

Environmental Stewardship in Jasper National Park

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Introduction

One important challenge facing national park residents is the need to uphold high environmental standards. Both visitors and national park officials expect residents of protected places to maintain high environmental stewardship values, attitudes and behavior. This study explored Jasper residents' perceptions on a vital component of park management: environmental stewardship. Stewardship systems for conservation can be more effective than laws since they are more adaptable, flexible and responsive (Dempsey et al 2002).

The case study chosen was Jasper National Park located in Alberta, Canada (see map in Appendix A). In a USA Today article, Jasper National Park was praised for its potential for high environmental integrity (Sloan 2004). While this article outlines visitor perceptions of environmental stewardship in Jasper, residents' perceptions are less clear.

Resource managers often misconceive community attitudes (Lee 1991). Much of the research looking at attitudes and perceptions of national park stakeholders does not focus solely on residents and community perceptions are diluted by tourist perceptions in the literature. A focus on Jasper residents alone can help to define their perceptions and values. Dearden and Rollins (2002) argue that studying the perceptions and attitudes of residents is one of the most important next steps in national park research.

Residents' perceptions are important since their support can be vital to the implementation of new policies and programs (Perez-Verdin et al 2004). It is important for community members to participate in environmental stewardship in order to achieve healthy ecosystems (Dempsey et al 2002). Social barriers can cause the most problems in sustaining ecological integrity and communities need to be active in maintaining ecosystems (Theberge and Theberge 2002). It is important to study the perceptions of national park residents on environmental stewardship since effective conservation requires active management and participation from everyone in the region (Goss 2001). Although residents can act independently in conservation efforts, it is important to integrate and work as a team with residents, park officials, businesses and tourists to succeed in reaching environmental goals (Furlong 2006).

Environmental education and collaborative management can improve relationships in and outside of the park and further enhance conservation (Hulme and Norgrove 2006). Collaborative management can also lead to an increase in environmental knowledge and stewardship among park management and communities (Anderson et al 2005).

In 2006, the Municipality of Jasper developed the Environmental Stewardship Advisory Committee to link residents, local government and Parks Canada while developing environmental strategies that focus on community needs and goals (Municipality of Jasper 2006a). They aim to increase quality of life for residents while establishing Jasper as a leader in environmental stewardship.

The overall objective of this research project was to determine ways in which residents perceive environmental stewardship in Jasper. Within this, specific objectives investigated key elements of environmental consciousness. This paper focuses on the

following: (1) responsibilities of living in Jasper National Park, (2), priorities for achieving good environmental conditions for: residents of and businesses in Jasper, Parks Canada and the Municipality of Jasper, and (3) participation in environmental initiatives.

Methods

Mail-out surveys were sent to 1919 mailboxes, 93.9% of the 1817 total private dwellings in Jasper plus 212 businesses (Statistics Canada 2007).

After distribution of the survey, the Fitzhugh (Jasper's local newspaper) contacted the researcher and printed an article that created further awareness of the study, resulting in requests for additional surveys. An advertisement was placed in the Fitzhugh and 200 surveys were printed and left in the Jasper Municipal Library for pickup by interested participants.

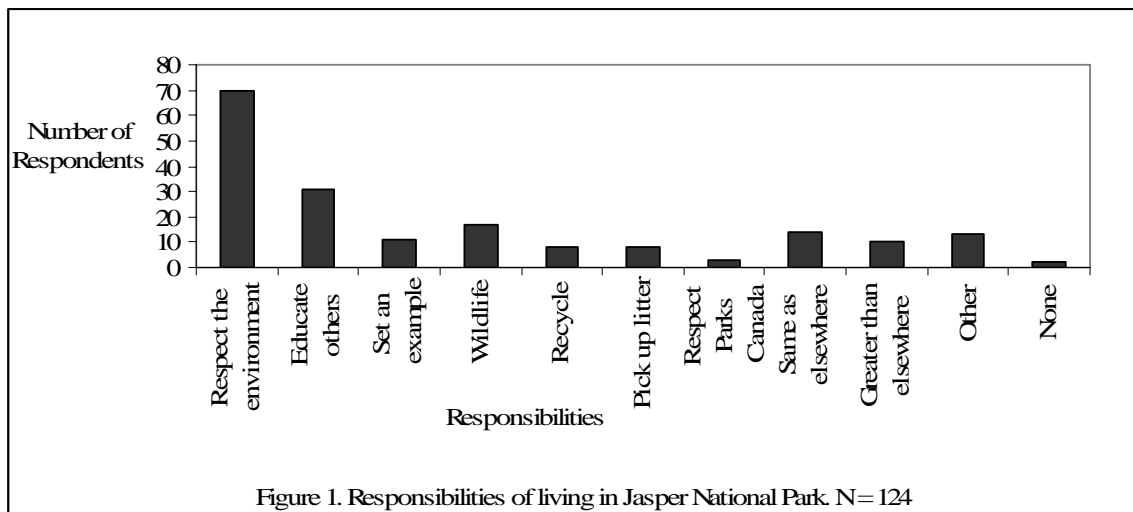
In total, 126 surveys were received (6.5% response rate for mailed surveys), including 2 of the 200 surveys from the Jasper Municipal Library. The sample (3.8% of the population of Jasper aged 20 and older) was representative of age groups in Jasper ($t(14)=2.14$, $p=0.98$) but not gender ($p<0.05$). The low response rate has some limitations but the data collected was sufficient for preliminary statements on resident perceptions.

Quantitative questions (check-box, scale and multiple choice) were analyzed using Microsoft Excel (2003). Open-ended questions were entered verbatim into QSR NVivo 7. Themes were summarized using electronic and manual techniques.

Results

Residents were asked about the responsibilities they felt they had due to living in Jasper National Park (Figure 1). Fifty-six percent (70/124) stated that they felt a general responsibility to be respectful of the environment. Twenty-five percent (31/124) stated that they felt it was their responsibility to teach others about being environmentally responsible and 9% (11/124) felt it was their responsibility to set an example.

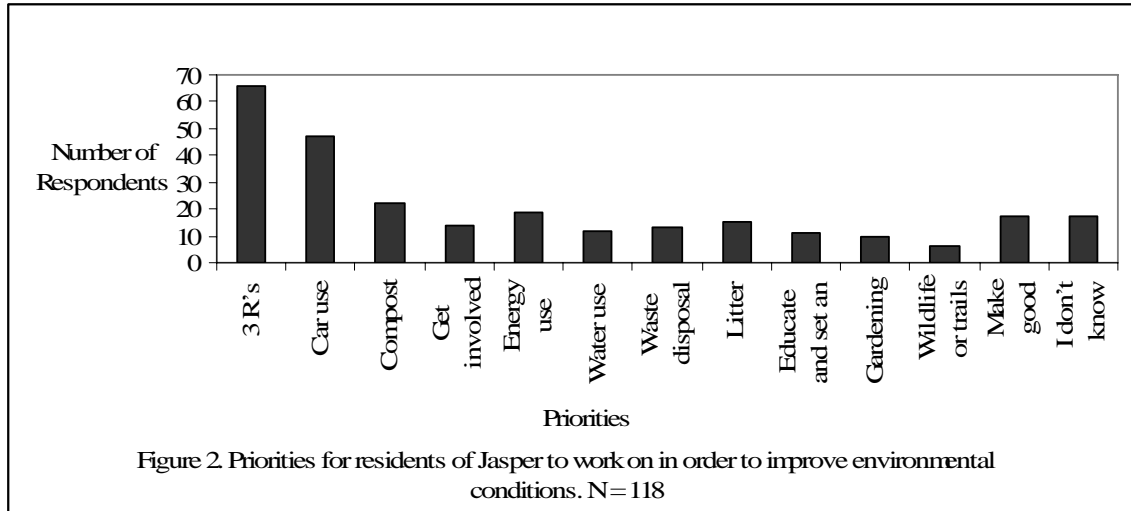
Eleven percent (14/124) of respondents felt their environmental responsibilities are the same as anywhere else, 8% (10/124) felt they were greater and 2 respondents (1.6%) felt they had no environmental responsibilities.



Respondents were asked to comment on the most important priorities four groups (residents, Parks Canada, The Municipality of Jasper and businesses) should work on in order to improve environmental conditions in Jasper.

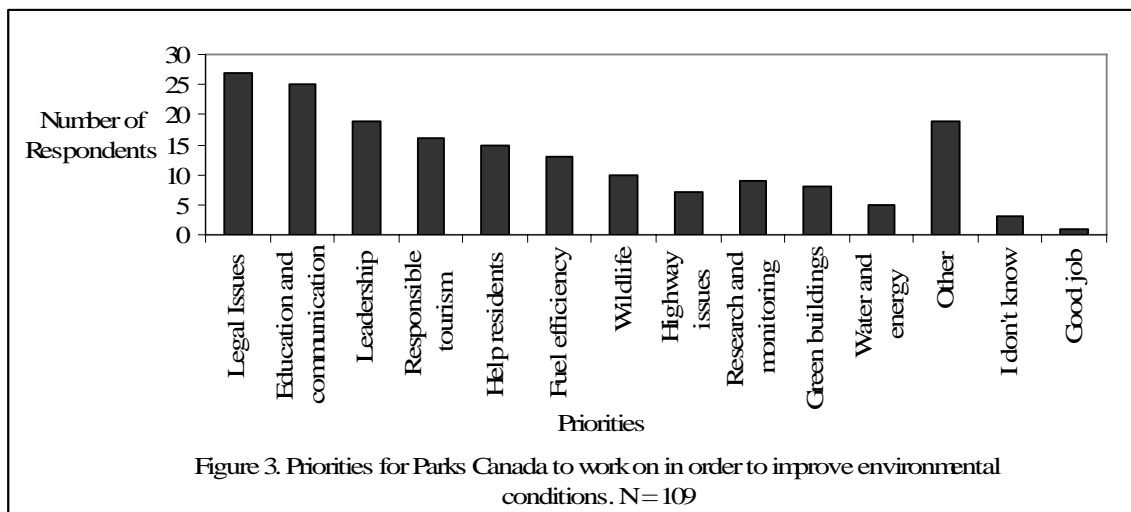
When asked about residents, most (55.9% or 66/118) stated that they should focus on the 3 R's (Reduce, Reuse, Recycle) (Figure 2). Others felt that residents need to focus on car use (49.8% or 47/118), involvement in community and environmental initiatives (11.9% or 14/118) and educate others or set an example (9.3% or 11/118).

One respondent (0.85%) said that they did not know what residents should prioritize.



When asked what Parks Canada should prioritize, most stated legal issues (24.7% or 27/109) (Figure 3). Others said education and communication (22.9% or 25/109), leadership (17.4% or 19/109) and helping residents become better environmental stewards (14% or 15/109). Specific ideas included recycling (60% or 9/15), fuel efficiency (33.3% or 5/15), composting (13.3% or 2/15) and more incentives (13.3% or 2/15) and alternatives (6.7% or 1/15).

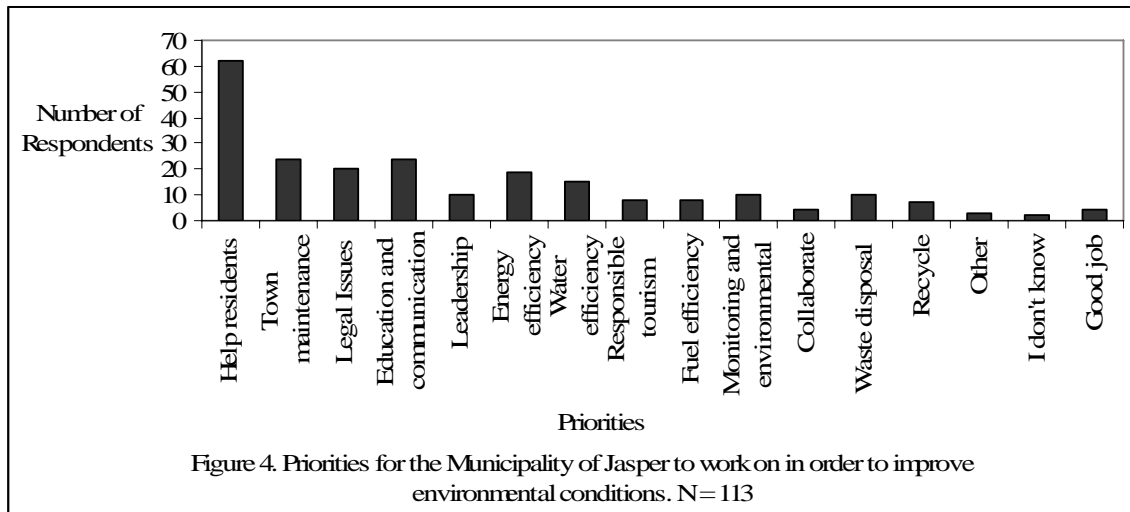
Three respondents (2.8%) stated that they did not know what Parks Canada should prioritize.



The most frequently suggested priority for the Municipality was helping residents to become more environmentally friendly (54.9% or 62/113) (Figure 4). This included help recycling (53.2% or 33/62), vehicle use (17.7% or 11/62), waste (9.7% or 6/62), energy (12.9% or 8/62) and water (4.8% or 3/62).

Many residents felt that the Municipality should put more emphasis on education and communication (21.2% or 24/113), leadership (8.8% or 10/113) and collaboration with Parks Canada (3.5% or 4/113).

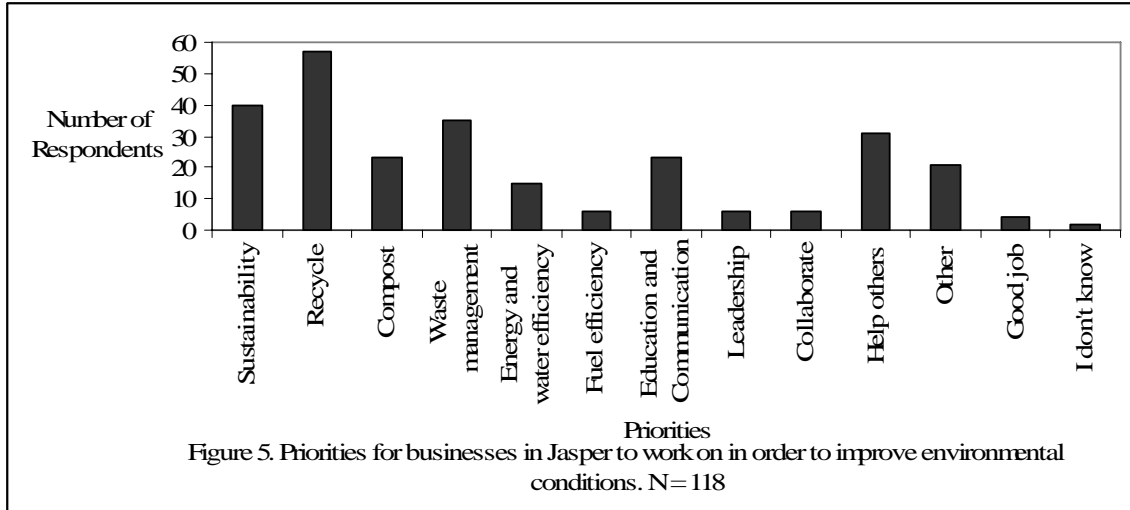
Some (3.5% or 4/113) stated that they felt the Municipality was already doing a great job, and 1.8% (2/113) said that they did not know what the Municipality should prioritize.



When asked what businesses should prioritize, the most common response was recycling (48.3% or 57/118) followed by waste management and reduction (29.7% or 35/118), composting (19.5% or 23/118), energy and water efficiency (12.7% or 15/118) and fuel efficiency (5.1% or 6/118) (Figure 5).

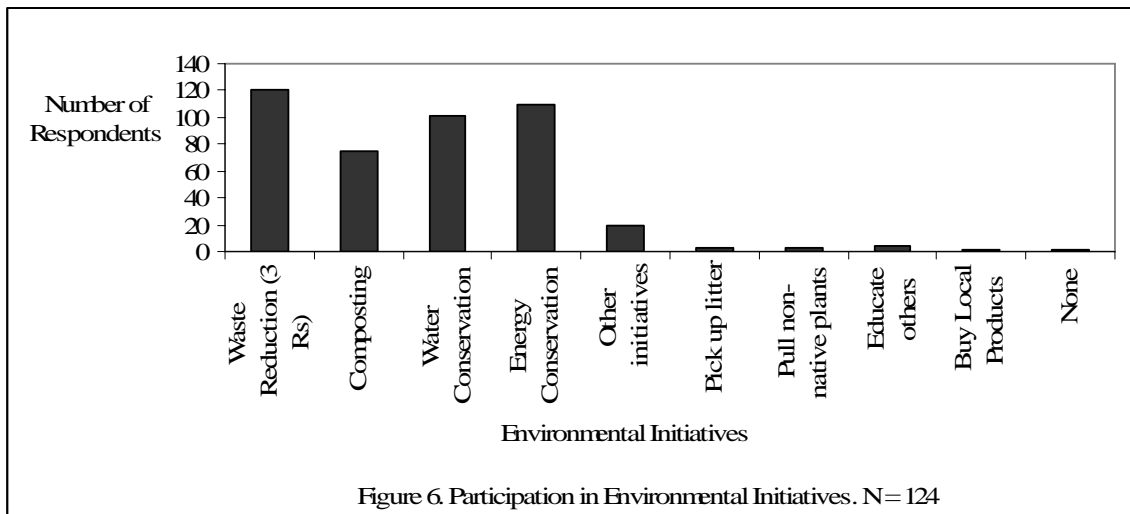
Education, communication and promotion of green products were other important priorities (19.5% or 23/118) as well as leadership (5.1% or 6/118), collaboration with Parks Canada and participation in environmental programs (5.1% or 6/118) and helping others become better environmental stewards (26.3% or 31/118) by focusing on vehicle use (29.0% or 9/31), reduced packaging (29.0% or 9/31) and providing alternatives (22.6% or 7/31).

Some respondents (3.4% or 4/118) said that businesses in Jasper are doing a good job of environmental stewardship, and two (1.7%) said that they did not know what businesses should prioritize.



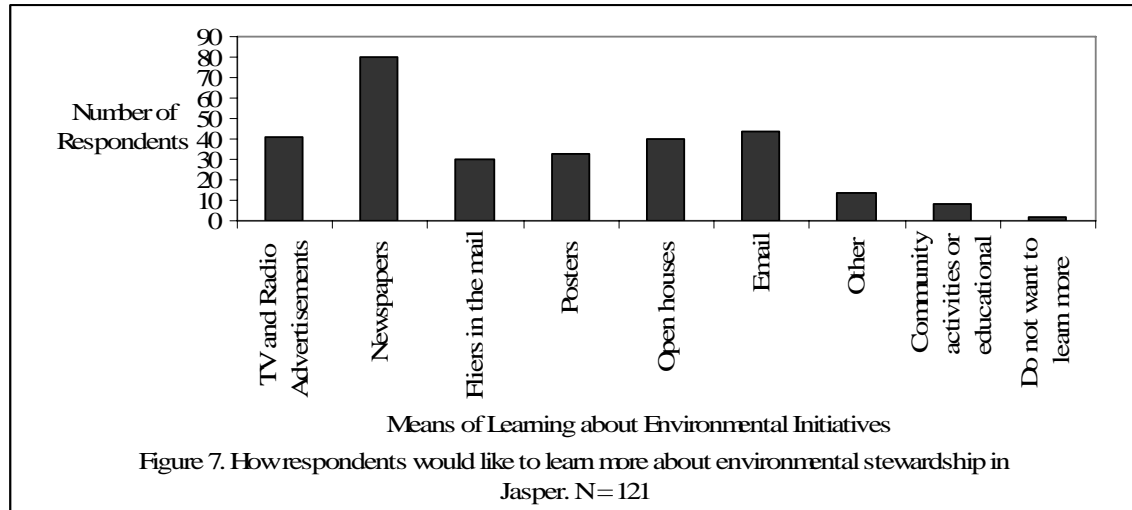
Respondents were given a list of four environmental initiatives (waste reduction (the 3 R's), composting, water conservation and energy conservation) plus "other" (to list their own) and asked to choose all that they had participated in (Figure 6).

Almost all (97.6% or 121/124) stated that they had participated in waste reduction, followed by energy (87.9% or 109/124) and water (81.5% or 101/124) conservation. Less commonly chosen were composting (though still high at 60% or 75/124) and other (20/124 or 16.1%). Other priorities listed included educating others (4/20), picking up litter (3/20), pulling non-native plants (3/20) and buying local products (2/20). Only 2 respondents (1.6%) stated that they had not participated in any environmental initiatives.



When respondents were asked how they would like to learn more about environmental stewardship, the newspaper was the most common response (66% or 80/121) (Figure 7). Email was the next most popular option (36.4% or 44/121), followed by television and radio advertisements (33.9% or 41/121), open houses (33.1% or 40/121), posters (33/121 or 27.3%) and fliers in the mail (30/121 or 24.8%). Fourteen

(11.6%) suggested other ways including 57% (8/14 or 6.6% of total respondents) who recommended community activities or educational programs, kept separate from “open houses” since they appeared to refer to longer term commitments. Only two respondents (1.7%) said that they did not want to learn more.



Discussion

Individual action is important in environmental stewardship in Jasper as demonstrated by one resident (#38) who stated that residents should “take part in individual activities like picking up garbage, helping to recycle.” Some researchers have argued that individual action is vital for environmental protection, although it should be collaborated with the community, government and organizations to ensure actions are appropriate and effective (Goss 2001; Hulme and Norgrove, 2006).

Community environmental projects can be very successful (Dearden 2000; Miistakis Institute 2007). The desire for education and community involvement indicates promise for high levels of participation in community environmental initiatives. The Environmental Stewardship Advisory Committee has many community initiatives already set up but it would be useful to expand on them and to communicate them more widely with residents of Jasper (Municipality of Jasper 2006b).

Education and communication from Parks Canada and the Municipality are highly desired by residents and could be very effective in improving environmental conditions in Jasper. Although participation in initiatives was high, composting was the lowest and many residents requested that the Municipality provide more composting opportunities. Some listed concerns about wildlife indicating that educational pamphlets or programs might be useful.

Educating others was the specific action most commonly listed in responsibilities of living in Jasper National Park suggesting respondents believe others may not know how to be environmentally responsible. Goss (2001) found that residents of national parks were not necessarily more knowledgeable about the environment than the general public, supporting the idea that although residents of Jasper are passionate about protecting the area, they may not know specific actions to be taken. The fact that the majority of respondents stated that they felt it was their responsibility to respect the

environment indicates that they *want* to put great effort into protecting the environment. Still, the lack of specific actions listed by most respondents indicates that residents may not know how they can work toward protection of the environment. The specific responsibilities that were listed (education, protecting wildlife and recycling) matched the responsibilities felt by national park residents in other studies (Dempsey et al 2002).

Individual accountability is important to the residents who responded to this survey, who requested that Parks Canada and the Municipality work toward helping individuals become better environmental stewards. This shows the importance of collaboration, opportunities, education and resources for residents (Furlong 2006). Accountability extends to businesses of Jasper: respondents requested businesses be sustainable and protect the environment by mitigating their proportion of the impact. They should recycle products, compost waste and increase fuel efficiency much like individuals but on a larger scale because they represent more individuals.

In addition to education, respondents also requested laws that support sound environmental practices and ensure everyone complies with high environmental standards, contradicting some previous researcher (ex. Hulme and Norgrove 2006).

Residents requested education and communication, leadership and opportunities from Parks Canada and the Municipality and feel that these two bodies should lead by example and teach others. They should also provide more opportunities for environmentally sound practices, such as recycling or composting. Assistance is important when involving communities in stewardship (Brown and Mitchell 1997).

There was a lot of overlap between what respondents indicated Parks Canada and the Municipality should focus on, indicating that collaboration is important. In addition, this might indicate a lack of knowledge in the community about which group does what suggesting the need for greater communication between the residents, Parks Canada and the Municipality, supporting findings of previous research (Hiwasaki 2006).

Parks Canada and the Municipality are already working closely together on a number of initiatives including this research project. Care should be taken, however, because in this research project, trying to be too inclusive and meet all agendas made survey design more difficult and costly than necessary.

Collaborative management between communities, governments and environmental protection agencies can help increase environmental knowledge and stewardship in communities but mistrust can occur when these groups do not collaborate properly (Anderson et al 2005). It is vital that Parks Canada and the Municipality not only listen to what residents have to say, but also implement their ideas. The Parks Canada Agency (2000) has also stated that it is very important that everyone cooperate in the protection of places. The Environmental Stewardship Advisory Committee in Jasper National Park is meant to collaborate but no respondents mentioned it in the survey suggesting a lack of communication with residents of Jasper.

Parks Canada's future priorities had the lowest response rate which might indicate that people are unaware of what Parks Canada does. On the other hand, one resident (#107) stated that it was "too big to answer" while others indicated that they did not bother since it is Ottawa that makes the decisions about their park.

The low response rate to the survey as a whole may also be a sign that people are less interested in or less knowledgeable about environmental stewardship, indicating a greater need for communication. Anderson et al (2005) caution against declining trust in

environmental institutions such as Parks Canada as demonstrated by the harsh language of some respondents. For example, one stated that Parks Canada should:

“Operate from a position of integrity and merit. Display the values and operating guidelines themselves . . . so the integrity of the stewardship is respected. Get rid of nepotism and local respect will be believed. Quit lying to people!” (# 41)

Although these are important notions to consider, this low response rate could be due to research fatigue in this area. Residents may rather see results of previous studies being implemented than further studies being completed.

7.0 Conclusion and Recommendations

Community, collaboration, communication and education were recurring themes in this survey. Jasperites who replied to this survey believe environmental stewardship in Jasper should be characterized by individual action within collaborative management. Parks Canada, the Municipality of Jasper, businesses and residents of Jasper should work together to accomplish the *same goals*.

Desire for increased education and communication between these four groups can be met through community projects, open houses and printed articles as suggested by respondents. Respondents wanted more newspaper articles and internet resources explaining both how and why to protect the environment in order to improve their own stewardship abilities but also to motivate and teach others. From their responses, information which focuses on individual actions including recycling, composting, water and energy reduction and fuel efficiency may be most appropriate.

This research project was limited due to its short time frame and low response rate. It appears that low response rates are very common for research conducted in Jasper and therefore it is difficult to say whether the findings from this study can or cannot be transferred to the population of Jasper as a whole.

Although the sample is representative of age groups, it may be biased toward those who feel strongly toward protecting the environment. Additional comments provided by many respondents varied. Many stated that this study would be biased toward environmentalists but others worried that only people who were sick of hearing about environmentalism in Jasper would answer, using this as an opportunity to state their opposing opinions.

The potential bias means that this project should be thought of as an introductory, exploratory exercise. Managers often have misconceptions on the attitudes of communities, demonstrating the importance of not assuming attitudes of all residents match the survey responses (Lee 1991). The findings of this study should be built upon by further research which should not use mail-out surveys or pick-up methods which had an even lower response rate. Residents appear to be tired of getting surveys in the mail and a new, more personal approach (door-to-door surveys, personal interviews or focus groups) may renew interest. Further research should use a variety of sampling techniques to determine the most effective approach.

Additional research should also look into a variety of topics including whether or not the environmental efforts put in by residents of Jasper are effective. To protect the

environment, it is important to determine success as well as effort. Further research could evaluate programs to determine which initiatives should be expanded, adapted or discarded. Further studies should also look into what people know about environmentally friendly behavior in order to determine which information should be spread throughout the community.

Comparative studies are vital for determining if residents of Jasper are more environmentally conscious than the general population. The results of this study indicate a high concern for the environment but it is not clear whether this is unique to Jasper, national parks as a whole or if this supports a change in Canadian values as a whole, as suggested in previous research (Daerr 1999). At any rate, it appeared that respondents felt highly about environmental stewardship in Jasper but want opportunities and resources for better environmental practices.

Acknowledgements

I would like to thank Dr. Dianne Draper at the University of Calgary and Dr. Kathy Rettie at Parks Canada for providing me with this opportunity and for helping me throughout the process. In addition, Jennifer Dubois, Shawn Cardiff and Barry Romanko at Parks Canada and Nicole Ward at the Municipality of Jasper each deserve recognition in helping to put this project together.

I am particularly grateful to Parks Canada and the Program for Undergraduate Research Experience (University of Calgary) for providing the funding and means for this project.

Finally, I would like to thank those residents of Jasper who took the time to fill out my survey. Their contributions provided interesting information which formed the basis of this report and gave me a valuable learning experience.

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- Map Credits (Appendix A)*
- Parks Canada Agency. 2007. National Parks of Canada. Available at http://www.pc.gc.ca/progs/np-pn/index_E.asp Last updated June 21, 2007. Last Accessed April 25, 2008.

Appendix A: Map of Study Area



Figure 1. Map of Study Area.

Source: http://www.pc.gc.ca/progs/np-pn/index_E.asp