day. Specific land use considerations for recreation and tourism include:

- Competition with growing regional populations for limited water supplies.
- Conservation of unique environments may conflict with residential and industrial development.
- Supply should be matched by demand of tourism and recreation opportunities.

Clearly a balance needs to be struck between tourism and recreation development and other social, economic, and environmental goals within the South Saskatchewan Region.

### **How concepts of ecotourism can support the land–use framework for the South Saskatchewan River**

Ecotourism is envisioned as being:

- Conservation supporting (Fennell, 2001);
- Sustainably managed (Borrini-Feyerabend, Kothari, & Oviedo, 2004; Carrier & Macleod, 2005; Foucat, 2002; Kontogeorgopoulos, 2005; West & Carrier, 2004);
- Nature based (Schelhas, Sherman, Fahey, & Lassoie, 2002); and
- Environmentally educating (Stem, Lassoie, Lee, Deshler, & Schelhas, 2003).

In accordance with upholding the South Saskatchewan Regional Development policies, it will help to understand where ecotourism can be successful in each of the three areas of the land-use framework.

### **A healthy economy supported by our land and natural resources**

The tourism industry is one of the fastest growing industries in the world with the power to support and sustain healthy economies. Most tourism activity occurs in or around natural areas.

In Canada, as of 2006, 104 million visitor days were recorded in national, provincial, and territorial parks with a total impact of between \$11 billion and \$17 billion (Dearden & Rollins, 2009). According to Dearden & Rollins (2009, p. 317) specific economic benefits of park tourism include:

- An increase in jobs for local residents;
- An increase in incomes;

- New tourism enterprises;
- Stimulation and diversification of the local economy;
- Local manufacture of goods;
- New markets and foreign exchange;
- Improved living standards;
- Local tax revenues;
- New skills learned by employees;
- Increased funding for protected areas and local communities.

Canadian Forces Base (CFB) Suffield National Wildlife Area is the only nationally, provincially, or municipally protected land along the South Saskatchewan River. As no one is permitted to use the land, there is little economic benefit to be realized for the region. If public demand is effectively expressed there is a good chance new parks can be created as the Alberta Government can “provide financial and managerial resources” (Dearden & Rollins, 2009, p. 314) along the river away from CFB Suffield. Tapping into this vast economic resource will significantly support tourism revenue targets for the region while conserving and sustainably managing sections of the South Saskatchewan River, especially considering that Medicine Hat has been targeted as one of four primary development hubs in the *Canadian Badlands Tourism Development Strategy (Canadian Badlands, 2008)*. Furthermore as “new surface water allocations are no longer available in the... South Saskatchewan River Basin” (Government of Alberta, 2009), “tourism... may provide new economic opportunity [if] there is a decline in resource-based industries such as... agriculture” (Dearden & Rollins, 2009, p. 318).

### **People-friendly communities with ample recreational and cultural opportunities**

An increased market for tourism and recreation in the South Saskatchewan Region has been recognized (Canadian Badlands, 2008; Government of Alberta, 2009), especially along the South Saskatchewan River as it is considered a major waterway in Southern Alberta. Current government policy calls for increased tourism and recreation development in regional planning to help communities improve recreational and cultural opportunities. The Canadian tourism industry has been shown to benefit “community pride, cultural appreciation between tourists and local residents, and maintenance and appreciation of local culture” (Dearden & Rollins, 2009, p. 318). Unfortunately Dearden & Rollins (2009) find that with an increase in tourism certain negative impacts can manifest, such as:

- High visitor numbers may stress local services... causing congestion at stores banks, service stations... and other locations.
- A ‘power shift’ may also occur when local control over the host community erodes in response to demands from tourists and when the tourism industry responds to their needs.
- Some tourists may feel less constrained while on holiday and may be rude, condescending, rowdy, or obnoxious to local residents and other tourists.

- The trivialization or commoditization of local cultures can occur when tour operators organize displays of local culture that have been altered in ways thought to be more interesting to tour groups, rather than presenting authentic displays of local culture.
- Growth in tourism may result in displacement of local residents through spiraling property values induced by the tourism industry.
- Traditional community decision-making structures may be stressed if some people in a community receive economic benefits and others do not.

The Government of Alberta's regional planning objectives have a solid foundation in sustainability with long-term economic, environmental and social objectives. Ideally the goal is to provide for socio-cultural benefits without becoming exploitive. "The ecotourism market concept provides direction for private-sector tourism companies to manage their operations in ways that sustain the environment, local communities, and tourism industry" (Dearden & Rollins, 2009, p. 332), without becoming overwhelming to or exploitive of local communities. Local sentiment in other Canadian communities, regarding the development of tourism, note that tourism supports:

- Employment
- An increase in marketing opportunities and recognition of local artists and crafts people
- More restaurants and shops
- Direct and indirect contributions for a healthy community-based economy. (Dearden & Rollins, 2009)

Alberta Tourism, Parks and Recreation (2007, p. 9) identify "outdoor adventure activities that can be further developed in the Canadian Badlands" and include:

- River and water based activities (canoeing, rafting);
- Golfing;
- Mountain biking;
- Horseback riding;
- Birding (see Figure 9);
- Wildlife viewing (see Figure 10);
- Scenic viewing (see Figure 11);
- Hunting;
- Boating; and
- Ice fishing, ice boating, para-skating and other winter activities.

This is an ideal time to create development strategies that utilize ecotourism concepts that further the agenda of the South Saskatchewan Region land-use framework.

To help develop ecotourism strategies in a direction consistent with the land-use framework a local education program already exists that focuses on ecotourism and outdoor leadership. The Ecotourism and Outdoor Leadership (ETOL) program at Medicine Hat College has strong ties with local volunteer and naturalist organizations such as the Nature Centre in Police Point Park, Medicine Hat, that support education and sustainable development of the South Saskatchewan River. Furthermore the ETOL program is heavily involved at municipal levels, with South East Alberta Watershed Alliance (SEAWA), in directing future policy for the sustainable development of the South Saskatchewan River. For example this report has been researched and generated with strong student support in researching current use practices and local sentiment regarding ecotourism on the South Saskatchewan River.

Medicine Hat already has a strong community through the ETOL program and its many partners, dedicated to the sustainable development of its natural resources while providing social and economic benefits to the local community. Strong community support makes Medicine Hat an ideal location for developing ecotourism along the South Saskatchewan River.

### **Healthy ecosystems and environment**

Ecotourism is considered minimum impact tourism. In consideration of the present state of the South Saskatchewan River, the specific role ecotourism can play in helping to create and maintain healthy ecosystems and environments must be acknowledged.

The Alberta Water Act “support[s] and promote[s] the conservation and management of water, including the wise allocation and use of water” (Alberta Environment, 2006, p. 25). Under the act a Water Conservation Objective (WCO) can be established and is necessary for the “protection of tourism and recreational uses of water” (Alberta Environment, 2006, p. 25).

Current recreational uses of the river include several kinds of boating such as:

- Canoeing;
- Kayaking;
- River Rafting; and
- Power boating (see Figure 12).

The first three activities can be considered to be minimally invasive to the riparian and aquatic environment, thus aligned with WCO, however power boating is not. It must be recognized here that power boating is loud and causes wildlife disturbances (Mosisch & Arthington, 1998) (see Figure 13). Power boating also causes damage to the aquatic environment with powerful jets, or propellers that decimate aquatic plant life and delicate ecosystems (Asplund & Cook, 1997).

Ecotourism can be used to promote sustainable recreational activity on the South Saskatchewan River through a public education and consultation process that establishes Water Conservation Objectives in support of protecting tourism and recreational uses of

water. Minimum impact water activities support the conservation of the South Saskatchewan River, and in turn support a sustainable tourism and recreation industry.

### **Summary of literature review**

An analysis of literature discussing current Alberta water policy and the South Saskatchewan Region land-use framework, clearly demonstrate that the development of an ecotourism industry can support tourism and recreation targets that endorse provincial sustainability objectives for the South Saskatchewan River. It has been shown that through public support ecotourism can promote:

- A healthy economy supported by land and natural resources that advocate the establishment of provincial parks along the South Saskatchewan River, not only to promote conservation of the river but tap into a vast Canadian tourism network to support local economies and help the South Saskatchewan Region meet or exceed provincial tourism economic targets;
- People-friendly communities with ample recreational and cultural opportunities that endorse strong, sustainably minded communities. Medicine Hat is one community that already advocates environmental, social and economic benefits through education programs that teach ecotourism activities;
- Healthy ecosystems and environments that advocate Alberta water conservation goals using water conservation objectives to designate areas of non-motorized boat use on the South Saskatchewan River.

As Alberta's population and economy grow, natural resources are pushed beyond their limits to continue to support our economic, social and environmental needs. The Government of Alberta and municipalities within the South Saskatchewan Region have made a call to action. Government objectives for sustainable development are consistent with concepts of ecotourism, therefore the development of a strong ecotourism industry has been acknowledged as a tool to support our quality of life.

## **Research and Results**

### **River Trip**

The goal of the river trip from September 26 -27, 2009, was to generate primary data that would aid in the creation of an e-map (see Appendix 1) of the Alberta reaches of the South Saskatchewan River. Specific Global Positioning System (GPS) waypoints taken during the field research trip act as a visual representation for outlining potential recreation sites, road access points, campsites, wildlife and scenic spots, irrigation points and grazing areas.

The e-map when combined with a tool such as the Recreation Opportunity Spectrum (ROS) can be used to aid in future river management decisions. The Recreation Opportunity Spectrum (ROS) is explained as such:

Using standards that describe recreation ‘settings’ or areas, the ROS framework systematically divides a landscape along a continuum or spectrum of recreation opportunities ranging from primitive (wilderness) through to urban (developed). The supply of opportunities identified in this way compares visitor’s demands for opportunities, allowing managers to match supply and demand where possible and permissible under legislation and policy (Dearden & Rollins, 2009, p. 180).

Currently applications of ROS can be found in Canada’s National Park System including Yoho National Park and Pukaskwa National Park (Dearden & Rollins, 2009). Pacific Rim National Park has also used the “ROS concept to develop a zoning system including semi-primitive, primitive, and wildland zones for the West Coast Trail” (Dearden & Rollins, 2009, p. 183). The B.C. Ministry of Forests uses ROS as a recreation inventory tool (British Columbia Ministry of Forests Forest Practices Branch, 1998; Dearden & Rollins, 2009). Internationally ROS is being studied and tested not just for specific land zones but, in New Zealand’s case, for 30 percent of the entire country (Joyce & Sutton, 2009).

A ROS for the South Saskatchewan River can be used to identify where the greatest potential for river recreation exists by highlighting:

- Where infrastructure exists to support recreation activity.
- Where the majority of grazing, irrigation, and private lands exist, and where recreation opportunities would be diminished.
- Where infrastructure and access to the river is reduced.

Without any prior documents that identify river tourism demand along the South Saskatchewan River, the e-map created from the river trip results offers critical points of consideration in which to build a ROS. With various recreation, agricultural, and government uses for the river, government and municipal land managers can use ROS for the South Saskatchewan River to actively manage the landscape to protect public interest and retain public resources in order to provide the best opportunities for river recreation while reducing the potential for land-use conflicts.

For this report current river recreation opportunities as well as future opportunities such as extended multi-day river trips were considered. As well, non-recreational sites along the river were considered to identify where potential land-use conflicts might exist without proper management.

The river research trip slotted observed GPS waypoints taken during the river trip into four different categories to help construct a ROS framework for the South Saskatchewan River. These points were observed from a fast moving jet boat. As such, GPS coordinates are as accurate as possible when taken from a moving vehicle, they include:

1. River recreation sites:
  - a) Wildlife sites: Four kinds of wildlife sites were observed including three Bald Eagle nesting sites (see Figure 14), a Canada Goose nesting bucket, Beaver activity including two Beaver dams, as well as thousands of

Bank Swallows. Other wildlife sightings included a Moose in the middle of the river (see Figure 15) and several Pelicans (see Figure 16).

b) Natural scenery and interesting local geology:

- Hoodoos – two sites (see Figure 17).
- Spectacular Badlands scenery (see Figure 18).
- Side coulees to explore – three sites.
- Rock outcroppings (see Figure 19).
- Red cliffs.
- Petrified coulee.

2. River recreation support sites:

- c) Road access: 29 roads were observed (see Figure 20).
- d) Potential campsites: 12 sites were observed. Some of these sites may share grazing land with cattle (see Figure 21).

3. Non-recreational sites:

- e) Irrigation pumps: 11 irrigation pumps were observed (see Figure 22).
- f) Grazing sites: 24 grazing sites were observed with over 700 cattle dispersed among them (see Figure 23).

4. Other sites:

- g) Cottonwood tree regeneration sites: three were observed.
- h) Other points of interest:
  - CFB command post.
  - Sherwood forest.
  - End of CFB land.
  - Overhead natural gas pipeline (see Figure 24).
  - Leftover pillars of old train bridge (see Figure 25).
  - Fork with Red Deer River.
  - Confluence of Old Man and Bow Rivers.

The reaches of the river from Medicine Hat to Empress provided the most intriguing and varied scenery compared to the reaches from Grassy Lakes to Medicine Hat.

### **River Recreation Survey Analysis**

The goal was to create and design a survey to gather the extent of local knowledge, thoughts and opinions regarding river recreation on the South Saskatchewan River. The survey contained a total of 13 recreation questions including both closed and

open-ended options and three questions on participant demographics. A total of 253 responses were obtained over approximately 25 hours of canvassing. It should be noted that some of the questions in the survey had no responses but percentage calculations are based on the full participant count of 253 (see Appendix 2).

The survey canvassing was conducted between January and February 2010. The survey leveraged several events held in Medicine Hat – the Medicine Hat College Best of the Banff Film Festival viewing, the Olympic Torch Relay Celebration and the Bow Island Community Festival – where a high volume of traffic was expected to maximize the overall number of survey participants. Local organizations including the Grasslands Naturalists and Medicine Hat Fish and Game Association were also approached for participation in the survey.

#### *Respondent demographics*

Demographically speaking, the respondents were evenly divided between the two genders. The age of respondents was consistently distributed between the five age categories that covered the range of 15-64 years. Respondent numbers dropped significantly for the age categories 0-14 years and for 65+ years. The majority of respondents (39%) came from a household of two persons.

#### *General river knowledge*

The first three questions of the survey intended to establish the level of baseline knowledge regarding the South Saskatchewan River. Almost a full majority, 96%, of the respondents knew the name of the river.

The extent of the river knowledge, however, became divided with the next two questions. Approximately one third, 32%, of the respondents were able to give a basic answer as to the origins of the river. 35% of respondents were not able to provide an explanation of where the river originated from and was going to. The remaining 30% of respondents were able to provide a partially accurate response.

#### *River information sources*

When asked “Where would you go to find information about the river?” over half of the respondents (53%) answered ‘the Internet’ making it the dominant reference source. The Tourist Centre (15%), Police Point Nature Centre (13%) and the Library (12%) were listed as the next information sources. SEAWA was cited by 4% of respondents.

#### *Current recreation use*

Respondents were asked to provide information on their frequency of activities. Levels of use were divided into High (weekly or more), Medium (10-50 times per year) and Low (less than 10 times per year).

The most popular recreational activities, in order of their high usage (weekly or more), were:

1. Walking/scenic viewing
2. Nature observation

### 3. Fishing

The remaining activities, ranked in order of highest to lowest medium usage (10-50 times per year) were power boating, canoeing, kayaking and floating on a raft.

#### *Future recreation use*

Respondents were also asked to provide information on which activities they would like to do more often (participants could choose more than one).

The most popular recreational activities, in order, were:

1. Walking/Scenic Viewing (62%)
2. Nature Observation (46%)
3. Canoeing (45%)

The remaining activities, ranked in order of votes were kayaking/floating on a raft (tied), fishing, power boating and other.

#### *Barriers to recreation participation*

Respondents were asked the question, “What is holding you back from increased participation?” (participants could choose more than one). “Work Commitments” was cited as the top reason at 57%, followed by “Equipment and Facility Availability” (infrastructure) at 36%, and “Skill/Knowledge” at 34% (rankings based on total responses from the Strongly Agree and Agree categories).

#### *Leisure experience (participants could check multiple answers)*

When asked, “How far ahead do you book your leisure experience”, 69% of respondents answered “Last minute”, 61% answered “Days in Advance”, 41% answered “Weeks in Advance”, 20% answered “Months in Advance” and 8% answered “Year in Advance” (rankings based on total responses from the Strongly Agree and Agree categories). The responses clearly indicate that respondents arranged their leisure experience within short-term time frames.

Results for the preferred length of leisure experience are as follows: 60% selected 1-3 hours, 43% selected full day activities, and 25% selected for multi-day activities. The responses clearly indicate a preference for shorter durations of activities.

Results for the preferred time for leisure activities are as follows: 76% selected Saturdays, 70% selected Sundays, 42% selected weeknights and 33% selected weekdays.

Lastly, when asked, “What would your ideal leisure activity include?” the top six responses include: “Relaxation” and “Activities that include an outdoor element” tied at 66%, “Natural/Wildlife” at 65%, “Socializing with Friends” at 62%, “Adventure” and “Environmental Sensitivity” tied at 50% (rankings based on total responses from Extremely Important and Very Important categories).

#### *Water-based recreation services*

When asked, “Do you know companies that provide water-based recreation services?” 20% responded “Yes” and a clear majority, 75%, responded “No”.

### *Future river development*

The survey concluded with an open-ended question asking respondents to provide comments on possible river development. 103 people responded to this question. Answers covered four general subject areas including “General level of river development”, “Water Quality”, “Recreation requests” and “General comments.”

General level of river development comments are shown in five response areas:

1. Do not build a dam (14 responses)
2. Build a dam (7 responses)
3. Limit development (7 responses)
4. Support conservation (2 responses)
5. Other (2 responses)

Water Quality comments are shown in four response areas:

1. Preserve water quality (10 responses)
2. High levels of pollution (4 responses)
3. Concerned about water quality (2 responses)
4. Other (2 responses)

Recreation requests are shown in five response areas:

1. Boating infrastructure (12 responses)
2. Land-based infrastructure (4 responses)
3. Guided river trips (6 responses)
4. Equipment rental availability (4 responses)
5. Other (12 responses)

### **Exploration Research Component**

The goal of this research was to determine current non-profit and commercial ecotourism related activity on the South Saskatchewan River.

Students found and contacted local clubs, organizations and associations to determine non-profit use. Students also investigated commercial recreation operators on the river including current tourism and recreation licenses issued for river tourism and recreation operators.

### *Non-profit River Use*

To gauge river use three questions were asked that considered group/ member size, annual membership and frequency of river use. Eleven clubs were contacted and responses were as follows (see Table 1):

1. Medicine Hat Paddling Club: No response
2. Medicine Hat Bicycle Motocross (BMX) Association: No response

3. Mad Hatters Running Club: No response
4. Scouts Canada Medicine Hat: No response
5. 4H Beef Club: No response
6. Medicine Hat Junior Forest Wardens: No response
7. Medicine Hat Fish and Game: No response
8. Redcliff Girl Guides: No response
9. Medicine Hat Family YMCA (River Run): No response, records not available
10. Newell Sailing Club: No river use, only Lake Newell
11. Prairie Roses 4H Multi-club (Bow Island): Has 14 members, the same annual membership as the previous year. Limited river use (less than once a year) was also recorded.

### *Commercial River Use*

One commercial operator was found on the river. River Bend Adventures offers a range of activities including scenic tours, jet boat tours, fishing, bird photography and remote bed and breakfast services. No other operators were found on the river.

According to the City of Medicine Hat and a search of the Town of Redcliff there no current commercial recreation licenses issued for the South Saskatchewan River.

### **Discussion of Research Findings**

The discovery of wildlife, natural scenery and unique geology during the river trip excursion provided an environmental backdrop and destination areas that can satisfy both outdoor recreation and ecotourism activities along the South Saskatchewan River.

Based on the River Recreation Survey, however, it was discovered that the current state of local knowledge about the South Saskatchewan River was low as only a fraction of respondents could provide basic knowledge about the river. Most respondents cited the Internet as their main source of information for finding general or recreation-based information about the river, while local sources such as Police Point Park Nature Centre and the Tourist Centre had significantly lower percentages. Today, searching the Internet using “South Saskatchewan River” as the search criteria on Google provides several pages of information regarding history, geography, biology, environment and culture, but very little information is provided for current river recreation opportunities. These results suggest that current awareness about the South Saskatchewan River is low and local resources for general information or recreation-based activities may be underutilized.

Based on student research conducted, there was very limited response from local clubs and organizations about their river use. Furthermore, no current commercial recreation licenses have been issued or could be found for river recreation operators and only one commercial recreation river operator could be found. These results suggest that the amount of organized river recreation, whether non-profit or commercial is also limited, but would require more research to gain better responses from non-profit organizations.

Despite the lack of non-profit or commercial river use information, the River Recreation Survey provided information about personal river recreation use. Respondents preferred to go for scenic walks while observing the natural environment or fishing, another popular activity. One reason these may be popular activities is that they require limited planning and can easily be done within a one hour to three hour timeline and on the weekends, as a majority of respondents suggested was their preference for leisure activity.

Survey respondents acknowledge that they would like more time to participate in leisure activities (restricted primarily by work commitments) and in a broader base of activities, such as more scenic walks and canoeing. Additional barriers such as a lack of skill and knowledge and current infrastructure were cited as other reasons to why people were not making the most of the river for their leisure activities.

An interest in conservation, limiting development (several responses specifically regarding a dam) and concerns about water quality were all areas of discussion for the last open-ended question of the River Recreation Survey. These results suggest that a number of those surveyed have specific concerns for the sustainability of the river environment. Concerns about water quality could even act as another barrier to river use. Other responses supported a number of further recreation requests showing the diversity in the surveyed based between conservation and recreational development – a very common challenge when discussing sustainable ecotourism development.

## Conclusions

Primary research of the river environment and results from the River Recreation Survey are very much aligned with current government objectives, water policies and recreation targets found in the literature review.

Summarized, the findings below support the potential for sustainable ecotourism on the South Saskatchewan River.

- The reaches of the South Saskatchewan River from Medicine Hat to Empress offer a unique river-scape and would offer the most scenic opportunities for ecotourism development. It was observed that this section also hosted an abundance of wildlife sightings. Additionally, this section of the river currently provides a level of infrastructure and accessibility that can be expanded upon.
- The demand for recreational tourism exists. Results from the River Recreation Survey not only provide a list of desired river recreation development but emphasize that the most popular type of current and desired activities are ones that can be considered ecotourism (such as walking/scenic viewing, nature observation, fishing and canoeing).
- Concern for the South Saskatchewan River environment presented itself in the River Recreation Survey. The main areas of concern focused on water quality, the need for conservation and limiting development. If tourism is developed following the ecotourism fundamentals - sustainably managed,

nature-based, conservation supporting and environmentally educating – it would provide social and economic benefits and satisfy the local community’s desire to protect the river.

- The Exploration Research component discovered that the current commercial river recreation use is not saturated, leaving room for growth for potential ecotourism-based activities. Further inquiries to non-profit use would have to be conducted if drawing conclusions regarding their use.
- Two barriers to recreation in the results section that were listed included a lack of skill/knowledge and a lack of infrastructure (both land and river based). These barriers however, can actually present opportunities. The lack of skill/knowledge can provide the opportunity for local businesses or organizations to provide guided ecotourism activities, training and education. The development of infrastructure for ecotourism activities can provide the opportunity for economic stimulation of the local economy.

Ecotourism can provide the balance for the spectrum of key government objectives. From a 30 percent increase in water conservation to a \$6.3 billion target in tourism dollars, development scenarios that recognize both water conservation and economic growth are the key to realizing sustainable, long-term government plans for the South Saskatchewan River. As such, recommendations must be based on an ecotourism approach that supports all elements of the land-use framework.

## Recommendations for Action

The potential for ecotourism exists on the South Saskatchewan River through various survey findings and support by existing government policies. However, to realize this potential, a balance of the elements in the land-use framework must be followed while attempting to remove barriers that keep people from participating in recreation and continuing to support the popular recreation opportunities (which meet ecotourism criteria) that they already enjoy.

Three recommendations for action have been identified that support current government policy and utilize the Canadian Badlands Tourism Development Strategy to support ecotourism on the South Saskatchewan River:

1. SEAWA, MHC ETOL and Canadian Badlands Ltd. Partnership. Joining forces in a tri-partnership will provide a unified approach that draws on the strengths from each of the partners. Conservation, education and tourism development are three areas that can be joined together to promote better awareness for new and sustainable ecotourism opportunities.
  - Canadian Badlands Ltd, in their *Canadian Badlands Tourism Development Strategy* (Canadian Badlands, 2008) point to Medicine Hat as a primary hub for tourism and recreation development. The development of an ecotourism industry must capitalize on this opportunity and draw from the wider tourism market in the area.

- The tri-partnership must advocate public support to develop water conservation objectives (WCOs), as part of Alberta Environment legislation, to provide environmental and economic conservation measures that protect the river and support non-motorized water based ecotourism activity. In turn, WCOs contribute to a healthy ecosystem and environment on the South Saskatchewan River.
2. Work with the provincial government to develop a provincial park that reinforces a healthy economy through responsible use of the South Saskatchewan River and surrounding land.
    - SEAWA, MHC ETOL, and Canadian Badlands Ltd. should collaborate and host public forums intended to establish what public support would be for the development of a new provincial park.
    - With the intent to garner positive support, education directed towards the social, economic, and environmental benefits associated with provincial park development should be highlighted.
  3. The findings in this report show preliminary results that the potential for ecotourism exists along the South Saskatchewan River. The report timeline dictated that the research was done in the winter season when river tourism is limited.
    - To support the above recommendations it is important to get an accurate sense of demand from a representative population that includes more than outdoor recreationalists. A similar study during the summer months can be conducted when river tourism and local river use is at its peak to get a complete picture of ecotourism demand along the South Saskatchewan River.
    - Further research can also be conducted to investigate specific findings uncovered in this report (such as barriers to recreation participation) and to actually help test ideas that will resonate with the public on developing ecotourism in the region.

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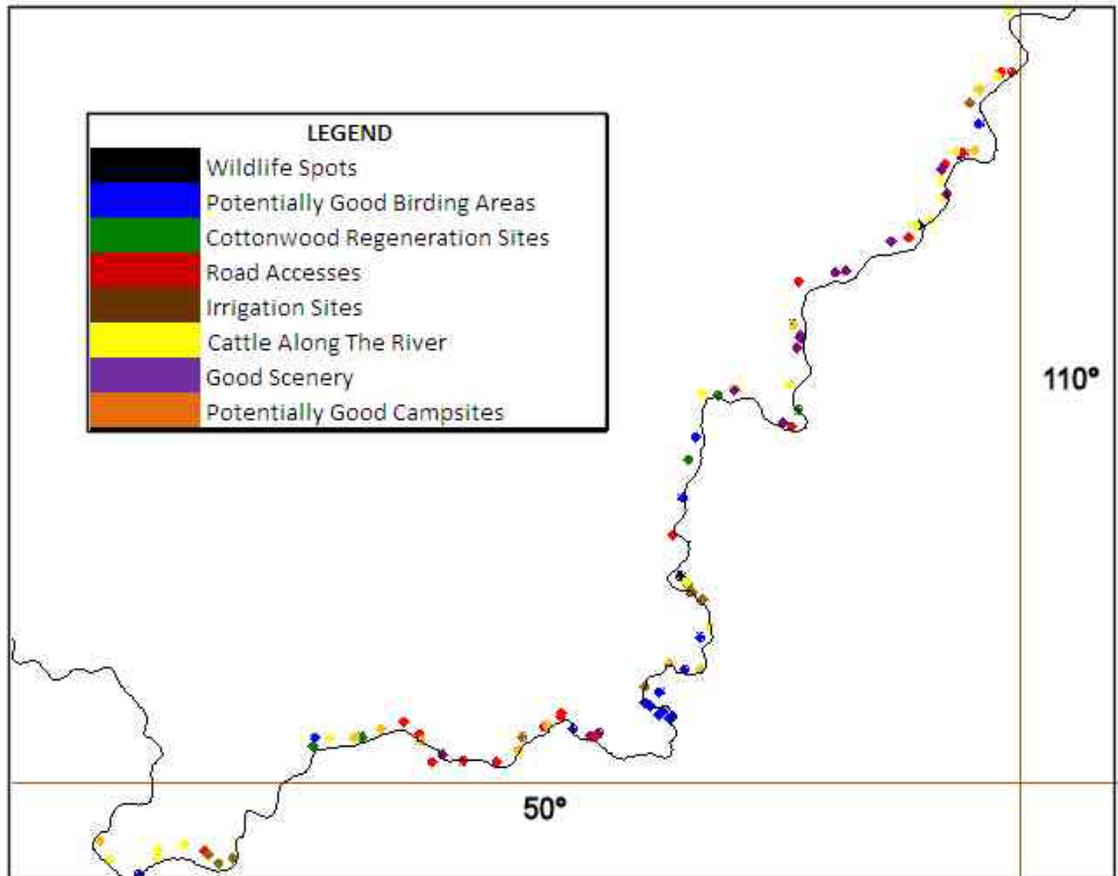
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## Appendix

### Appendix 1 – Initial River Map with GPS Waypoints

# South Saskatchewan River GPS Points



Erin Vossler  
January 29 2010

## Appendix 2 – Survey and Results

In general, what would your ideal leisure activity include?

Enjoyment Factors	Not Important	Slightly Important	Moderately Important	Very Important	Extremely Important
Adventure	7	25	68	79	49
Socializing with Friends	7	8	54	102	54
Environmental Sensitivity	9	24	68	79	48
Relaxation	4	18	40	117	49
Trendy Destination	92	45	46	17	13
Supporting Local Workers	24	49	60	59	18
Outdoor Element	1	15	40	99	67
Natural/Wildlife	5	12	47	88	76
Urban	57	52	52	23	16
Arts and Culture	33	43	67	47	21

Preferred Time for Leisure Activities	1	2	3	4	More than 4
Weekdays	83	2	98		
Weeknights	105	3	31		
Saturday	192	4	48		
Sunday	177	More than 4	23		

Preferred Length of Leisure Experience	
1-3 HRS	151
Full Day Activity	110
Multi-day	62

	Male	Female
Gender	120	118

	15-24	25-34	35-44	45-54	55-64	65-74	75+	0-14
Age	44	44	36	47	38	14	5	6
M.H.	20	20	16	21	16	2	2	2.7
Stats Can.	13	14	14	15	11	8	8	12

Your answers to the following questions will help us understand how you use the river. Blank 9

How often do you do these activities in a year?	
Walking/Scenic Viewing	H-78 M-65 L-80
Nature Observation	H-49 M-45 L-78
Fishing	H-3 M-23 L-55
Power Boating	M-14 L-34
Kayaking	M-5 L-44
Canoeing	M-8 L-61
Floating on a raft	M-4 L-58
Other (please name)	

Blank 11

Which of these activities would you like to do more often?	
Walking/Scenic Viewing	158
Nature Observation	116
Fishing	89
Power Boating	59
Kayaking	99
Canoeing	115
Floating on a raft	99
Other (please name)	6

How far ahead do you book your leisure experience? Please check below:

Blank-9

Planning Time	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Last minute	16	20	7	94	81
Days in advance	13	11	12	120	35
Weeks in advance	27	31	13	82	22
Months in advance	46	43	21	34	16
Year in advance	69	43	20	19	2

## RIVER RECREATION SURVEY

### Total Results

The Medicine Hat College's Ecotourism and Outdoor Leadership Program has been asked to research the recreational use of our river. Answering these questions will help us determine what services would best meet your needs.

All information you provide will be kept strictly confidential. Thanks for your help!

To start with can you name our local river? \_\_\_ Y-244 \_\_\_\_\_

\_\_\_\_\_ N-9 \_\_\_\_\_

Where does the river come from and go to? \_\_\_\_\_

\_\_\_ 0-89 \_\_\_\_\_ 1-76 \_\_\_\_\_ 2-82 \_\_\_\_\_

Where would you go to find information about the river? \_\_\_\_\_

Blank-15

What is holding you back from increased participation? Please check all that apply: Blank-13

Barrier	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Cost	51	54	19	48	18
Skill/Knowledge	37	49	23	69	18
Family Commitments	24	46	21	63	16
Water Quality	29	51	50	53	21
Water too High/Low	26	50	41	51	19
Work Commitments	15	19	14	110	35
Equipment and Facility Availability	19	38	35	69	31
Transportation	42	70	30	25	8
Other (please name)					

Do you know companies that provide water-based recreation services?

\_\_\_ Y-52 \_\_\_\_\_ N-191 \_\_\_\_\_

Where would you go to find this information? \_\_\_\_\_

Blank-49

Do you have any comments about possible future river development?

\_\_\_\_\_ People who made comments-103 \_\_\_\_\_

SUMMARY OF ALL RESPONSES

Total responses = 253

1. Do you know the name of the river?      Yes    244                      No    9

2. Where does the river come from and go to?  
       No idea            89                      Partial response    76                      Good answer    82

3. Where would you go to find information about the river?

No response	15
Internet	134
Tourist Centre	38
Police Point Nature Centre	32
Library	30
City Hall	11
SEAWA	10
College	6
Ask friends & family	3
Grasslands Naturalists	2
Atlas	2
Non-government organization	2
Esplanade Museum	2
Alberta government	1
Alberta government website	1
Alberta Tourism	1
AB Fish & Wildlife	6
AB Environment	9
Books	2
Atlas	1
Parks Department	1
Outdoorsman store	1
Map	1
Google Map	1
Google Earth	1
Cultural Centre	1
Water Plant	1
Rob Gardner	1
Parks Canada	1
Water's edge	1
Land Use Framework	1

8. Do you know companies that provide water-based recreation services?  
       Yes    52                      No    191

9. Where would you go to find this information:

No response	49
Internet	132

Tourist Centre	31
Police Point Nature Centre	16
Telephone book	10
Medicine Hat College	10
Public Library	8
YMCA	6
City of Medicine Hat	5
Friends & family	3
Alberta Tourism	2
Calgary	1
County	1
Parks Department	1
Fishing shop	1
Strathcona	1
Residents of Medicine Hat	1
Newspaper	1

10. Comments about future river development:

General level of development

- don't build the dam (14 responses)
- build the dam (7 responses)
- don't like development on or near the river (3 responses)
- going to hell in a hand basket
- keep it natural (2 responses)
- limit development (2 responses)
- underutilized but like it like that
- protect nesting areas
- protect trees

Water quality

- development must maintain or improve water quality
- stop pumping crap into the river
- very polluted (4 responses)
- keep it clean (7 responses)
- concerned about water quality (2 responses)
- preserve water supply
- city needs to move to tertiary water treatment
- City needs to promote practical water conservation

Recreation requests

- improve area for recreation ( 3 responses)
- safe boat launches and docks (6 responses)
- hope they reopen the boat launch by the first
- better access (2 responses)
- more & better pathways (2 responses)
- boat trips would be nice (3 responses)
- guided canoe/kayak opportunities
- more active paddling club

- kayaking tours
- kayak & canoe rentals would be great (2 responses)
- inquiry about getting a canoe
- make equipment available
- organized transportation
- dock & boardwalk (2 responses)
- water skiing
- no motorized activity in city (3 responses)
- sea-doo rentals
- wanted to swim, called authorities, not very helpful, decided to stay out of the river
- would like to skate on the river
- would be interested in safe, organized water recreation
- make a beach
- river not suitable for dragon boating
- rafting company
- restaurants along the river
- keep water level constant
- build a weir

#### General comments

- make it easier to find information (2 responses)
- enjoy the river
- available to everyone
- not educated on current use
- more on history
- underutilized
- general inquiries
- very interested
- don't get out much
- when is it going to happen?
- develop downtown & incorporate the river



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The **South East Alberta Watershed Alliance (SEAWA)** was formed in 2007, incorporated as a non-profit society in 2008, and designated as the WPAC (Watershed Policy and Advisory Council) for the South Saskatchewan River sub-basin.

*SEAWA Vision: A healthy watershed that provides balance between social, environmental and economic benefits.*

*SEAWA Mission: South East Alberta Watershed Alliance brings together diverse partners to plan and facilitate the sustainable use of the South Saskatchewan River Watershed for present and future needs.*

SEAWA Members include interested individuals throughout the watershed along with our communities, ranchers, farmers, industries, companies, governments, conservation groups and educational institutions. We are proud to include the following among our founding members:

*Government Sector:* Alberta Government, City of Medicine Hat, Government of Canada, Cypress County, Palliser Health Region, Town of Redcliff, Town of Bow Island, and Special Areas Board.

*Land Resource - Industry and Agriculture Sectors:* St Mary River Irrigation District, Murray Lake Ranching, GG Bruins Farms, Short Grass Ranches, Canadian Fertilizers Limited, Redcliff Technology Enterprise Centre, Box Springs Business Park, and Canadian Centre for Unmanned Vehicles.

*Academic, Research and Non-Governmental Organizations Sectors:* Medicine Hat College, Alberta Research Institute, Red Deer River Watershed Alliance, and Hyperion Research.

*Tourism and Conservation Sectors:* Grasslands Naturalists, Canadian Badlands, and Medicine Hat Interpretive Program.

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