



UNIVERSITY OF ALBERTA  
ALBERTA CENTRE FOR SUSTAINABLE  
RURAL COMMUNITIES

# Alberta Parks' Top 20 Policy and Research Questions – Provincial Workshop



Lars K. Hallstrom, Joyce Gould, John Parkins, Elizabeth  
Halpenny, and Naomi Finseth

ACSRC Report Series #19-12

# **Alberta Parks' Top 20 Policy and Research Questions – Provincial Workshop**

Lars K. Hallstrom, Joyce Gould, John Parkins, Elizabeth Halpenny, and Naomi Finseth

ACSRC Report Series #19-12

## **Authors**

Lars K. Hallstrom – Associate Professor Political Science, University of Alberta and Director of the Alberta Centre for Sustainable Rural Communities.

Joyce Gould – Science Coordinator, Alberta Tourism, Parks and Recreation.

John Parkins – Associate Professor Resource Economics and Environmental Sociology, University of Alberta

Elizabeth Halpenny – Assistant Professor Recreation and Leisure Studies, University of Alberta.

Naomi Finseth – Research Assistant for the Alberta Centre for Sustainable Rural Communities

## **Acknowledgements**

These notes were created by the staff of the Alberta Centre for Sustainable Rural Communities, University of Alberta – Augustana Campus.

The creation of these notes would not have been possible without the input of participants at the 'Alberta Parks Provincial - Top 20 Rural Policy Research Questions' Workshop. No particular observation or comment should be attributed to any specific individual, unless otherwise specified. Any errors in description or interpretation are those of the author.

Research funding for this project was provided by Alberta Parks.



## **Abstract**

*“Generation of priority research questions to inform Park management and conservation policy.”*

## **Objectives**

This project met multiple objectives of relevance to both the research and policy communities within the Parks Division of Alberta Tourism, Parks and Recreation. In addition to generating a list of relevant, feasible and implementable Parks priority research, this project:

- 1) Identified potential gaps and innovation in public policy that will support Parks sustainability in the face of demographic/social change, economic stressors and ecological variation;
- 2) Contributions to “horizon scanning”- the systematic search for potential threats and opportunities.
- 3) Increase communication, interactions and potential collaboration between government, non-governmental and research communities and practitioners;
- 4) Increase the exposure and knowledge base of the research community to the policy and research priorities of both governmental and non-governmental organizations at the provincial and federal levels in Canada.
- 5) Generate and communicate the policy and research priorities of different levels and branches of government across those different levels and branches; &
- 6) Provide guidance to funders and funding agencies as to areas of priority and interest.

## **Methodology**

This project solicited submissions of priority research questions via a web-based interface. Participants were solicited on the basis of purposeful sampling (subjective sampling targeting stratification) via email.

The instructions given to those wishing to submit questions is based on Rudd et al. (2011:4), aspirational criteria for questions requires that they; (1) be answerable through an implementable and realistic research design; (2) be answerable on the basis of fact; (3) be of a spatial and temporal scale that can be addressed realistically; (4) not be answerable with a yes/no or “it depends”; (5) contain a subject of intervention, an intervention and a measurable/ evaluated effect related to that intervention or policy; and (6) increase the efficacy, scope or efficiency of policy related to Parks policy.

Once the questions were submitted, questions were culled on the basis of (a) the aspirational criteria noted in and (b) redundancy and repetition. This produced a list of questions that were reviewed and consolidated into the final listing.

Publications in the Series should be cited as:  
AUTHOR, TITLE, ACSRC WORKING PAPER NO./YEAR [URL]

## Table of Contents

Alberta Parks Provincial Top 20	6
Appendix A: Agenda	8
Appendix B: Workshop Goals	9
Appendix C: Plenary Results	10
Appendix D: Breakout Questions	15
Appendix E: Raw Submissions	20

## **Alberta Parks' Top 20 Policy and Research Questions:**

1. How does social change (in terms of values, behaviours, expectations, etc.) affect visitation to Alberta's parks?
  - 1.b How is social change affecting Alberta Parks' ability to deliver its mandate?
2. How do: (1) the public; and (2) the provincial government define an optimal and efficiently management Park Agency, and what management, funding, and marketing and on-the-ground management practices models contribute to creating such as Agency?
3. What are the individual/familial/community/social impacts that are provided by Alberta Parks? (e.g., economic, health, ecosystem services)
4. What values do citizens assign to parks that ensure Alberta Parks and protected areas are retained, maintained and remain a part of our natural heritage? How should these values be assessed?
5. What elements/aspects of a park visit, foster or inspire more environmentally active and aware citizenship?
6. What will be/are the impacts/effects of climate change on the ecological and social systems in and immediately adjacent to Alberta Parks?
7. What spatially-based initiatives and spatial properties are needed to optimize conservation/preservation in or adjacent to Alberta Parks now, and into the future?
8. What tools and techniques are most effective in the restoration of species and ecosystems in Alberta Parks?
9. Using ecological and social carrying capacity as a guide, how can Parks enhance visitor experience and prioritize the ecological well-being of provincial parks while countering negative visitor and industrial effects on being?
10. What natural disturbance processes operate within provincial parks and how do we manage for them now and into the future?
11. How do current land management practices in Alberta Parks influence water resources?
12. What is Alberta Parks' contribution to protecting biodiversity?
13. What are the most effective interventions to foster or reinforce positive behaviours and reduce non-compliance within Alberta Parks?
14. What are the most effective collaborative and network-based strategies for enhancing the spatial extent of Alberta Parks, while maintaining/improving relationships with neighbours?
15. What is the role of Alberta Parks in provincial and national efforts in the management, conservation and recovery of species at risk?
16. What are the barriers and processes for knowledge translation in Alberta Parks' policies, decision making and practice(s)?
17. What are the best practices for funding the conservation of natural areas and open spaces?

18. How are invasive species being controlled, managed, affected or mitigated by Park's policies and programs?
19. In light of growing population and industrial/economic pressures in the province, is demand for recreational opportunities and natural green spaces being met by each region's existing family of provincial parks and other conservation and/or outdoor recreational lands?

**Appendix A:****Providence Renewal Centre  
November 16, 2012**

<b>Item</b>	<b>Time</b>	<b>Activity</b>	<b>Person</b>	<b>Location(s)</b>
<b>1</b>	<b>9:30 – 10:00</b>	Introduction and Overview of the day's goals & activities	John Parkins	Auditorium
<b>2</b>	<b>10:00 – 10:45</b>	Breakout Session I	Note takers: Kaitlyn Carwell, Naomi Finseth, & Jerrica Tomaszewski	Auditorium
<b>3</b>	<b>10:45 – 10:50</b>	<b>Break</b>		Auditorium
<b>4</b>	<b>10:50 – 11:30</b>	Breakout Session II	Note takers: Kaitlyn Carwell, Naomi Finseth, & Jerrica Tomaszewski	Auditorium
<b>5</b>	<b>11:30 – 12:00</b>	<b>Lunch</b>		Main Dining Room
<b>6</b>	<b>12:00 – 12:55</b>	Breakout Session III	Note takers: Kaitlyn Carwell, Naomi Finseth, & Jerrica Tomaszewski	Auditorium
<b>7</b>	<b>12:55 – 13:00</b>	<b>Break</b>		Auditorium
<b>8</b>	<b>13:00 – 13:45</b>	Breakout Session IV	Note takers: Kaitlyn Carwell, Naomi Finseth, & Jerrica Tomaszewski	Auditorium
<b>9</b>	<b>13:45 – 14:00</b>	<b>Break</b>		Auditorium
<b>10</b>	<b>14:00 – 16:00</b>	Plenary Session	John Parkins (note takers present)	Auditorium
<b>11</b>	<b>16:00 – 16:30</b>	Wrap-up and next steps	John Parkins	Auditorium

## **Appendix B:**

### **Background:**

You are being asked to participate in an exercise to identify what you see as the most pressing or important questions for researchers to address in terms of research and public policy in Alberta Parks. Given your role in the research, policy, non-governmental or conservation communities, you have been selected to provide feedback on different research questions via a workshop. These questions are supposed to respond to the following:

“What research question, if answered, would substantially advance the development or state of public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta?”

These questions should:

- (1) Be answerable through an implementable and realistic research design;
- (2) Be answerable on the basis of fact;
- (3) Be of a spatial and temporal scale that can be addressed realistically;
- (4) Not be answerable with a yes/no or “it depends”;
- (5) Contain a subject of intervention, an intervention and a measurable/evaluated effect related to that intervention or policy; and
- (6) Increase the efficacy, scope or efficiency of policy or practice related to Alberta Parks.

### **Workshop Goals:**

- (1) To reduce the number of submissions to 20 based on the criteria above;
- (2) To edit/amend, combine and modify as necessary the submissions in order to achieve goal (1);
- (3) To identify thematic consistencies or inconsistencies;
- (4) To NOT prioritize or order in any way.

## Appendix C:

### Alberta Parks' Top 20 Plenary Results

November 16, 2012

(Note: Blue text is revised question, Bold text is original question, bullets are general information from the workshop)

#### 1. **How does social change (in terms of values, behaviours, expectations, etc.) influence or shape the usage requirements and capacity of Alberta Parks?**

##### **Trends and experiences of park user and non-user,**

- **What relationships exist between societal trends and the expectations and use of parks? (7)**
- **What are the barriers and motivations in visiting parks? (i.e. by scope and focus) (3)**
- **E.g. identifying turning points in policies of Alberta Parks throughout its 80-year history (eg. Rise of automobiles, ATVs,) (0)**
- **What experiences do Albertans desire most from their parks? What market segments seek what experiences? What market segments are most desirable (considering our mandate), as visitors to Alberta Parks? (Sub questions how will changing cultural, demographic and lifestyle trends affect Alberta Parks' ability to achieve its mission? [in terms of volunteers, front country services, wellness promotion, etc.]) (5)**
  - Begging for a much more overarching question. It's more about understanding who visitors and potential visitors are. Barriers, motivation, expectations, turning points, societal trends, need to word a bigger question to encapsulate all.
  - General idea is good but need an overarching question. Trends and experiences of users and non-users of parks.
  - Society – need to talk about everybody? Who cares about parks and how? Why? How are parks relevant? As society changes, what do those changes mean for parks? Where are people going, travelling,
  - Relationship between social values and dimension of personal – what makes them tick,
  - Application can be applied
  - We care about people who don't care about parks and why! Who are they? Why do they not care? Human dimensions in parks?
  - Societal part regards understanding changes. Bigger than parks, speaks to outdoor interests. Relationship between social values and how people feel about parks.

- What are the optimal best practices within parks management? How do we operationalize. Almost more planning than research because the process already exists.

**2. What does an optimally and efficiently managed Park Agency “look like”?**

**What does an optimally and efficiently run Park Agency look like? (E.g. centralized vs. decentralized, ratio of management to staff, types of staff necessary).**

- **What are the effects of branding and marketing on people’s understanding of Alberta Parks? \*(I believe this part of the question was removed)**

- Service delivery – first question in 4b. It’s a big question about how to run Alberta parks as an agency. Not service delivery
- This question is unique not related.
- Inward gazing
- It’s difficult to collapse question into one but there’s a broader concept.
- Take out branding and marketing question!! Eliminate bottom question
- More business like!
- What are we optimizing to? Our goals? Self-sufficiency?
- Unique, inward gazing of how we could work better as an agency. Comes from a challenge to obtain revenue. Thus, should parks perform more business like? If so, how do we come about this? Top piece should be only part of question, and then expand off that.

**3. What are the individual/familial/community/social benefits that are provided by Alberta Parks?**

**What are the health benefits that Alberta parks and protected areas provide to people? (5)**

- **What are the health and social/community/family benefits of interaction with nature?**

**4. What are people (citizens) willing to pay to ensure that Alberta Parks and protected areas are retained, maintained and remain a part of our natural heritage?**

**What are people willing to pay to ensure that Alberta parks and protected areas remain a part of our natural heritage? (2)**

- How much do people value Alberta parks?
- Value?
- What are public tolerances to economic factors becoming a part of parks? What is the public threshold to discuss this with the public?
- Inherent value and direct economic benefit?

**5. What elements/aspects of a park visit, foster or inspire more environmentally active and aware citizens?**

**What aspects of a park visit foster (inspire) a connection between the visitor and a more environmentally active and aware citizen in everyday life and in protected areas? (5)**

- 6. What will be/are the impacts/effects of climate change on the ecological and social systems in and immediately adjacent to Alberta Parks?**

**What will be the impacts of climate change, ecological and social, on ecosystems in and immediately adjacent to Alberta Parks? (7)**

- 7. What are the spatially based initiatives and spatial properties needed to optimize conservation/preservation in or adjacent to Alberta Parks now, and into the future?**

**What are the spatial properties needed in order to optimize conservation/preservation adjacent or within the park now and into the future? (7)**

- E.g. Should the GOA utilize a triad approach whereby areas directly around parks have a different type of zoning than the industrial land-base and ecological connectivity in Alberta?(0)

- 8. What tools and techniques are most effective in the restoration of endangered species and vulnerable systems in Alberta Parks?**

**What tools and techniques are effective in the restoration/restoration in Parks for endangered ecosystems and species (i.e. Fescue)? (4)**

- 9. Using ecological and social carrying capacity as a guide, how can visitor use be optimized while managing for thresholds to human use?**

**Using ecological and social carrying capacity as a guide, how can we optimize visitor use (front country, back country, different park context)? (6)**

- - Impact of disturbance?
- - How do we define industrial? We are not talking about Alberta tourism
- - More related to disposition, human use. Broader

- 10. Using ecological and social carrying capacity as a guide how can industrial effects be optimized while managing for thresholds to human use?**

**Using ecological and social carrying capacity as a guide, how can we manage (optimize) industrial footprints (i.e. everything from everybody else) in parks? (0)**

- **What are the thresholds to human use in terms of ecological health and also user experience? What tools can utilize to ensure sustainable use of the landscape? What tools can help us understand changes to those thresholds? (8)**

- Optimize is sending the wrong message. Not a good term to use. Management. It all adds up.
- Two different questions need to be combine.
- Get rid of industrial- to specific, talk about humans rather. Industrial- trying to capture the stuff in parks that's not visitor use.

- 11. What are the functions of natural disturbances and how do we manage for them?**

**What is/will be the role of natural disturbances in parks now and into the future (climate change, fire) and how do we manage for them through effective and relevant practices and policy? (e.g. Suppression vs. prescribed fire) (10)**

**12. How do current land management practices in Alberta Parks influence water resources?**

**How do current land management practices in parks influence water resources? (i.e. Wetlands, (2)**

**13. What is the contribution of Alberta Parks in protecting biodiversity?**

**What is the overall contribution of Alberta Parks to protecting the biodiversity of the province? (4)**

**- To what degree Alberta Parks factor into the protection of biodiversity and ecological resilient communities, relative to their surrounding landscape? (reword) (7)**

- Two different questions need to be combine.
- Species of risk should also be included in a component of biodiversity- not included because it is too wide of an area.

**14. What are the most effective interventions to foster or reinforce positive behaviours and reduce non-compliance within Alberta Parks? What do we do when management “fails”?**

**What are the most effective interventions to foster positive behaviours/ reduce non-compliance within Alberta Parks and what do we do when management fails? (3)**

**15. What are the economic impacts of Alberta Parks on surrounding areas?**

**What are the economic impacts of parks on the surrounding area? (1)**

- Make up of communities
- On economy of province
- Economic impact is a sailing point between effective partnerships but should not be combined.
- Economic measures and social relevance of parks.
- Combine under a mega relevance question like BENEFITS OF PARKS or something like that.
- Goes with social benefits. Parks has looked into this area already a fair bit. Can we expand it to how it relates to successful partnerships? Can we combine this with willingness to pay?

**16. How can/do different delivery models (public, private or blended) affect Alberta Parks’ ability to deliver its mandate?**

**How do different service delivery models (public, private or blend) affect Parks ability to deliver its mandate? (8)**

- **How does privatization align with the vision of Alberta Parks? (0)**

**17. What are the “best” (most effective/efficient etc.) collaborative and network-based strategies to best maintain/increase the spatial basis of Alberta Parks, and maintaining/improving relationships with neighbours?**

**Successful collaboration**

- **What is the effectiveness of different collaborative mechanisms to increase the spatial footprint to which Alberta parks reaches? (need to be two way street) (1)**
- **What factors lead to effective partnerships between Parks and Park neighbours? (bottom up) (1)**
  - Successful collaboration
  - Imbedding economics in here?
  - How is it going to bring vitality to rural communities?
  - How do we leverage collaborative management? Grassroots
  - Don't want to see the economic aspect dropped.
  - Economic relationship

**18. What are the effects of Alberta Parks in the provincial and national efforts for the management, conservation and recovery of species at risk?**

**What is the role of parks in provincial and national efforts for the management, conservation and recovery of species at risk? (7)**

**19. What are the barriers and processes for knowledge translation in Alberta Parks' policies, decision making and practice(s)?**

**What are the barrier and process for knowledge translation (adoption, application) in Alberta Parks? (2)**

**20. What are the emerging/better/best practices for funding the conservation of natural areas and open spaces?**

**What creative funding mechanisms have other government jurisdictions used to fund the conservation of natural areas and open spaces? (1) (Best practices)**

- Practices of other agencies that they convinced politicians to move forward.
- And how they successfully implemented those funding options.
- How do we convince politicians that these are implementable? How have they successfully implemented other options in other areas? In the context of best practices what are the ways that creative funding can be done in protected areas as a research frame work.

## **Appendix D:**

### **Breakout Questions:**

#### **Breakout Questions- Session 1a**

1. How are societal trends affecting and being affected by visitor use of AB Parks (eg. nature-based activities, outdoor recreation, science, technological innovations, etc.)
2. How are individual parks, regions, and the provincial system branded and marketed locally, within the province, across Canada, and around the world, and to what effect?
3. How do user and non-users view AB Parks? (Also attendees and non-attendees of interpretive programs). What values to Albertans ascribe to AB Parks?
4. Somewhere around 80% of all visits in provincial parks are repeat visitation, by the same people to the same park. Why is that and how can we use those motivations to the advantage of Alberta Parks?
5. What are the variables that influence why certain visitors visit certain parks? (i.e. build a demand model)
6. What does an optimally and efficiently run Park Agency look like? (E.g. centralized vs. decentralized, ratio of management to staff, types of staff necessary).
7. How do or could non-visitors value Alberta's provincial parks? What types of non-visitors are there (clustering/segmentation)?
8. What are the health benefits that Alberta parks and protected areas provide to people?

#### **Breakout Questions- Session 1b**

1. What are people willing to pay to ensure that Alberta parks and protected areas remain a part of our natural heritage?
2. What are the health and social/community/family benefits of interaction with nature?
3. What is the route characteristics of park user patterns?
4. How does park visitation foster the development of more environmentally connected citizens?
5. How do people form attachments to protected areas? What characterizes these attachments/connections to parks? What are the most powerful means of connecting people to (a) nature, and (b) particular parks, and (c) park systems/conservation initiatives that protect special places?
6. How will changing cultural, demographic and lifestyle trends affect Alberta Parks' ability to achieve its mission? [In terms of volunteers, front country services, wellness promotion, etc.]
7. What experiences do Albertans desire most from their parks? What market segments seek what experiences? What market segments are most desirable, as visitors to Alberta Parks?

### **Breakout Questions- Session 2a**

1. Do parks serve as refugia or "breeding grounds" for wildlife that come into conflict with agriculture, such as elk, bears and wolves?
2. In the face of climate change, what species of plants can persist over the longer term based on the projected environmental conditions
3. What are the best ways to address the chronic issue of beaver related floods of the Parks' infrastructure?
4. Are Weed Prevention Areas the effective part of the solutions to protecting biodiversity in AB Parks?
5. What are the best specifications for boundary and cross fencing for AB Parks to address issue with effective wildlife crossings?
6. What are the potential impacts of so-called green energy wind farms on parks wildlife and greater ecological communities (e.g. intact native grasslands) surrounding parks?
7. How are (Japanese Brome/Timothy/Sweet Clover/Downy Brome/Crested Wheatgrass) controlled in non-grazed native grassland habitats within the Dry Mixedgrass natural subregion of Alberta?

### **Breakout Questions- Session 2b**

1. Can we model the optimal spatial and temporal configuration of forest harvest with regards to spatial configuration of existing protected areas that is necessary to maintain species and ecological processes within the protected areas?
2. Do existing Alberta parks protect biodiversity and ecologically resilient communities, relative to their surrounding landscapes?
3. What role do Alberta parks and protected areas play in mitigating the effects of climate change on local, regional and provincial scales?
4. What is the appropriate size and distribution of these various management systems (grassland patches) on the landscape to ensure conservation of biodiversity in a regional/provincial context?
5. What tools and techniques are effective in the restoration/restoration of fescue grasslands?
6. Access management around sensitive areas is a big issue in this province. How should AB Parks work with other GOA ministries, industry and land owners to ensure access is monitored and regulated?
7. What is the state of the "ecological health" of the units within Alberta's park system and what are the major factors/stressors responsible for compromising the ecological integrity of the units?
8. What are the trail preferences and patterns of use within Alberta Parks backcountry areas?

### **Breakout Questions- Session 3a**

1. What is the pre-development / fire control range of ecological conditions for each park?

2. Given that parks tend to be small, but often ecologically important, (how) does more of a landscape approach (e.g., with neighbours) to management make sense? Where and how?
3. What is the relative role of natural disturbance such as wildfire in each park? (parkland, grassland-forest interface, etc.).
4. Is it desirable or possible to re-introduce fire as a restoration tool?
5. What are the key biophysical resources for each park and region that contribute to its designation, distinctiveness, and representativeness? Key indicators?
6. Develop/test the effective Fire-smarting methods for AB Parks sites throughout the province.
7. What is the historical role of fire in the ecology of grassland systems and what is the response of grassland ecosystems to various types of fire?
8. Do current land management practices in parks positively or negatively influence the retention of wetlands and other water sources on the landscape?

### **Breakout Questions- Session 3b**

1. What are the gaps in the current protected areas system with respect to maintaining both representation and ecological connectivity in Alberta?
2. What are the primary ecological goods and services produced within Alberta Parks and how might these be quantified?
3. What is the overall contribution of Alberta Parks to protecting the biodiversity of the province?
4. To what extent does the amenity value of parks and the landscape protection certainty they provide factor into the decisions of businesses or individuals to locate in Alberta or to remain in Alberta? This is a critical question in building the economic case for park protection in a Province that sees itself as having an economy dependent on natural resource extraction (or, if the results are negative, of course, the results might point towards the need for more multiple-use management areas)
5. To what extent is the (a) regional and (b) provincial population's needs for outdoor recreational opportunities and natural green spaces being met by each region's existing family of provincial parks and other conservation and/or outdoor recreational lands?
6. What size of protected areas is required to allow sustainable populations of the largest ranging species in Alberta?
7. What degree of human use can be allowed in parks before negative impacts on wildlife can be observed?
8. Should parks utilize a triad approach whereby areas directly around parks have a different type of zoning than the industrial land-base (i.e. more intense best management within 50 km of a park, no hunting, etc.).

### **Breakout Questions- Session 4a**

1. What are the motivations, needs and underlying values of park users who choose to use the park in ways contrary to management intent (e.g.: building illegal trails, trespassing into closed areas, etc.)?
2. What are the effects of privatization of Park Facility Operations on outlying communities?
3. Will parks use a park classification system that is broad enough to in fact consider the diverse landscapes and biodiversity across Alberta, and compatible activities within these landscapes that would substantially advance the development or state of public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta?
4. Does increasing partnerships ensure more effective establishment and management of protected areas?
5. What has been the relationship between municipal growth and needs in Alberta, and the planning and policies around urban hinterland provincial parks in the 1950s through 1980s?
6. How have the service and infrastructure demands of changing modes of transportation, particular from automobiles to ATVs, from the 1950s onward affected changes in parks policies and management questions.
7. As parks have been set aside in Alberta, what have been the economic relationships between them and municipalities and urban centres nearby in terms of services, contracted construction and maintenance work, and out-of-park residency of parks employees and workers? Such a question can be approached in light of treasury records and parks accounts, particularly, Acc. 86.116, Parks Records, Contracts, Services files in the 1960s-1970s.

### **Breakout Questions- Session 4b**

1. How has the seasonality of Alberta's provincial parks been an historical policy issue, and in what ways have the incorporation of design, facility and changing recreation and use designations within parks policies allowed for more intensive and multi-seasonal park visits over time?
2. How has the expanded number of provincial parks, and the concurrent development of urban parks, informed land use policies, provincial and municipal government cooperation and raised the need for shared land use, collateral expropriation and agreements between various levels of government in Alberta since the 1950s?
3. Historically, how did developing understanding of wilderness and recreational parks dividing generally between federal and provincial park mandates in the 1950s shape decision making in policies in Alberta's multi-use recreational areas to the 1970s?
4. Beyond policy innovations and management directives, how has popular culture in provincial parks changed between the 1950s to the 1980s, and, as reported in parks warden papers, can quantifiable incidents of behaviour "deviancy," criminal activity and

illegal recreation, such as poaching, better inform directions in parks policies, public education and social programs?

5. What opportunities are there for AB Parks to "integrate" into, partner with and support the Public Health agenda and provide tangible benefits that will improve and enrich the quality of life for Albertans? (also reduce health care costs)
6. HERITAGE RANGELANDS (HR): How can HRs be more effectively managed to support and celebrate their unique marriage of Conservation, Culture (i.e. ranching/rural heritage), and Economy (a premium beef product based on human health benefits (grass fed), grassland ecology friendly, and local).
7. In terms of management effectiveness, what model of service delivery works best in providing (a) conservation programs, (b) visitor services programs, (c) general operations, etc. What elements of private sector (e.g., concession) vs. public sector delivery systems contribute to the successful execution (management effectiveness) of park planning, management and maintenance?
8. How do Albertans (and other visitors) make choices about visiting parks and other natural areas in Alberta (preferences; awareness; satisfaction; use history, etc.)? How do Albertans make a decision to visit one park versus another? How do Albertans make a decision to visit an Alberta park versus other recreational opportunities [i.e., natural areas with minimal to no protection (Crown land), shopping malls, museums, etc.]

## Appendix E:

### Raw Submissions

What is the ecological state of Alberta Parks' protected areas?
What are Alberta Parks' conservation targets? What 10-20 ecosystems and species are most valued, threatened and can be feasibly conserved?
What steps need to be taken at the policy level to improve/ maintain the ecological integrity of wilderness and ecological reserves and provincial parks ?
How can Alberta Parks benefit from conservation offsets funded by oil sands companies?
What are the gaps in the current protected areas system with respect to maintaining both representation and ecological connectivity in Alberta?
What are the primary ecological good and services produced within Alberta Parks and how might these be quantified?
What is the overall contribution of Alberta Parks to protecting the biodiversity of the province?
How might collaborative governance of Alberta Parks be improved to better incorporate the values of neighbouring lands?
Which parts of the park's landscape are the most ecologically resilient and the least critical to maintaining biological diversity, natural processes and habitat and movement corridors for sensitive species? The answers to this question would be valuable in planning for facility development and protection zones.
If changes are proposed (a new park is being established, new developments are being considered, etc.) then which market segments will benefit and which market segments will be displaced? For those that are displaced, where will they be displaced to?
To what extent does the amenity value of parks and the landscape protection certainty they provide factor into the decisions of businesses or individuals to locate in Alberta or to remain in Alberta? This is a critical question in building the economic case for park protection in a Province that sees itself as having an economy dependent on natural resource extraction (or, if the results are negative, of course, the results might point towards the need for more multiple-use management areas)
What are the motivations, needs and underlying values of park users who choose to use the park in ways contrary to management intent (eg: building illegal trails, trespassing into closed areas, etc.)? It is not enough to call for more enforcement etc. -- good management solutions can only come from understanding the clientele better and working with that understanding to rethink and reengineer park facilities, communications, etc.
To what extent is the (a) regional and (b) provincial population's needs for outdoor recreational opportunities and natural green spaces being met by each region's existing family of provincial parks and other conservation and/or outdoor recreational lands?
What is the net economic benefit of protected areas, and of each class of protected area, to the Provincial economy? This should be assessed both in terms of traditional financial measures (spending on equipment, travel, lodging etc.) and on other economic measures such as existence and amenity values.

How does park protection and associated approaches to ecosystem management influence water quality, timing and overall yield in protected watersheds compared to the affects of other management regimes in similar watersheds that are management for natural resource extraction or more consumptive forms of recreation? Water is THE big issue for Alberta in the future: we need to know more about how to optimize our watershed management and whether protected areas have particular value in this domain.
Do parks serve as refugia or "breeding grounds" for wildlife that come into conflict with agriculture, such as elk, bears and wolves or is this just "street knowledge" perpetuated by those with strong biases? My observation from SW Alberta is that large ranches are, in fact, better refuges for grizzlies and wolves than the few parks in the area but the parks get the blame when conflicts arise.
What environmental conditions will parks "protect" in the face of climate change?
What size of protected areas is required to allow sustainable populations of the largest ranging species in Alberta?
How representative are the environmental conditions in Alberta parks of the entire province?
What degree of human use can be allowed in parks before negative impacts on wildlife can be observed
In the face of climate change, what species of plants can persist over the longer term based on the projected environmental conditions
How important is linear feature reclamation in creating "useful" protected areas in the future
Should parks utilize a triad approach whereby areas directly around parks have a different type of zoning than the industrial land-base (i.e. more intense best management within 50 km of a park, no hunting, etc).
What is the pre-development / fire control range of ecological conditions for each park?
In what ways, and to what degree does each park differ from the pre-development conditions?
Is it desirable and/or necessary to "restore" (any) parks to pre-development conitions?
Given that parks tend to be small, but often ecologically important, (how) does more of a landscape approach (e.g., with neighbours) to management make sense? Where and how?
What is the role of each park relative to the greater landscape? For example, are there parks which represent focal points for the larger landscape either in terms of unique location, geological or topographic conditions, or existing biological conditions? Or do some parks serve supporting roles such as stepping stones, refugia, or seed sources?
What is the relative role of natural disturbance such as wildfire in each park? Is it desirable or possible to re-introduce fire as a restoration tool? (perhaps as it relates to aspen parkland, grassland-forest interface, etc).
To what extent does interpretation and environmental education support the purposes of AB Parks?
What are the economic values and impacts of the operations and visitation associated with AB Parks?
Which parks or sets of parks can serve as appropriate nodes for research in AB Parks (ie. provide a representative snapshot of issues, management, user groups, etc.)?
What are the key indicators that can be used to measure the parks' biophysical resources, management operations, and visitor use?
What are the key biophysical resources for each park and region that contribute to its designation, distinctiveness, and representativeness?
How are societal trends affecting and being affected by visitor use of AB Parks (eg. nature-based activities, outdoor recreation, science, technological innovations, etc.)
What are the cultural and spiritual resources of AB Parks (individually and collectively)?

What are the connections between healthy parks and healthy people?
Which species in individual parks, regions, and the provincial system can best serve the objectives of AB Parks?
How are individual parks, regions, and the provincial system appropriately branded and marketed locally, within the province, across Canada, and around the world?
Which key ecological processes, species, and ecosystems provide the basis for ecologically healthy ecosystems in AB Parks?
How do user and non-users view AB Parks? (also attendees and non-attendees of interpretive programs). What values to Albertans ascribe to AB Parks?
What human-wildlife conflicts exist in AB Parks? What are the trends? What management and policy options to minimized negative interactions?
How can restoration be incorporated in management to improve ecological integrity of AB Parks?
What is the level of provincial awareness of the Alberta Parks system? This information is used to identify priority market segments and the key factors (issues and or parks) generating this awareness. It is also important to understand any predominant barriers which may impact awareness or are prohibiting non-users from visiting.
What is the total volume of use of the Alberta Parks system by Albertans? Needed to identify the key provincial markets (demographic and experiential), the key drivers for visitation (activities ad experiences), and their use patterns (does 100 visits represent 100 unique visitors or 25 visitors coming 4 times).
What is the total volume of use of the Alberta Parks system by all users? Needed to identify the key visitor markets (demographic and experiential), the key drivers for visitation (activities ad experiences), and determine if there are distinct patterns of visitor use (segments based in what people are seeking to experience, where they go, and what they do).
What is the public perception of the role Alberta parks do (and can) play in supporting Active Alberta? Needed to determine the success and potential opportunities for the Alberta Parks system to support the Active Alberta initiative.
What are the levels of visitation in key (high profile, heavily visited, or priority) parks? Information required to identify the key visitor markets (demographic and experiential), the key drivers for visitation (activities ad experiences), and satisfaction with the current park offer.
What are the levels of visitation at key park nodes in key (high profile, heavily visited, or priority) parks? Used to determine if there are distinct patterns of visitor use (segments based in what people are seeking to experience, where they go, and what they do) and how they move through parks.
What are the types and levels of human use at specific nodes in key (high profile, heavily visited, or priority) parks? Needed to assess current and potentially different impacts on ecological integrity from changes to the service offer.

What are the potential changes in motivations and experiences for visitors to key (high profile, heavily visited, or priority) parks anticipated by specific changes to the services offer? What are the potential changes in motivations and experiences for visitors to key (high profile, heavily visited, or priority) parks anticipated by specific changes to the services offer? What are the potential changes in environmental impact by visitors to key (high profile, heavily visited, or priority) parks anticipated by specific changes to the services offer? Having a baseline measure of motivations and experiences, patterns of use, and impacts combined with proposed alterations to the service offer allows for evidence-based decision-making by management on proposed alterations.

Establish use patterns and focus services toward the areas of high use.

Multi-spectral image analysis looking at NDVI for vegetative health in high traffic areas. This research could establish trends in vegetative health and identify where resources should be spent.

Understanding of the topography and development strategies to help plan development.

What are the best ways to address the chronic issue of beaver related floods of the Parks' infrastructure? Historically, Parks have dealt with it by trapping beavers (mainly by lethal means) and/or removing beaver dams and lodges. Methods are needed that are not resource-prohibitive, and that allow for the coexistence with this keystone species. This question applies to all regions, and is therefore provincial in scope. More than one method will likely have to be identified to address different habitat types.

Are Weed Prevention Areas the effective part of the solutions to protecting biodiversity in AB Parks? AB parks should establish a number of pilot Weed Prevention Areas in each of the regions; regional weed lists and preventative methods that will keep WPAs weed free should be established; monitoring should follow to answer the question.

Develop/test the effective Fire-smarting methods for AB Parks sites throughout the province. Fire smarting developed by ESRD does not seem to be in line with or even necessary for most AB Parks sites throughout the province. Reduction of fuel loads is often conducted by either removal of coarse woody debris or by grazing (removal of grass understory). Parks specific program needs to be developed based on a good science.

Test various specifications for boundary and cross fencing for AB Parks to address issue with effective wildlife crossings. The goal is to improve wildlife crossings while at the same time addressing neighbor's/grazing permit holders needs.

What is the optimal infrastructure investment to support or increase recreational activities and participation in Parks (P4P strategy 3)? E.G.Trails? Campgrounds? Power/Water/sewer in campgrounds?

What is the state of Outdoor Education programming led by the Park and non-park agencies (e.g. Scouts, NOLS, Schools) and the possible effects in the future on camping and park recreation participation as adults? that is, Outdoor recreation programming is known to be decreasing across the board - there will be knock-on effects.

How can personal-use technology such as ipads, smartphones etc be used to effectively increase visitor engagement in Parks? School groups, trail building organizations, interpretation, self-guided, etc

What are effective strategies for combatting invasive species in grasslands from a Parks management perspective? Scientific review. Outcomes would describe levels of staffing, specific strategies for specific species.

<p>what are the effects of privatization of Park Facility Operations on outlying communities? That is, private industry workers are paid substantially less than Public Sector employees. Industry benchmarks for campgrounds suggest minimal cost savings to government are borne by employees being paid less. can communities be otherwise supported by Parks if jobs are kept locally and well-paid?</p>
<p>What are long term outlooks for recreation demand in provincial parks - what are the new activities (e.g. zip lines, via ferratta, etc) or existing (Mountain biking etc) and how does our provision of infrastructure (trails, trailheads, etc) stack up?</p>
<p>What are the potential impacts of so-called green energy wind farms on parks wildlife and greater ecological communities (e.g. intact native grasslands) surrounding parks?</p>
<p>What are the costs/benefits associated with Alberta parks being spun off as a crown corporation such as in Quebec? Parks currently wastes significant time money and energy dealing with a ponderous bureaucracy that might be considerably lessened in a different business structure.</p>
<ul style="list-style-type: none"> <li>• How is Japanese Brome controlled in non-grazed native grassland habitats within the Dry Mixedgrass natural subregion of Alberta?</li> </ul>
<ul style="list-style-type: none"> <li>• How is Smooth Brome controlled in non-grazed (or lightly grazed) native fescue habitats within the Montane natural subregion of Alberta?</li> </ul>
<p>How is Timothy controlled in non-grazed (or lightly grazed) native fescue habitats within the Montane natural subregion of Alberta?</p>
<p>How is Sweet Clover controlled in non-grazed native grassland habitats within the Dry Mixedgrass natural subregion of Alberta?</p>
<p>How does one control/manage the levels of (already established) invasive-alien grasses in rough fescue communities, which persist over time even under good management?</p>
<p>How is Downy Brome controlled in non-grazed native grassland habitats within the Dry Mixedgrass natural subregion of Alberta?</p>
<p>How is Crested Wheatgrass controlled in non-grazed native grassland habitats within the Dry Mixedgrass natural subregion of Alberta?</p>
<p>Alberta Parks is considering a range of sponsorship options to aid in infrastructure creation/replacement, program and service delivery, etc. What do Albertans consider should be "offlimits" in relationship to who Alberta Parks partners with and rights/privileged provided in return for private sector funding/in-kind support (ie. name of park, building, trail, key land features, programs, uniforms for staff and volunteers, vehicles, etc)?</p>
<p>Approximately 20 years ago, Alberta Parks shifted from site-based staffing in many provincial parks to District/Regional based staffing. Does a majority of Alberta support the current field staffing model or would they prefer a return back to more site-based staffing, or is there new model which should be considered?</p>
<p>Private sector has always had a role in the direct or indirect delivery of services within provincial parks. However private operations of provincial campgrounds peaked near 100% in the mid 90's by political decree, and has dropped down to current levels of around two-thirds of the system due to Auditor General scrutiny. With 20 years of operations under both models now available for reference, which model do Albertans feel provides the best service at the right price, in both tax dollars and fees paid?</p>

In the past 20 years, there has been a substantial increase to the land base of Alberta Parks and through the Land Use Framework and other initiatives, another substantial increase is likely to occur again in the near future. Past and recent addition of land was not met with a proportional increase in manpower and operating budget, despite promises being made to relevant communities. What is the envisioned "breaking point" by which Albertans would feel compelled to react to the lack of commitment by the provincial government and how far away is Alberta Parks from reaching that point?
Somewhere around 80% of all visits in provincial parks are repeat visitation, by the same people to the same park. Why is that and how can we use those motivations to the advantage of Alberta Parks?
Some aspects of a park experience need to be standardized across the province, however there should be some latitude for customization based on uniqueness of some specific parks/regions. What do Albertans think should be standardized regardless of the location of the park experience?
At one time the camping experience was either free or had a single all inclusive fee. Now there is a spectrum of fees charged and every year, more are proposed (parking, toilets, etc). Which would Albertans prefer: a single and standardized all inclusive fee or paying for each and every individual service received and not being charged for something they don't use?
Do Albertans consider the provision of firewood and/or potable water basic and fundamental requirements of their camping experience?
AB Parks provide areas where Albertans and their guests have opportunities to relax and enjoy nature. Measure response on a gradient scale of agree/disagree
AB Parks protect the environment for the benefit of future generations. gradient scale of agree/disagree.
Name 5 AB Provincial Parks This will determine if the respondent even knows what AB Parks are.
AB Parks should allow oil and gas exploration within their boundaries. agree/disagree continuum
AB Parks should provide basic tenting accommodations for those that do not own camping equipment, to encourage a new group of "campers" in AB Parks. agree/disagree continuum
AB Parks should offer programs to attract "New Canadians" to learn how to camp, fish and enjoy the outdoors. agree/disagree continuum
AB Parks should work with AB Education to develop curriculum instruction units to encourage schools to use the parks as outdoor classrooms. agree/disagree
AB needs more Provincial Parks agree/disagree
Through primary research, what is the economic impact (value) of Alberta's provincial parks?
What are the variables that influence why certain visitors visit certain parks? (i.e. build a demand model)
What is the monetary value of ecological goods and services contributed by Alberta's provincial parks?
What are the advantages and disadvantages of offering tiered or non-tiered annual camping passes? What are some best practices to this approach? How are park visitor expectations of such a proposed program? How much would implementing and operating such a program cost?
What does an optimally and efficiently run Park Agency look like? (E.g. centralized v.s. decentralized, ratio of management to staff, types of staff necessary).
How do or could non-visitors value Alberta's provincial parks? What types of non-visitors are there (clustering/segmentation)?
First Nations issues affect much of Alberta Parks' business. How much money is spent administering first nations issues and does the average Albertan support that level of spending?

Is the demand for RV sites / opportunities growing? What is the demand for alternative sleeping arrangements in campgrounds? (i.e. tents, yurts, glamping)
Under current resource management and policy regimes, are woodland caribou predicted to still be present in Alberta by 2050?
Can we model the optimal spatial and temporal configuration of forest harvest with regards to spatial configuration of existing protected areas that is necessary to maintain species and ecological processes within the protected areas?
Does the current suite of provincial parks in Alberta adequately represent and protect the flora, fauna, and ecological processes of the component ecosystems? If not, where do new provincial parks need to be situated and/or how to existing provincial parks need to be expanded and/or connected to each other to ensure representation and persistence of ecological features and processes.
How will climate change affect the distribution of species and ecosystems within the existing suite of provincial parks?
Which species are most at risk of becoming endangered and extinct in Alberta provincial parks? What factors are contributing to their decline?
How does the human footprint of resource development (including the oil sands and forest harvest) affect the spatial connectivity of Alberta's provincial parks?
What are the pathways by which contaminants in air/water/soil from the oil sands move into the surrounding ecosystems, and how far do these extend spatially? Are they predicted to have an adverse effect on the ecological integrity of Alberta's provincial parks?
How well are protected areas in Alberta linked to projected areas in adjacent jurisdictions (BC, Saskatchewan, NWT, Montana)?
What are the intrinsic benefits that people get from visiting natural and wilderness areas ?
How can Nature Deficit Disorder be addressed by visiting Alberta parks ?
To what degree do Albertans want their parks kept in a natural undisturbed state versus open for various types of recreation ?
What value do Albertans place on having natural areas protected and on visiting those natural areas ?
How do park planners integrate and balancing social/cultural, environmental, economic factors in park planning? It is often an attempt, it appears not inclusively measurable, and whether perception or reality appears tilted towards economics. A matrix forming a series of measurable indicators inclusive of all factors that would be weighted would be of assistance in determining public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta. Not always but in some cases, history in planning of Alberta Parks, has allowed incompatible activities with competing interests exclusive to either social/culture, the environment or economic factors. Possibly this process could lead to a supporting standard process of Provincial land use planning that would consider landscapes for new parks in addition to Conservation areas as part of the Provincial Land Use Framework. I am not familiar with the Parks Science Strategy this may be covered.
Do Alberta Park Planners consider existing park management and new park development on a landscape scale, looking beyond the boundaries of the park to the surrounding private lands function in the scope of park development and management? Example wetlands/uplands on adjacent lands to a Park may form part of a larger functioning landscape and decisions on those lands made by Municipalities.

Should sound science-based information determine that a landscape/area should be conserved, either through Provincial conservation strategies or development of new parks, how willing is the GOA to invest in new and existing park systems to support and substantially advance the development or state of public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta. Steady ongoing increased financial investment is required to achieve this goal.

Based on planning a park on a landscape scale that would look at private lands combined with what would be public lands in a park system, how willing is the GOA to invest in park systems to support and substantially advance the development or state of public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta and work with private land owners/land trusts/stewards/municipalities?

If an area is determined to be of ecological significance/rare sensitive species plant or animal/ how willing is the GOA to restrict access and traverse to international Nature Based tourism strategies? How willing is the GOA to market Nature Based Tourism as defined on the global scale? How willing is the GOA to develop strict policy that directs proponents of hotel/camp ground/lake side developments to adhere to international nature based tourism criteria?

The Provincial Land Use Framework Strategy 4 Conservation and Stewardship calls for an increased activity by Land Trusts to achieve more conserved land. What do Parks have in mind to foster and build a relationship with land trusts that would substantially advance the development or state of public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta. Will the GOA/Parks financial support networks with land trusts/stewards and municipalities.

Will Parks set targets for increased land base that will substantially advance the development of parks in addition to Conservation Areas that are determined in Land Use Framework Regional Plans? Would the GOA/Parks consider partnerships with Parks Canada for shared systems that would substantially advance the development or state of public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta.

Will parks use a park classification system that is broad enough to in fact consider the diverse landscapes and biodiversity across Alberta, and comparable activities within these landscapes that would substantially advance the development or state of public policies, practices and management strategies for the development, sustainability, capacity and resilience of provincial parks in Alberta.

Question: Do existing Alberta parks protect biodiversity and ecologically resilient communities, relative to their surrounding landscapes? This question recognizes that it is Alberta Parks' mandate to protect and conserve natural biodiversity; it predicts that any parks' ability to protect biodiversity and ecologically resilient communities is influenced by its size, its location, its landscape context, and the degree of recreational and other human development within its boundaries. This question is answerable through a realistic study design, wherein biodiversity is surveyed using field and probabilistic methods adapted from the Alberta Biodiversity Monitoring Program, similar to what was done for the Willmore Biodiversity Research Project. By surveying parks biodiversity using methods comparable to the surrounding landscape, we can assess how biodiversity within parks measures up to biodiversity in that parks' landscape and regional context.

(From above) We can make this comparison for multiple parks (each a sampling unit), and then we can relate differences between within-parks biodiversity and outside-parks biodiversity to parks' size, location, degree of development, and landscape context. These are all potential points of intervention; the answers will inform Alberta Parks' management whether a specific park needs to be expanded (in size or with additional parks nearby); implement some transboundary protection or parks buffer zone; limit or reduce internal development; or working with partners in the surrounding landscape on large-scale public/private land conservation programs with specific biodiversity objectives. Currently these initiatives are conducted on an ad-hoc, opportunistic basis without specific objectives or measurable benchmarks; this research would establish and prioritise these objectives and benchmarks using a rigorous scientific framework based on ecological data.

(From above) This research is completely achievable under current technology (e.g. adapted ABMI protocols) and feasibly delivered under a partnered-research model (e.g. Willmore Biodiversity Research Project). Answering this question would allow us to better understand how parks contribute to biodiversity, how they are connected to their landscapes, how resilient the communities within parks are to human-induced ecological change, and how we can make management changes to fulfill Alberta Parks' mandates.

What role do Alberta parks and protected areas play in the conservation of biological diversity of the province?

What are the health benefits that Alberta parks and protected areas provide to people?

What are the economic benefits that Alberta parks and protected areas provide to the provincial economy?

What are the impacts of climate change on Alberta parks and protected areas (i.e. will the values for which they were chosen still be applicable under various climate change scenarios)?

What are people willing to pay to ensure that Alberta parks and protected areas remain a part of our natural heritage?

Who visits Alberta parks and protected areas and why? What role to Alberta parks and protected areas play in provision of a 'sense of place' to Albertans?

What techniques/tools are appropriate for measuring/monitoring ecosystem health at the scale of the landscape (natural, physical and social science based)?

What role do Alberta parks and protected areas play in mitigating the effects of climate change on local, regional and provincial scales?

What value to Albertans place on parks and protected areas that are rarely visited or provided limited recreational opportunities (other than wilderness experiences) (e.g. Rumsey Ecological Reserve)?

We 'manage' grassland systems to a 'healthy' state but yet several species rely on either heavily grazed or ungrazed systems. What is the appropriate size and distribution of these various management systems (patches) on the landscape to ensure conservation of biodiversity in a regional/provincial context?

What is the historical role of fire in the ecology of grassland systems and what is the response of grassland ecosystems to various types of fire?

What tools and techniques are effective in the restoration/restoration of fescue grasslands?

What tools exist at the scale of the landscape that can be used to detect change in grassland/parkland ecosystems?

What benefits do protected areas in the grassland/parkland play in buffering the effects of climate change?

Assessing the effectiveness of wildlife friendly fences in Wainwright Dunes Ecological Reserve (WDER): AB Parks and partners initiated a three-year research project in September 2011 to examine the effectiveness of wildlife friendly fencing at WDER. It involves various fence modifications and the use of wildlife cameras to capture wildlife activities. To date, we collected over 350,000 images of wildlife (mainly elk and deer) and domestic animals (mostly cattle). Collected images indicate potential for wildlife injuries and fence damage. AB Parks need assistance with extracting information from selected images (those containing wildlife) on wildlife species, approximate age, gender, fence interactions, etc. Based on the results of this project, we may look for a graduate student in the future to design more sophisticated study around the issue of wildlife friendly fencing and wildlife corridors in this study area.

Mitigating Human-Beaver Conflicts through Adaptive Management: The purpose of this project is to assess wetland biodiversity and management as they relate to the efficacy of current approaches to beaver-human conflicts in Blackfoot PRA. The objectives of this project are to: 1) determine current means used to quantify conflict occurrences, 2) document the existing protocols and frequency of beaver management by park management; 3) determine cost-effectiveness of management actions; 4) assess and test the effectiveness of current and alternative management approaches in problem areas; and, 5) establish long-term research sites to study differences in biodiversity at wetlands that are regularly drained, wetlands with leveling devices, and wetlands that are neither drained nor modified with leveling devices. This is an ongoing project carried out by Dr. Glynnis Hood of Augustana that requires further financial support.

Environmental history of Miquelon Lake Provincial Park (MLPP) and beyond: This research project would merge both social and natural science questions and would use original records and letters from Frank Farley, MLPP's first ranger, and historic aerial photographs dating back to the 1940s to document early conservation efforts in a changing landscape. Specifically, the project's objectives are to: • document the role and contributions of MLPP's first ranger • examine the role of Frank Farley relative to Alberta's and Canada's early efforts in ornithology • create a bibliography of Frank Farley's publications • re-publish Farley's (1932) *Birds of the Battle River Region* • quantify land use and ecological change over time in MLPP as it relates to the historic records. This project has been proposed by Drs. Glynnis Hood, Glen Hvenegaard and Jeremy Mouat of Augustana faculty, but has not started yet due to the lack of funding.

Vegetation inventory for Ribstone Creek Heritage Rangeland: This site contains one of the few relatively undisturbed and diverse riparian habitats in the Central Parkland of Alberta. It also contains one of the few areas in the Central Parkland with active sand dunes and provincially rare plant species and communities. Terrain sensitivity and landform classification has been mapped for the site in 2004, but little information exists on vegetation communities and their response to cattle grazing that is a long term management activity in this site. This project would acquire more accurate base line vegetation data for upland sandy soils, dune complexes and riparian plant communities. Also several rare plant species require further inventory and detailed assessment. The information would assist with better management strategies for resources including grazing, recreational, wildlife, riparian areas and industrial uses.

Bat management in Miquelon Lake PP: Bats are an important component of ecological diversity of Miquelon Lake PP. However, little is understood about bats' roosting and forage habitats in this site. Furthermore, a large number of bats tend to inhabit a number of shelters in the park during the summer month that coincide with the high visitor use, causing staff concerns about potential health hazards associated with bats' guano and potential close encounters with animals (a.k.a., bat bits). A study is needed to address these data gaps and propose a management strategy that would eliminate health concerns while at the same time ensuring the long term sustainability of the bat population in the park.

An increased fuel load (e.g., dead and down trees in particular) has become a concern to AB Parks staff in many sites within the EC Region due to the decadent stage of upland forests. One way to reduce the fuel load is to remove coarse woody debris (CWD) to minimize wildfire occurrence and intensity. However, management for wildlife habitat often focuses on just the opposite. Managers must balance fuel reduction to reduce wildfire hazard with fuel retention targets to maintain other forest functions. Little information is available on potential negative effects of CWD removal on small mammal populations, as well as on the understory vegetation changes that may change the fuel load quality to flashy by allowing more space for grasses to grow. A study that would help address these data gaps and help AB Parks staff make more educated decision on fuel management is needed.

What role should Alberta Parks play in managing access to vulnerable headwaters, and how can we effectively address the issue of random camping?

Many of Alberta Parks are outdated and not suitable for today's large RV's, should the province spend money to upgrade these parks in a similar fashion as the province of BC has done?

Access management around sensitive areas is a big issue in this province. How should AB Parks work with other GOA ministries, industry and land owners to ensure access is monitored and regulated?

AB Parks have talked about increasing the recreational opportunities around the Crowsnest pass area, how can we ensure the biodiversity and sensitive aquatic and terrestrial habitats are maintained? Do we really need more recreation sites, or can we just improve existing ones (e.g. Lynx Creek, Racehorse, Dutch Creek, Carbondale etc)

When comparing Alberta Parks to other parks (outside of Alberta) that you have visited, is there something you think we can be doing better? Be specific.

When you visit Alberta Parks, what is the most important element you are looking for? Is it quality family time, wildlife viewing opportunities, fishing opportunities, etc?

Do parks have an Early Detection - Rapid Response weed management plan?

What is the relative effectiveness of current operational practices on visitor attitudes and behaviours to parks? Specifically, looking at the real impacts of tools such as education, interpretation, signage, enforcement (both actual and potential for), facility planning and design, etc...

Are there regional differences and/or factors that more effectively contribute to compliance and desired behaviours in parks?

What are the expectations and acceptable limits regarding social carrying capacity in parks relative to park classification and recreational feature and/or landscape type?

What are the perceived differences of the roles and mandates between, municipal, provincial and federal parks? Are there differences between individuals based on visitation or non-visitation to one or all of the various levels parks?

What is an appropriate, publically acceptable target for revenue neutrality versus general public funding of parks?

How can the indirect benefits of non-commercial recreation uses in parks be more accurately calculated?

What are the perceived reasons for non-compliance and undesired behaviours in parks? What are the factors influencing the perspectives and are there regional differences?

What are the perceived benefits of parks and the general knowledge regarding ecosystem goods and services associated with them? Are there difference between those that visit parks versus those that don't?

<p>What are the implications of climate change in the natural range of flora and fauna as well as the biodiversity of all units within Alberta Parks (I am assuming that unless noted otherwise, Alberta Parks refers to the full range of designations within the Alberta Parks system)?</p>
<p>What are the implications of climate change on the extent to which existing protected areas adequately represent the natural regions, sub-regions and natural history themes that have been identified for Alberta?</p>
<p>By what means and to what extent can Alberta Parks increase the awareness of Alberta's Parks system with specific reference to demonstrating their benefits and total value to Albertans, Canadians and potential visitors to this Province?</p>
<p>What is the state of the "ecological health" of the units within Alberta's park system and what are the major factors/stressors responsible for compromising the ecological integrity of the units?</p>
<p>What is the impact and extent of invasive species within the parks system and what management strategies can be undertaken to prevent and/or mitigate the impact of invasive species?</p>
<p>How can financial support be increased to ensure a more effective establishment and management of protected areas?</p>
<p>How can partnerships be increased to ensure a more effective establishment and management of protected areas?</p>
<p>To what extent is the Alberta parks system responding to the increasing pressures on the provinces land and water base?</p>
<p>Since their creation in the Provincial Parks and Protected Areas Act (1930), how have the needs of ethnic communities been met in Alberta parks and those needs inform policy decisions? These questions can be drawn from reference to specific groups, and their expressed needs, in records and policy outcomes arising in the Alberta Provincial archives, Acc. 83.92, Provincial Parks Board Records, 1929-58; and Acc. 69.289, Premier's Papers file 319A; and keyword newspaper searches.</p>
<p>What has been the relationship between municipal growth and needs in Alberta, and the planning and policies around urban hinterland provincial parks in the 1950s through 1980s? The case example of Bow River provincial park and Calgary can be explored in Acc. 83,498, Parks Records, related to Bow Valley Park Supervision reports, 1967-69 within the Bow Valley Park Supervisor Report files; newspaper and other media sources.</p>
<p>How have the service and infrastructure demands of changing modes of transportation, particular from automobiles to ATVs, from the 1950s onward affected changes in parks policies and management questions.</p>
<p>As parks have been set aside in Alberta, what have been the economic relationships between them and municipalities and urban centres nearby in terms of services, contracted construction and maintenance work, and out-of-park residency of parks employees and workers? Such a question can be approached in light of treasury records and parks accounts, particularly, Acc. 86.116, Parks Records, Contracts, Services files in the 1960s-1970s.</p>
<p>How has the seasonality of Alberta's provincial parks been an historical policy issue, and in what ways have the incorporation of design, facility and changing recreation and use designations within parks policies allowed for more intensive and multi-seasonal park visits over time?</p>

How has the expanded number of provincial parks, and the concurrent development of urban parks, informed land use policies, provincial and municipal government cooperation and raised the need for shared land use, collateral expropriation and agreements between various levels of government in Alberta since the 1950s?
Historically, how did developing understanding of wilderness and recreational parks dividing generally between federal and provincial park mandates in the 1950s shape decision making in policies in Alberta's multi-use recreational areas to the 1970s?
Beyond policy innovations and management directives, how has popular culture in provincial parks changed between the 1950s to the 1980s, and, as reported in parks warden papers, can quantifiable incidents of behaviour "deviancy," criminal activity and illegal recreation, such as poaching, better inform directions in parks policies, public education and social programs?
How do current land management practices in parks positively or negatively influence the retention of wetlands and other water sources on the landscape?
How do current management practice for nuisance wildlife species (e.g., beavers, ground squirrels, bears) influence spatial and temporal biodiversity and the ability of these species to influence habitat heterogeneity and the biodiversity it supports?
How can Alberta Parks engage a changing population for advance the conservation of protected areas for both recreational and ecological goals?
How might current trends in climate change influence biotic and abiotic communities in Alberta's protected areas and are their specific mitigations that can help buffer the impacts of these changes?
How much Alberta Parks land base contributes to conserving and maintaining provincial biodiversity and where the gaps are?
How to determine a recreational carrying capacity for different sites in respect to maintaining healthy ecosystem? Set criteria how to choose indicators to establish limits and monitor status?
How document biodiversity within Alberta Parks? Develop a list of priority species or group of species to survey and how to do surveys for them.
Conduct GAP analysis of inventory/monitoring needs in Alberta Parks in natural as well social science.
Biodiversity of small protected areas in connected agricultural landscapes and their role in maintainig biodiversity.
State of cottonwood stands in Alberta Parks and how to restore and maintain them.
What will be good indicators to evaluate and monitor ecological integrity in Alberta Parks?
Are ecosystems in Alberta Parks fragmented beyond repair in respect of threatened and endangered species? Can Park's land base support recovery of threatened and endangered species?
What are the health and social/community/family benefits of interaction with nature?
What kinds of programs can AB parks support, design or deliver to provide Albertan's with beneficial primary health care benefits to reduce the burden on the acute care system? In other words, how can parks contribute to upstream health promotion to prevent disease and reduce the reliance on acute care systems?
What opportunities are there for AB Parks to "integrate" into, partner with and support the Public Health agenda and provide tangible benefits that will improve and enrich the quality of life for Albertans? (also reduce health care costs)

Working from an assumption that sustainability is a major and all-encompassing societal challenge, what innovative and non-traditional avenues can Parks employ to inform, inspire, enlighten and motivate behavioural change towards healthier lifestyles, communities and landscapes to create the change we need? Example: might subjects such as food system ecology-human health-ecosystem health be legitimate topics for park programming insofar as it links nature conservation and ecosystem health to human behaviour and human industry? Nature and ecology permeates our existence and should no longer be limited to the concept of nature = wilderness (which has little relevance to an urban society).

What are the most effective learning tools/mechanisms for creating transformative human experiences in nature that enrich and enlighten us as individuals and social beings? I ask this in light of evidence that suggests traditional environmental education has had limited measurable effect. What are the more powerful tools for getting people to internalize and personalize the environmental realities of our existence?

What is the contemporary relevance of Parks to our social and political realities of the day? I ask this assuming that society has needs much greater than just places to family camp, swim and hike as was our main historical relevance under the banners of leisure and recreation (namely for the middle class).

Based on the assumption that sustainability and environmental health can not be delivered by parks/conservation lands alone, what are the most meaningful connections between parks and the working landscape? How can the former be used to inform sustainable practices on the latter? i.e. what is the continuum of sustainability across the landscape and what is the best role for parks to support this full spectrum imperative beyond it's narrow tradition mandate of conservation and protection?

HERITAGE RANGELANDS (HR): How can HRs be more effectively managed to support and celebrate their unique marriage of Conservation, Culture (i.e. ranching/rural heritage), and Economy (a premium beef product based on human health benefits (grass fed), grassland ecology friendly, and local). Albeit a limited market, can there be a Heritage Rangeland brand of beef products that make HRs more successful for all parties involved? Who are the potential stakeholders/partners? It's not often that conservation and commodity production can be this compatible. Are we making the best of this rare and fortuitous circumstance?

What type of visitor experience are park users receiving at backcountry areas within Alberta Parks?

What are the trail preferences and patterns of use within Alberta Parks backcountry areas?

What is the spatial visitor flow of park users?

What are the route characteristics of park user patterns?

What is the relationship between park users and the area that they visit?

What are the visitor profiles and demographics of parks users within the various protected areas classifications?

What are the visitor numbers of people visiting Alberta's protected areas?

What natural and physical features are important to park visitors?

How does park visitation foster the development of more environmentally connected citizens?

a. Intervention question example: After attending a guided immersive weekend for New Canadians at Miquelon Provincial Park, how many participants reported (a) greater levels of comfort in interacting with Canadian natural areas, (b) a deeper sense of connection with nature, (c) increased interest in (sustainably) interacting with Canadian nature in the future

How can environmental literacy and environmental activism be promoted more effectively through park programming (in-situ and virtual) to Alberta's parks?

<p>a. Intervention question example: After the implementation of a mobile digital app designed to enhance the visitor experience and environmental education at Cooking Lake Blackfoot PRA, how many visitors reported (a) increased visitor satisfaction, (b) increased knowledge of local environmental issues, (c) knowledge of local natural history, (d) felt an increased sense of responsibility to take action to protect CLBPA, and (e) felt an increased sense of efficacy about how to protect CLBPA.</p>
<p>How can health and wellness be promoted more effectively through park programming?</p>
<p>a. Intervention question example: After observing a 5-km fundraiser run in Fish Creek Provincial Park, what portion of spectators (a) reported an intention to exercise more often to achieve greater personal fitness, and (b) felt they'd like to exercise in Fish Creek PP to achieve this?</p>
<p>b. Intervention question example: After spending two weeks of outdoor camping/hiking at Dinosaur Provincial Park, what portion of youth (10-16 yrs) with extreme behavioural issues, displayed improved behavioural patterns, and reported positive emotional and cognitive outcomes</p>
<p>How do people form attachments to protected areas? What characterizes these attachments/connections to parks? What are the most powerful means of connecting people to (a) nature, and (b) particular parks, and (c) park systems/conservation initiatives that protect special places?</p>
<p>Who are (and are not) Alberta's park visitors? What segments of the population are not visiting Alberta's parks, and which of these segments should Alberta Parks prioritize its effort to reach out to?</p>
<p>Who are (and are not) Alberta Parks' supporters (amongst Albertans)? How should we manage our relationships with each segment of supporters? What non-supporters should we attempt to convert to supporters?</p>
<p>In terms of management effectiveness, what model of service delivery works best in providing (a) conservation programs, (b) visitor services programs, (c) general operations, etc. What elements of private sector (e.g., concession) vs. public sector delivery systems contribute to the successful execution (management effectiveness) of park planning, management and maintenance?</p>
<p>How do Alberta's parks contribute to Albertan's quality of life?</p>
<p>What do Albertans understand about Alberta Park's mission and attributes?</p>
<p>How will changing cultural, demographic and lifestyle trends affect Alberta Parks' ability to achieve its mission? [in terms of volunteers, front country services, wellness promotion, etc.]</p>
<p>How do Albertans (and other visitors) make choices about visiting parks and other natural areas in Alberta (preferences; awareness; satisfaction; use history, etc.)? How do Albertan make a decision to visit one park versus another? How do Albertan's make a decision to visit an Alberta park versus other recreational opportunities [i.e., natural areas with minimal to no protection (Crown land), shopping malls, museums, etc.]</p>
<p>a. Intervention question: After the creation of the brochure by Alberta Travel which details the existence of multiple World Heritage sites in Alberta, what level of WH site awareness and travel opportunities were generated amongst (a) tourists originating from outside of Alberta, (b) Albertans, and (c) travel professionals?</p>
<p>b. Intervention question: If Alberta Parks re-branded all its protected areas to the designation of "Provincial Park", how would this affect Albertans' and parks visitors' expectations for park management of, visitor experience at, and awareness of these parks?</p>

c. Intervention question: If Albertans were provided with a coupon, printed on milk containers, for one night free accommodations at [undervisited] parks in their region, how many additional camp sites would be used at that these parks over a one year period [how many coupons would be redeemed]?

What experiences do Albertans desire most from their parks? What market segments seek what experiences? What market segments are most desirable, as visitors to Alberta Parks?

How well is outreach working with nearby communities and other stakeholders? What can be done to improve connections with stakeholders/community members?