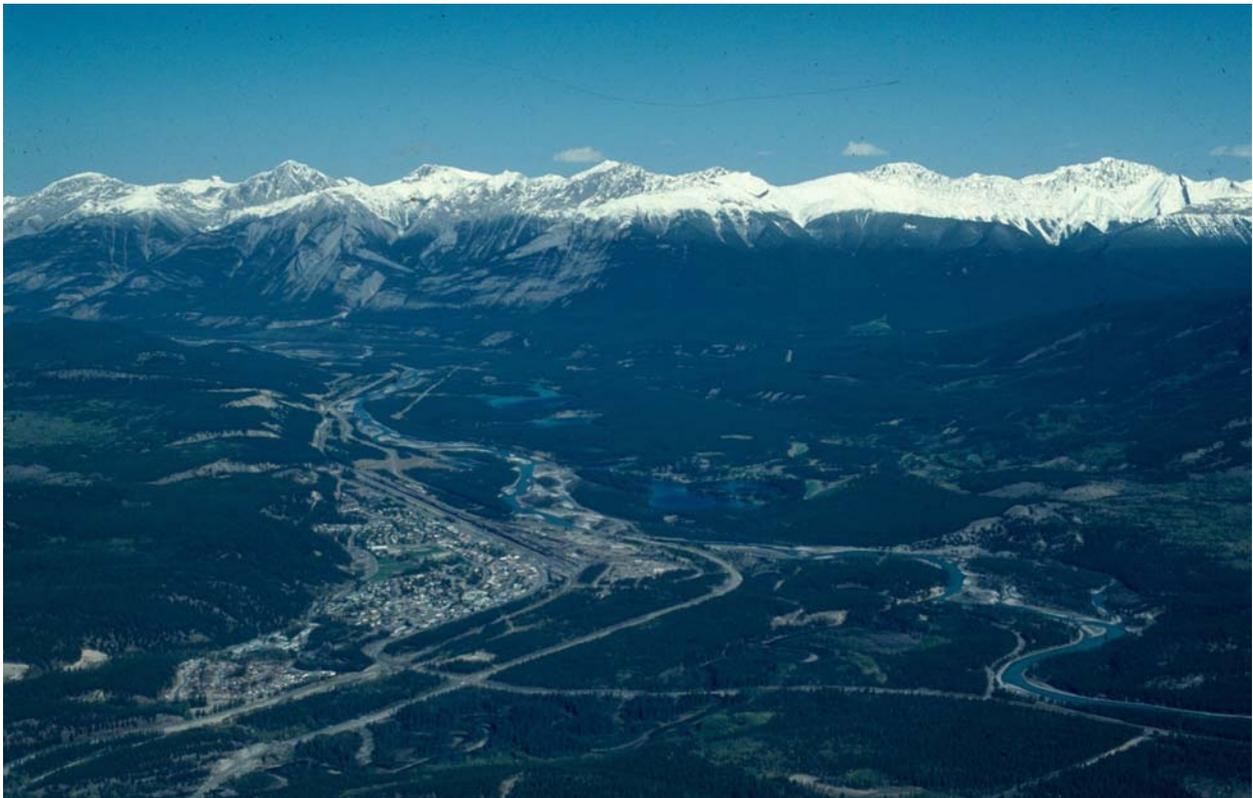




State of the Community Report Town of Jasper Jasper National Park of Canada November 2006



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Executive Summary

Communities in national parks play an important role in achieving all aspects of Parks Canada's mandate: they are important staging areas for memorable visitor experiences; they provide opportunities for visitors to develop an improved understanding of the park's heritage values; they preserve and protect built heritage and other cultural resources; and they can reduce the ecological impacts on adjacent park lands by consolidating services and facilities in one area.

The purpose of the State of the Community report is to assess the current Jasper Community Land Use Plan's ability to provide adequate direction to enable the achievement of Parks Canada's full mandate and to address the social and economic issues of the community. This State of the Community Report for the community of Jasper in Jasper National Park presents an assessment of the ecological, cultural, economic and social health of the community. This assessment is based on an analysis of progress in implementing the Jasper Community Land Use Plan (2001) and its ability to achieve the Minister's guiding principles. Emerging issues not captured in the original community plan are also examined. This is the first such report for the community. A number of information gaps will be filled in subsequent reports as the community's monitoring program develops.

A. Overall State of Achievements of Minister's Principles

1. No-Net-Negative Environmental Impact and Leadership in Environmental Stewardship:

Aquatics: Effluent treatment has improved with the construction of a new wastewater treatment facility and all agreed upon effluent targets are being achieved. Metered water flow is decreasing and steps are being taken to repair system leaks. Additional work needs to be completed on storm water management.

Vegetation: Fire Smart/Forest Wise Program surrounding the townsite has returned significant areas to natural habitat. The community is focusing on initiatives to encourage natural vegetation in residential planting and tree replacement due to development or aging. Non-native plants remain a concern in commercial areas.

Wildlife: Wildlife encounters have decreased due to the elk management program and elimination of the lagoon ponds. Concern exists over the number of bear contacts in the CN rail yards. Work is progressing to eliminate human/wildlife contacts through the movement and redevelopment of formal trails surrounding and initiating from the community.

Solid Waste: Significant gains have been made in waste diversion due to new facilities and programming. Concern exists over the life expectancy of the transfer station and the handling of trade waste.

Contaminated Sites: All sites are now confirmed, monitored and/or risk managed. Some site cleanup has occurred in the past year.



2. Leadership in Heritage Conservation: An inventory of all built heritage buildings has been completed and some heritage initiatives have been implemented by third parties. Actions are underway to protect the Jasper Park Information Centre. Protection of heritage resources is a consideration of all development.

3. Responsible Growth Management: Commercial growth is proceeding at a slower rate than was outlined in the community plan, with only 24.2% of the allowable growth taking place between 2003 and 2006. Completion of the planned growth strategy would have resulted in approximately 73% of the commercial growth being completed. Availability of affordable housing continues to be a problem in Jasper with only a minor increase in new units.

4. Appropriate Development and Use:

Character: All development proposals are reviewed to ensure compliance to regulations and policies. A high degree of compliance is evident in the community. All businesses in the community meet Jasper Park Management Plan Appropriate Use Guidelines. New businesses in the community will be evaluated against the new appropriate use guidelines approved by Parks Canada and the Municipality of Jasper.

Visitor Experience: Visitors have a high degree of satisfaction with their experiences and services that they receive in the Jasper community. A high degree of visitor return is noted. Additional work needs to be completed to develop monitoring tools that will provide additional community-specific information to further improve experiences and quantitative data.

Public Education and Awareness: A wide variety of learning opportunities are provided through Parks Canada direct programming, businesses and community activities. Quantitative data is needed to provide better understanding of the increased learning and level of connection with the Parks Canada mandate that occurs through these experiences.

B. Results of Management Effectiveness Monitoring

Key actions have taken place since 2001 in the areas of aquatics, wildlife, vegetation, public education and awareness, visitor experience, and environmental stewardship. These actions have produced these key results:

- Achievement of approved wastewater effluent standards.
- Increase in solid waste diversion and extension of landfill lifecycle.
- Control of level and intensity of commercial development.
- Implementation of legislated community boundary
- Improvements to key visitor service infrastructure.
- Addition of visitor education opportunities.



C. Condition of Databases

A number of information gaps have been identified through this process. A community-monitoring framework is currently being developed which will enable the collection of community-specific information. Future State of the Community Reports will have the benefit of this expanded information base.

D. Key Planning Issues

Planning issues have been identified through the preparation of this State of the Community Report that will necessitate an amendment to the plan. These planning issues include:

- The lack of a community plan that integrates land use planning into an overall strategic plan that links social, economic, environmental and governance considerations to overall community sustainability.
- The need to review the redistribution of new commercial development opportunity from retail to commercial accommodation or light industrial zones.
- The need for community feedback on the potential use of light industrial land for municipal purposes.
- Rezoning of some properties to reflect administrative changes or residential zoning.

Addressing these issues will not require a change to:

- The limits to commercial development.
- Legislated community boundary.
- Existing commercial zones.

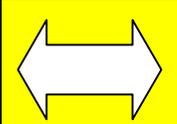
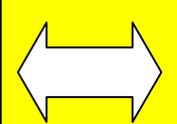
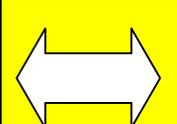
Some areas of concern have been noted and these will be addressed through: further data collection and monitoring to confirm current conditions and trends; additional initiatives in the areas of wildlife, vegetation, solid waste diversion, built heritage, and landscape rehabilitation; continued collaboration with the community to address quality of life and economic issues; and implementation of community-specific visitor services surveys to gain information on appropriate use indicators related to visitor experience and public education and awareness.

E. Condition and Trend of Indicators

Table 1 Condition and Trend of Indicators

Green = good ↓↓ = getting worse
Yellow = fair ⇔ = no change
Red = poor ↑↑ = improving



Indicator	Condition and Trend of Ecosystem	Rationale for Rating
3NEI and Leadership in Environmental Stewardship		
Aquatic Ecosystems		New wastewater treatment plant is meeting approved standards and all water testing illustrate that applicable guidelines are being achieved. Additional work needs to be completed with storm water runoff and water conservation.
Terrestrial ecosystems: Vegetation		Fire Smart Program activity has resulted in approximately 265 hectares of land surrounding the community being thinned. Additional hectares are slated for completion. Some concern exists about the invasion of non-native plant species in the community.
Terrestrial Ecosystems: Wildlife		Informal trail proliferation surrounding the community exists, but issue is being addressed through the efforts of the Jasper Trails Program. Human-wildlife encounters have dropped in the community but concern still exists for black bear encounters in the CN rail yard.
Terrestrial Ecosystems: Solid Waste Diversion		Increased solid waste diversion has occurred due to the provision of expanded programming and infrastructure development. Some concern exists about the lifecycle of the waste transfer station and the handling of trade waste.
Terrestrial Ecosystems: Community Contaminated Sites		All suspected sites now confirmed, monitored, or judged not to be contaminated. Two contaminated sites have been eliminated to enable local government land transfers.
Leadership in Heritage Conservation		
Built Heritage		Inventory of all cultural properties in Jasper has been completed. Protection of cultural resources a consideration of all redevelopment in Jasper. Information on condition ratings of non government structures is not available.
Responsible Growth Management		
Growth Limits		Growth in Jasper from 2002 to 2006 was limited to 24% of the new commercial allocation, which is 50% below the planned schedule of development. The result is the projected development build out has been moved from five years to nine years.
Quality of Life		Availability of affordable housing continues to be an issue in Jasper. Some additional units have been developed to meet commercial development regulations. Additional lands have not been released for development and Parks Canada properties have not been redeveloped. Additional quality of life measures need to be developed.



Economic Vitality		No measures have been developed for this indicator. Some concern exists in community due to taxation rates and sustainability after commercial growth limits are achieved.
Appropriate Use: Quality Visitor Experience and Promoting Visitor Understanding		
Character		All development proposals are reviewed to ensure conformity with JCLUP and development regulations. High degree of compliance in building projects. Existing and new business licenses conform to basic and essential services criteria and appropriate use guidelines.
Visitor Experience		
Understanding Visitors		Visitor needs survey completed for mountain parks in 2003. Management decisions based on this understanding, but not specific to community. Potential visitor needs still to be determined.
Providing Opportunities		Target segments not identified, but diverse range of opportunities available. Increase in number and scope of opportunities are occurring.
Delivering High Quality service		Visitors to Jasper generally satisfied or very satisfied with the opportunities identified as being important in their travel decisions. Data specific to community not available.
Connecting visitors/residents personally with the place		No data available with respect to level of visitor understanding. Increased communication and consultation with residents about park initiatives. Likelihood of return visit high.
Public Education and Awareness		
Knowledge, Understanding and Support		No information is available with respect to visitors' knowledge levels resulting from information provided in communities. However, increased communication and consultation has built significant knowledge and understanding on the part of residents and businesses.
Participation levels		An increasing number of businesses involved in heritage tourism is reaching a greater number of visitors, including traditional audiences. Additional Parks Canada programming in town increased participation levels.
Number and Type of Opportunities		A wide variety of learning opportunities are available to visitors and residents, including a visitor reception centre, interpretive programs, roving interpreters, training of staff by Parks Canada, and programs put on by businesses through their heritage tourism strategies.



STATE OF THE COMMUNITY REPORT **TOWN OF JASPER, JASPER NATIONAL PARK**

The State of the Community Report for the community of Jasper in Jasper National Park presents an assessment of the ecological, cultural, economic and social health of the community. This assessment is based on an analysis of progress in implementing the Jasper Community Land Use Community Plan (2001). Emerging issues not captured in the original community plan are also examined in this report.

This is the first such report for this community. There are a number of information gaps, which will be filled in subsequent reports as the community's monitoring program develops.

1. Context

Jasper is a community of approximately 4700 residents located in the ecologically sensitive Three Valley Confluence Area of Jasper National Park. Jasper's primary function is as a service centre for park visitors. Serving this role can see the size of the community swell to a daily figure of 25,000 people in the peak visitor period.

The development of the Jasper Community Land Use Plan (JCLUP) occurred within the context that Parks Canada would continue to govern the community and provide most of the municipal services. Shortly after the approval of the plan, local government was enacted in the Town of Jasper under the governance of the council of the Specialized Municipality of Jasper. The distribution of responsibilities in the local government agreement resulted in many activities identified in the plan becoming the implementation responsibility of the municipality. Parks Canada retained responsibility for implementing the actions related to land use planning and development.

2. Indicators and Measures

A comprehensive monitoring program is currently being developed and implemented to assess the state of all national park communities. This program will use a suite of indicators to report on the status of communities with respect to the principles of: no net negative environmental impact and leadership in environmental stewardship; leadership in heritage conservation; responsible growth management; appropriate use (including visitor experience and public education and awareness); and efficient and effective administration. The status of each indicator will be determined by reviewing information from a set of measures relevant to each indicator. These measures are evolving; therefore, data may not be available for all indicators.

The indicators and measures for the Jasper community have not been completed. The final measures and indicators will be developed through engaging the Municipality of Jasper and community members during the community plan review process.

To date, measures to assess some indicators have been identified, as have reporting standards to be used by all national park communities. Where measures and standards have not been finalized, or where data is lacking, reporting on the state of some indicators has been based on the



best available information, recognizing that the process will continue to improve as the community monitoring framework develops further over time.

Evaluation of each indicator is based, wherever possible, on objective information such as ongoing monitoring, existing reports, and surveys. In some cases, information gaps have been identified to ensure such gaps are addressed through the community-monitoring framework currently in progress.

A colour-coding scheme is used in this document to report on the condition of the indicators (i.e. red = poor, yellow = fair, green = good condition). The intent is that these ratings will be determined relative to an established target or threshold value for each of the indicator/measures. While there are some targets identified in this report, many of the conclusions have been based on a subjective assessment of the condition of measures and indicators. Future monitoring frameworks will attempt to establish targets and thresholds for each of the measures and indicators, thereby reducing the amount of subjectivity in subsequent reports.

The indicators and measures that apply to Jasper are:

2.1 3NEI and Leadership in Environmental Stewardship:

- Aquatic Ecosystems: sewage effluent quality, quantity of wastewater effluent; surface water quality, and water conservation.
- Terrestrial Ecosystems (Vegetation): non-native, invasive species, and community landscape composition.
- Terrestrial Ecosystems (Wildlife): trail proliferation, wildlife movement; and human-wildlife encounters.
- Terrestrial Ecosystems: solid waste diversion, and community contaminated sites.

2.2 Heritage Conservation:

- National Historic Sites: inventory; condition rating; and use of cultural integrity in activities and decision-making.
- Built Heritage: inventory; condition rating; and designation activities.

2.3 Responsible Growth Management:

- Growth Limits: square meters of additional commercial growth.
- Quality of Life: to be determined with community but could include potable water, level of fire protection and ambulance service, crime rate, and housing availability.
- Economic Vitality: to be determined with community, but could include numbers of visitors, dollars spent, and occupancy statistics.

2.4 Appropriate Use:

- Character: degree of conformance with architectural, landscape, sign, and site guidelines.



- Understanding visitors: the extent to which management decisions are influenced by an understanding of actual and potential visitors' needs and expectations.
- Providing opportunities: visitors participate in opportunities that are targeted to their needs and expectations.
- Delivering High Quality Service: 85% overall visitor satisfaction, including at least 50% very satisfied.
- Connecting visitors and residents personally with the place: the level of a visitor's connection to the park or community, comprised of the level of visitor understanding of Parks Canada's mandate and likelihood of a return visit.

3. STATE OF THE COMMUNITY REPORT

3.1 No-net-negative environmental impact (3NEI) and Environmental Stewardship

Principle: 3NEI means that wildlife, plants, water, air, soil, and the processes that connect them will be no worse off tomorrow than they are today. The cumulative impact of development and operations will be positive or neutral. No-net-negative environmental impact is a tool to minimize effects of communities on adjacent parklands. It will be assessed on a cumulative basis, not individual projects. A measurement framework will be the basis for determining success. The results of monitoring will be used to determine the need for further mitigations.

Communities should strive to be models of excellence in applying environmental management systems (e.g. water quality, water conservation, waste management, etc.). Through the application of 3NEI and environmental stewardship the communities can reduce impacts on ecological integrity.

The JCLUP stated that Parks Canada was to develop a community environmental management program in consultation with the locally elected council. The result of this engagement was the development of a partnership between the park and municipal council that enables joint programming to achieve the overall vision for the community and the successful completion of many environmental stewardship actions identified in the JCLUP.

3.1.1 Aquatic Ecosystems (a) Water Conservation

The Municipality of Jasper has implemented specific activities in the water conservation area including:

- Establishing a volume and cost recovery based fee structure for sewer and water in October 2001;



- Conducting a leak detection survey in 2003; and
- Conducting a water use audit in 2004.

Recommendations from these studies have been systematically addressed mainly through the repair of leaks and bleeder valves. This has reduced the water losses from 15% to 9%. A leak detection survey will be conducted every three years to mitigate water loss through leaks. Other initiatives to reduce water consumption include: installation of low-flush toilets and low-flow showerheads in municipal buildings, and educating residents about water conservation in bi-monthly utility bills. These actions have assisted in decreasing water consumption as noted in the “User Meter Flow” column.

Table 2 Water Consumption

Year	Total Water Consumption (m ³)	Monthly Average (m ³)	User Metered Flow
2003	1,482,491	123,540	927,773
2004	1,415,603	117,967	885,722
2005	1,490,673	124,223	879,499

Parks Canada’s development review process includes information and environmental assessment requirements that encourage the incorporation of water conservation infrastructure in all new development and renovation projects.

(b) Wastewater Treatment

The JCLUP directed that a larger capacity wastewater treatment plant be built. The Municipality of Jasper constructed the new plant with funding from the municipality, Alberta Government, and Parks Canada. The plant became operational in 2003 and has worked towards achieving the agreed upon standards.

The Jasper National Park Management Plan was updated to reflect a mountain parks phosphorus effluent target of 0.15mg/ml. Working within the principle of no-net-negative environmental impact and cost-effective action, Parks Canada approval was granted to enable the municipality to construct a tertiary wastewater treatment plant and substitute an exfiltration basin.

Jasper was given a phosphorus target of 0.5mg/ml for effluent exiting the plant before the exfiltration basin. The five-year river monitoring program from 2002 through 2007 with Michelle Bowman, PhD, is being used to determine whether the Jasper approach combining technology and biology was more or less effective than the higher technology approach in other mountain parks for minimizing effects to the microbotic river environment. The Jasper plant has met, and continues to meet, the effluent standards assigned for this five-year pilot project. The full five year testing program is required to properly assess the merits of both systems.



Table 3 Effluent Testing

Parameter	PCA Leadership Guidelines	1999-2001 Average	2004-2005 Average	2005-2006 Average
Total Phosphorous (mg/l)	<0.15	10.3	0.43	*0.39
Fecal Coliforms (CFU/100ml)	<20 (end of pipe)	**	9.75	14.0
Solids, total suspended (mg/l)	<10	**	4.73	5.10
5-Day Biochemical Oxygen Demand (BOD ₅)(mg/l)	<10 (summer)	**	3.2	2.79
	<20 (winter)			3.00
Ammonia (NH ₃ -N)(mg/l)	<1 (summer)	**	0.52	0.69
	<5 (winter)			0.56

- *As per agreement between Parks Canada and the Municipality of Jasper
- ** Information not available

(c) Surface Water Quality

Direct effluent releases (including storm and sewage effluent) and surface runoff can affect surface water quality. Measuring changes over time in surface water quality can help to indicate the impact of the community on catchment systems. Parks Canada and Environment Canada measure key human-influenced parameters of water quality in the Athabasca River both above Athabasca Falls and below the Snaring River.

Indicators commonly used to detect human induced changes to surface water chemistry include: total particulate matter, total phosphorus, total ammonia, and total faecal coliforms. Parks Canada compares current year average concentrations above and below the community to published guidelines from the Canadian Council of Ministers of the Environment (CCME) and Alberta Environment. All values fall within the applicable guidelines. Environment Canada analyzed the trend in water quality above and below the community between 1973 and 2003¹. Their analysis revealed that since the early 1990s, effluent inputs between the two sites have had only a minimal effect on water quality. There has been a positive trend in water quality during the 1980s below the community and values have remained in the normal range since that period.

However, current water quality monitoring may not adequately detect the effects of storm water which runs untreated into three water bodies: Dead Man's Hole, Cabin Creek, and

¹ Environment Canada. 2004. Water Quality Characteristics and Trends for Banff and Jasper National Parks: 1973-2002). Ecological Science Branch. 86 pp.



Cottonwood Creek. Concentrations of the contaminants of concern (salt and hydrocarbons) could be monitored by periodically testing the receiving waters.

Table 4 Water Quality Monitoring – Receiving Waters

Parameter	Units	Athabasca Falls	Below Snaring River	Applicable Guideline
Total particulate matter (or total suspended solids) ²	mg/l	100.382	106.043	Not to be increased by more than 10 mg/l over background value ²
Total phosphorus	mg/l	0.03	0.019	0.05 ³
Total Ammonia	mg/l	0.005	0.005	4.84 ⁴ at 5°C at PH 7.5 ⁵
Total coliforms	CFU/100 ml	23.500	50.250	1000 ¹
Faecal coliforms	CFU/100 ml	3.000	6.000	100 ¹

3.1.2 Terrestrial Ecosystems (Vegetation) (a) Non-native, Invasive Species

Non-native and invasive species have the potential to alter ecological integrity by changing ecosystem composition. Parks Canada’s target is a reduction in the number of types and the impact of non-native species.

Condition and Trend

Currently, no trend-monitoring program for non-native plants exists within the community. However, employees of the Parks Canada non-native vegetation control crew and vegetation management specialists have noted an increasing number of infestations within the town. Infested areas include:

- CN rail yard
- Industrial area
- Jasper Discovery Trail
- East and West entrance ditches
- Recently disturbed areas

The town has some of the Park’s species of greatest concern, which are all on the restricted or noxious weed list in both Alberta and Jasper National Park:

- Dalmatian toadflax
- Yellow clematis

² Unnaturally high levels of suspended solids in surface waters will reduce the amount of sunlight available for aquatic plants and animals, clog fish gills, cover spawning areas and disrupt feeding habits.

³ Surface Water Quality Guidelines for Use in Alberta (1999).

⁴ Canadian Water Quality Guidelines for the Protection of Aquatic Life (2000).

⁵ Total ammonia level selected based on an average water temperature over 4 samples/year at a PH level for the Athabasca River of 7.5.



-
- Tall buttercup
 - Spotted knapweed
 - Ox-eye daisy
 - Bladder campion

Some corporate land managers (e.g. CN, ATCO gas pipeline, ATCO electric) are working toward restoration and eradication of non-native plant species within town boundaries. There is a growing level of cooperation between Parks Canada and municipal staff on individual projects, however, a formal strategy for non-native vegetation control within the community and native landscaping principles needs to be developed.

(b) Landscape Composition

Natural or native vegetation and natural forest integrity provides habitat for certain species, reduces the attractiveness of communities to other species (e.g. bear and elk), reduces the likelihood of the spread of non-native plant species, and provides for protection against wildfire. Parks Canada's target is an increase in extent of natural/native vegetation and to restore forest integrity in the area surrounding the community.

The Fire Smart/Forest Wise project is a priority for Parks Canada and the Municipality of Jasper. The project also involves the Foothills Model Forest, Métis Nation of Alberta, ATCO Electric, and others. The program goals are to continue to restore forest integrity and offer increased security to the community. Parks Canada is taking the lead role in the fuel reduction program, with the municipality funding support for communication and education programs. Currently, approximately 265 hectares of area surrounding the community has been thinned, with approximately 110 hectares remaining in the current phase of the planned program.

The Municipality of Jasper is participating in the Communities in Bloom program that has eight main criteria: Floral Displays; Turf & Groundcovers; Landscaped Areas; Natural & Cultural Heritage Conservation; Tidiness; Tree/Urban Forest Management; Environmental Awareness; and Community Involvement. First year involvement resulted in the community receiving a very good rating of four blooms out of five. The long-term goal is to encourage the residential and commercial leaseholders to embrace the concept of natural vegetation versus non-native vegetation in all planting projects.

Information provided in the development process encourages developers to replace trees needing to be removed to enable development, and to replant natural species. The municipality has planted approximately 300 trees and it is working on a hazardous tree removal program. The goal is to replace all trees that have been removed as a result of development activity, disease, or the aging process.



3.1.3 Terrestrial Ecosystems (Wildlife)

(a) Trail Proliferation

Trails can compromise ecological integrity in areas around the community by decreasing the amount of effective wildlife habitat, causing erosion, promoting the spread of non-native plants, and fragmenting landscapes thereby restricting movement of wildlife species.

The community of Jasper acts as a hub from which a comprehensive formal trail network extends. These trails are mapped and maintained by Parks Canada. Despite the variety of trails within the formal network, there is considerable proliferation of informal trails. Informal trails are user-created (often by adopting game trails) and maintained. The proliferation of informal trails in the immediate area surrounding the community is undesirable.

The Jasper Trails Project is working closely with the community to make better trails for both people and wildlife. The project focuses on the trail network (both formal and informal) surrounding the townsite. Presently there are 210 km of formal trail and 142 km of informal trail. Through the Jasper Trails Project, informal trails will be addressed primarily by providing an exceptional formal trail network that meets the needs of recreational users. Options to manage informal trails include but are not limited to: adoption into the formal trail system, re-location, and rehabilitation. A renewed trail network will draw users back onto the formal trails and concentrate human use in areas of minimal ecological sensitivity. Community consultation is now in progress and trail construction and rehabilitation is slated for completion in the next two years.

Condition and Trend

Parks Canada reports the kilometres of formal and informal trails in the Three Valley Confluence area. These are primarily trails extending from the townsite that provide a 1-2 hour recreational experience.

Anecdotal evidence suggests that the number and level of use of informal trails has increased significantly over the past ten years. This has been particularly evident in the area that descends from the benchland west of the community. Monitoring is in progress, but trends are not yet available. As the formal trail network is reconfigured, any new informal trails will be removed as needed and the landscape rehabilitated as soon as possible.

Another indicator of trail proliferation is the number of informal trails that descend from the benchland into the community. The proportion of the landscape affected by these trails is small, however this is an area of high concern for erosion and non-native plants. These trails will be addressed along with the other informal trails through the Jasper



Trails Project. Ten such downhill trails have been identified, but use and proliferation trend information is not yet available

(b) Wildlife Movement

The Jasper community is located in an area containing the most productive wildlife habitat in the park. It is also the site where three prominent river systems come together making it an important thoroughfare for wildlife movement. For some wary species, the community and its activities may provide a barrier to this movement.

Parks Canada is beginning to monitor the presence and abundance of a diversity of wildlife species by detecting tracks and animal sign on winter transects orientated across several important movement areas near the community. This program is part of the long-term ecological integrity-monitoring program. Once it is in place, the results will be reported in the State of Community Report.

(c) Human-Wildlife Encounters

Human-wildlife encounters within communities help assess how well communities are integrating into natural landscapes. As well, it provides communities with a measure of safety for residents. High numbers of human-wildlife encounters would suggest that additional mitigation is necessary to reduce these incidents. The data in the table below is the number of interactions between wildlife and people that were either responded to by park wardens, or alternatively, have been reported through a detailed description.

Table 5 Human-Wildlife Encounters

Wildlife Species	Number of Encounters						Target	Threshold		
	2000	2001	2002	2003	2004	2005				
Elk	85% decline in the park since the late 1990s.					1	6	Not yet determined	22 ¹	
Grizzly bear	From 1993 to present there have been no recorded encounters in the community.						0	0		
Black bear	2	9	5	3	11	5	Not yet determined	Not yet determined		
	Number of Hazings*									
Black bear	23	43	84	28	29	18	Not yet determined	Not yet determined		

*In 2001, Parks Canada began a zero-tolerance program for black bears within the community to reduce habituation and mortality risk for bears. All black bears are now hazed (moved using cracker shells)

Elk

Elk encounters have declined by over 85% since the recommendations of the Elk Action Working Group were implemented in the late 1990s. However, park wardens haze elk daily from town to maintain this relatively low number of encounters. Wildlife specialists suggest that without constant hazing, incident numbers would be in the range of



30-40/year. Positive steps that will continue to maintain low elk encounters include further reducing non-native forage and ensuring gates in community parks are operating properly.

Bears

Grizzly bear encounters have remained low in the community of Jasper, while black bear encounters have declined since the new sewage treatment plant replaced the ponds, which attracted bears to the town area. Nonetheless, black bear encounters continue to be a problem in the town. The purchase of a vacuum truck by CN has helped reduce the grain attractant on the railway. However, daily spills on the tracks continue due to poor grain car maintenance. Ensuring the bear-proof garbage and recycling containers are used and well maintained remains important to reduce bear encounters.

3.1.4 Terrestrial Ecosystems (Solid Waste Diversion)

The Municipality of Jasper is responsible for solid waste collection in the town site and Parks Canada is responsible for the outlying commercial operators and all park facilities. Actions of the joint environmental stewardship program include the following improvements to the recycling facilities and programs since January 2004:

- A new community-recycling depot.
- Expanded recycling services including milk container and plastic jugs.
- An active promotion/education program to increase awareness about recycling.
- New collection bins for cardboard and kitchen organics.
- Creation of a community-based environmental stewardship committee.

In June 2005 a composting pilot study was conducted to raise awareness about composting and demonstrate the need for organics diversion. Results from the study indicated that an average household in Jasper produced 5.7 kg per week of kitchen organics. This indicates that organics are a significant portion of the waste stream. The Municipality of Jasper will continue to focus efforts on waste reduction and diversion and improving programs for residents and visitors. The table below reflects most recent waste diversion figures:

Table 6 Solid Waste Diversion

Year	Townsite	Total Waste or material (m ³ or tonnes)*	Diverted material (m ³ or tonnes)*	% diversion (recycled + composted/total waste x 100)
2002-2003	Jasper	8462.8	1408.4	16.6
2003-2004	Jasper	7958.7	1375.3	17.3
2004-2005	Jasper	6966.8	1395.3	20

*Total Waste: All material weighed at the transfer station and paper fibre & plastics processed by the Municipality of Jasper

*Diverted Material: Includes all material, which is diverted from the landfill for re-use, recycling or composting



Waste diversion programs are a priority for Parks Canada and the Municipality of Jasper because of concerns about the future life expectancy of the current transfer station. Using current practices the waste transfer station has approximately a ten-year life expectancy. However, with the imminent closure of the trade waste area, trade waste will have to be diverted to the transfer site causing a shortened life expectancy. Actions to deal with trade waste management are a priority for Parks Canada and the Municipality of Jasper.

3.1.5 Terrestrial Ecosystems (Community Contaminated Sites)

Contaminated sites are described as places where substances occur at concentrations above background levels and may prove hazardous to human health or the environment if improperly monitored or, where necessary, if not reclaimed. Parks Canada measures this indicator by examining the level of reclamation activity within communities, with a goal of 100% reclamation over time.

Condition and Trend

The table below shows the status of contaminated sites in the community in 2000 and 2005. In 2000, Parks Canada suspected one site to be contaminated and six were confirmed. Since that time no additional sites were discovered.

A phase 1 contaminated sites study was completed in 2002 as part of the transfer of land in the local government development process. The results of the phase 1 study resulted in phase 2 and phase 3 studies being completed with the result that two contaminated sites were remediated to enable land use transfer arrangements. Commercial sites that have been identified as contaminated are being risk managed.

The table below reflects removal of the underground storage tanks and reclamation at the AMA site on Connaught Drive.

Table 7 Contaminated Sites

Site Name	Status in 2000	Status in 2006
CN Yard	Confirmed (risk managed)	Confirmed (risk managed)
Parks Maintenance Compound	Confirmed (risk managed)	Confirmed (risk managed)
Old Firehall	Suspected (risk managed)	Suspected (risk managed)
Dry Cleaning - various	Confirmed (risk managed)	Confirmed (risk managed)
AMA Area – Connaught	Confirmed (risk managed)	Confirmed (remediated)
Service Stations	Confirmed (risk managed)	Confirmed (risk managed)
S Block Industrial park	Confirmed (risk managed)	Confirmed (risk managed)



3.2 Heritage Conservation/Built Heritage

Principle: The focus should be on the conservation of priority heritage buildings representative of the community's distinctive character and ensuring that new development is compatible in design and quality with the heritage character of the community. This principle applies to both Parks Canada facilities and those owned by others.

An inventory of heritage structures has been completed with five being under control of Parks Canada. The remaining structures are owned or under the control of third parties through agreement with Parks Canada. Third party agreements with parties that control federal heritage resources include a commitment to retain heritage character. All other privately owned resources are controlled through the development review process.

The historic district of Old Town Jasper is a primary area of heritage character that has been maintained through development controls and implementation of strict architectural motifs. All development in the area is closely monitored and each development is assessed on its merits of compatibility with the community. In some situations development regulation variances are provided to assist in achieving heritage goals.

Currently there is no organized community effort to encourage maintenance of built heritage or programs that would assist lessees in developing or maintaining heritage character. The lack of community focus on this area may contribute to some heritage residences being demolished. Additional work will have to occur to provide an overall assessment of the trend that is occurring with built heritage resources.

The Jasper Park Information Centre National Historic Site is the only national historic site located in the Community of Jasper. A Commemorative Integrity Statement (CIS) was prepared and approved for the site in March 2000. Interventions to the building have been undertaken to stabilize the structural concerns identified in the CIS Evaluation, and further measures are planned.

A management plan for the Jasper Park Information Centre National Historic Site has been completed in 2006, to establish long-term direction for managing the commemorative integrity of the site, and to improve presentation and awareness.

3.3 Responsible Growth Management

Principle: Limits to commercial growth, zoning, and boundaries for each community have been established. These legislated limits will continue to guide community plan reviews. Housing requirements will be managed by commercial development limits, need to reside regulations, zoning, and community boundaries.



3.3.1 Growth Limits

The strategic directions for Jasper in the JCLUP provided actions that would enable Jasper to continue to be a good place to live and visit while maintaining and developing appropriate levels of commercial and community services for eligible residents and visitors. A maximum commercial development limit was established at 9290 sq. meters (100,000 sq. feet) and a draw process for allocation of new commercial development was implemented to achieve park and community objectives. As per direction in the JCLUP, new commercial development occurred once the new wastewater treatment plant was made operational.

Since the approval of the JCLUP four lottery draws have been completed. The resulting amount of commercial development is identified in the following table. The table reflects that some commercial space has been drawn to meet the annual allocation, but not all development has been completed or has been able to receive development approval. The result is that the target for commercial development build-out has been amended from five years to approximately nine years.

Table 8 Commercial Growth

Commercial Growth Limit (m2)	Fiscal year	Net increase for reporting year (m2)	Total net increase since signing of C-plan (m2)	% of limit (Total net Increase/Commercial Growth Limit x 100)
9290 m2	2003-2004	956 m2	956 m2	10.3 %
	2004-2005	947 m2	1903 m2	20.5%
	2005-2006	322 m2	2225 m2	23.9%
To date	2006-2007	27.3m2	2252.3 m2	24.2%
Totals		2252.3 m2	2252.3 m2	24.2 %

Four development draws have resulted in the limit for light industrial development in the S-Block area being allocated. C-2 commercial lodging limits were allocated through the draw process; however, development did not occur and the full amount is available for future draws. A review of the allocation for C-1 retail and restaurant finds that some of this allocation may be moved to the two other development categories. The JCLUP commits to a review of the allocation between commercial districts after five years or through a plan amendment process.

The decision to set limits and provide allocations of new commercial development to the commercial zoning districts remains controversial. Parks Canada has received conflicting feedback on the implementation of the community boundary and the limits to commercial development. One side of the debate argues that the limits provided are detrimental to the overall sustainability of the community; however, Parks Canada has also received feedback that the limits to growth are a positive influence to maintaining the community vision and character of the community.



3.3.2 Quality of Life

No formal system of quality of life measurement or monitoring through established indicators has been established. The strategy is to work with the Municipality of Jasper to use the community planning process as the avenue to develop indicators residents accept as reflecting the needs of their community.

One aspect of community quality of life that Parks Canada has been confronted with is the availability of affordable housing. This issue was raised in the last JCLUP development process and continues to be of concern to community members and governing bodies.

The JCLUP identified the following four major actions to assist in dealing with the affordable housing issue:

- Development of a housing study to determine the needs in the community,
- Establishment of a housing authority,
- Release of residential lands for development, and
- Redevelopment of underdeveloped Parks Canada residential properties.

The JCLUP identified a shortfall of 150 housing units and the subsequent 2002 housing study projected the ten-year need at approximately 235 units to accommodate different households. Since the completion of the community plan 30 units have been completed as a result of new commercial development and another 30 will be provided when allocated new commercial development is completed. Additional housing proposals are currently being contemplated by the private sector that will generate 31 units. The public sector is currently planning to develop 24 new senior units. Additional units have been developed through redevelopment of up-zoned properties.

Currently the Municipality of Jasper is reviewing the potential functions of a housing authority in delivering affordable housing and negotiations between Parks Canada and the municipality are underway to release lands. Parks Canada has completed an internal business case on the financial needs to redevelop the existing staff housing and the underdeveloped properties. Redevelopment of Parks Canada's underdeveloped properties is key to meeting the housing unit targets that have been identified.

3.3.3 Economic Vitality

No formal system of measuring economic vitality or monitoring through established indicators has been established. The strategy is to use the community planning process as the avenue to establish the indicators that residents accept as reflective of the needs of their community.

Municipal council has expressed concern about the future economic sustainability of the community when commercial build-out has been achieved. There is speculation that the "no growth" environment combined with changing visitor patterns may hamper sustainability.



3.4 Appropriate Use

Principle: New business applications and development will only be considered if it can be demonstrated that they are appropriate to the national park community and its setting in a national park. Basic and essential services should be outlined in the context of meeting the needs and expectations of visitors and residents, contributing to memorable visitor experience and promoting public education.

Appropriate use guidelines have been developed in consultation with the Municipality of Jasper. These guidelines will be implemented into the municipality's business license bylaw and will be considered as part of the approval framework when the municipality assumes responsibility for issuing business licenses.

All new business licenses issued after the implementation of the community plan meet the appropriate use criteria identified in the *Jasper Park Management Plan*. Currently all licensed businesses in the Town of Jasper are consistent with the appropriate use guidelines.

3.4.1 Character

Community character relates to the degree of conformance with architectural, landscaping, sign and site regulations and policies.

The JCLUP provided direction to update Jasper Land Use Regulations and to develop and implement a stricter compliance and enforcement strategy. Jasper Land Use Regulations were updated through a community consultation process and are currently being implemented as park policy until final legislative structuring is completed. A stricter compliance program is implemented through the addition of a designated compliance officer to townsite operations.

New community land use policies and the existing architectural motif continue to guide development. All development is directed to follow these directives and a high degree of compliance occurs. No formal statistics are maintained but initial development compliance is estimated at 95%. Compliance after consultation is estimated at 98%. Non-compliance is then moved to an enforcement program that includes administrative and legal actions.

3.4.2 Understanding Visitors – Visitor Experience

The 2003 Survey of Visitors to Banff, Jasper, Kootenay and Yoho National Parks of Canada is a comprehensive year-long study that was commissioned by Parks Canada in partnership with many regional tourism partners. Survey results for Jasper can be used to draw some observations about visitors to the community of Jasper. The data included here reflects information from independent travellers and does not include bus tour information.

Over 70% of visitors to the park used the town at some point in their visit. Visitors indicate a generally high level of satisfaction with the value of services offered by the park and the Town of Jasper (average over 4 on a 5-point scale).



Table 9 Origin of Visitors

Visitors using the Town of Jasper area	Alberta	Other Canada	United States	Europe	Asia	Other Overseas	Total
Number	349,614	228,429	239,858	189,568	3,170	63,134	1,073,773
Percentage	32.6%	21.3%	22.3%	17.7%	0.3%	5.9%	71.9%

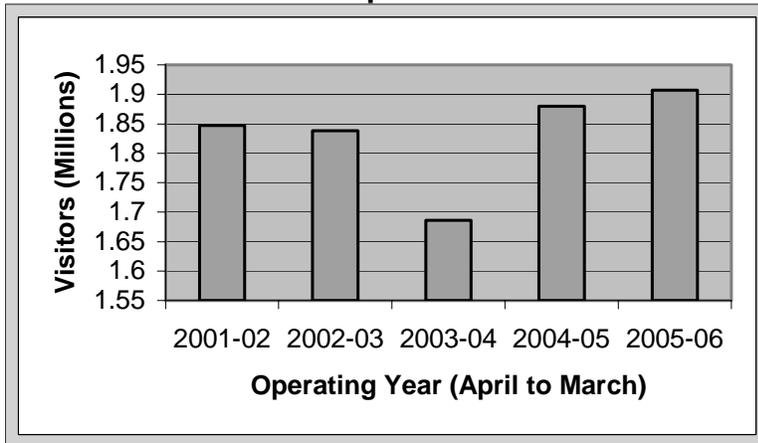
The majority of visitors (67%) to the park stay at hotels, motels, and lodges in Jasper National Park. Most of these are located in the town. A minority of visitors (5.6%) stay with friends and relatives or at approved home accommodations.

A high proportion of Albertans are habitual visitors to Jasper National Park (41% vs. 35% of all Jasper visits). The breakdown by visitor type to Jasper National Park looks like this:

- Habitual 34.9%
- Park Experience 17.3%
- Getaway 30.1%
- Sightseeing 17.7%

Findings from the 2003 survey are being used in park management decision-making.

Table 10 Annual Jasper National Park Visitation



Despite international events and other factors that have influenced tourism the overall visitation to Jasper National Park has remained relatively steady over the last five years.

3.4.3 Providing Opportunities – Public Education and Awareness

The JCLUP plan provides direction that increased learning will occur within the community through Parks Canada direct programming, and/or through partnerships that are focused on achieving the goals of the Heritage Tourism Strategy. These goals are:

- Ensure all visitors are aware they are in a national park setting;
- Encourage, develop and promote tourism opportunities, products and services consistent with heritage values;



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- Encourage tourism operators to adopt environmental stewardship initiatives upon which sustainable heritage tourism depends; and,
 - Strengthen employee orientation, training and accreditation as it relates to sharing heritage understanding with visitors.

Several businesses support the heritage tourism objectives informally through participation in training and accreditation programs (approx. 900 staff/year), by offering programs that promote heritage values, through the adoption of environmental stewardship practices, and by creating awareness of the national park through their print, signage, and promotion programs. A process for monitoring the heritage tourism offer and a means for evaluating effectiveness would be beneficial.

Parks Canada's Corporate Plan identifies specific expectations in the area of public appreciation and understanding. It challenges us to:

- Maintain 50% participation of national park visitors in learning experiences related to the natural and/or cultural heritage of the park.
- Maintain 85% visitor satisfaction with 50 % being very satisfied with onsite heritage presentation programs
- Maintain 75% visitor understanding of the significance of the park
- Gain active support from visitors, stakeholders, residents and Canadians for the integrity of the park

Learning opportunities that currently exist include:

- A guide accreditation program developed in partnership with Parks Canada and the Mountain Park Heritage Interpretation Association (MPHIA). This partnership assists with the delivery of consistent information.
- Friends of Jasper National Park provide educational programs on the history and development of the community.
- Information stations exist throughout the community that provide interpretive information on the park and the community. Last year this program was enhanced with the placement of additional stations. Heritage Tourism messaging is being integrated into the newly developed Discovery Trail. This project is a partnership between the Municipality of Jasper, Friends of Jasper and Jasper National Park.
- The Jasper-Yellowhead Museum and Parks Canada bring in guest speakers for the benefit of residents and visitors.
- Advisory groups, steering committees and workshops ensure two-way communications on key issues.
- Parks Canada has implemented several new initiatives to provide regular updates to the community, including:
 - Submissions in both local weekly newspapers every two weeks;
 - Info Report by fax/e-mail to storefront properties every two weeks called "What's happening in the park";



- Monthly e-newsletter to stakeholders

Increased monitoring and evaluation of visitor and resident opportunities is needed for better decision making and direction setting in both the Community Plan and Park Management Plan.

3.4.4 Delivering High Quality Service

The Parks Canada Corporate Plan identifies clear expectations for Quality Visitor Experience including a target of 85% overall visitor satisfaction with at least 50% indicating they are very satisfied with their experience at a national park. There is recognition that the visitor experience includes pre-trip planning as well as welcome and orientation. Opportunities exist for the park and community to establish shared visitor services along with monitoring and evaluation of that service.

The 2003 Visitor Study has some data on the level of visitor satisfaction with services provided in the community, but a more targeted Jasper Community Visitor Services Plan will provide the community with information that will enable business and other agencies to meet the evolving expectations of visitors.

3.4.5 Connecting Visitors and Residents Personally with Place

There are many and varied opportunities for visitors and residents to make a personal connection with Jasper National Park and the community of Jasper. This can be done through independent activities, community organized events and programs (e.g. volunteer program, Fire Smart/Forest Wise work bees, Parks Day tours), school activities (including the Grade10 Stewardship Course), programs offered by the park, commercial ventures, and programs offered by non-profit organizations like the Friends of Jasper National Park and the Jasper-Yellowhead Museum.

A monitoring system would help assess the level of visitor or resident satisfaction and level of participation in learning opportunities.

4. Evaluation of Management Actions

The following management actions of Parks Canada or the Municipality of Jasper have contributed to achieving the Minister's principles and the objectives in the plan. An assessment of the success of these actions is also provided.



Table 11 Evaluation of Management Actions

Management Action	Result
Protection	
1. Construction of new wastewater treatment plant	Achievement of wastewater effluent standards that have been identified for the community
2. Agreement between Parks Canada and the Municipality of Jasper to partner in the establishment of an environmental stewardship position.	Key successes have occurred in the area of solid waste management, environmental education and community engagement.
3. Implementation of the commercial allocation strategy and community boundary	Controlled commercial development within the strategic direction of the Plan and limited community footprint.
4. Development of new water wells and decommissioning of old well.	Increase in the quality of water service, decrease community impact on park land and increase visitor confidence in water services
Visitor Experience	
5. Municipal development of parking infrastructure and road controls	These have both contributed to an improvement in visitor services.
6. Allocation of additional resources by the Municipality of Jasper and Parks Canada to increase enforcement.	Produced increased compliance in appropriate use and development, and has increased quality of visitor services
7. Improvements to community entrances and changes to the Jasper Land Use Regulations which provide height restrictions to commercial development	Connection of visitors/residents to place has been achieved through the maintenance of scenic views
Quality of Life	
8. Area structure plan completed for trailer court, new development regulations implemented and new services developed by the municipality	Enhanced community development and quality of life in the trailer court
Public Education	
9. Improve website and stakeholder communication tools	Stakeholders and partners are better informed about park issues and initiatives
10. Increase programming to engage visitors in learning (e.g. Behind the Scenery - Wildlife Festival, Mountain WHIT Theatre)	More opportunity for residents and visitors to have first-hand learning experiences

5. Condition of the Information Base

A number of information gaps have been identified through this process. Data is missing in the areas of:

- The effects of storm water on the park landscape;



- Information on the degree of compliance to development regulations;
- Information on quality of life;
- Trend monitoring program for non-native, invasive species;
- Trend information on state of heritage resources;
- Information on visitor needs specific to community;
- Information on visitor satisfaction of experience in the community; and
- Information on levels of visitor understanding of the Parks Canada mandate and support of that mandate.

These information gaps will be considered and addressed through the ongoing development of the community-monitoring framework. Future State of the Community Reports will have the benefit of this expanded information base.

6. Key Considerations and Emerging Issues

- a) Approximately 90% of the actions identified in the existing plan have been carried out or are in the process of being addressed. Therefore, a new plan with a broader scope is needed to meet the evolving needs of the Town of Jasper.
- b) The town currently does not have an overall strategic development plan that uses contemporary planning process that use an integrated approach of considering social, economic, environmental, governance, and cultural development with an overall focus on community sustainability.
- c) Increasing competition and the changing nature of the tourism industry is causing businesses to raise issues of their sustainability given the commercial development caps, establishment of a legislated community boundary, and the Parks Canada gate fees. The Municipality of Jasper also has concerns about its sustainability in a no growth assessment environment.
- d) Implementation of the commercial development allocation process has resulted in complete allocation of light industrial development in S-Block. Additional lands under the control of Parks Canada are available for future commercial development or are considered for use for community related development consistent with a light industrial zone. The C1 retail zone seems to have an overabundance of allotment and there is a continual expression by the accommodation businesses that additional allotment is needed for sustainability.

The community planning process can assist in determining if any redistribution of allotment is needed within the existing commercial zoning and if some lands in S-Block should be considered for community use.



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- e) Current water quality monitoring systems may not be sufficient to detect the effects of storm water run off into the three water bodies: Dead man's Hole, Cabin Creek, and Cottonwood Creek.
 - f) The availability of affordable housing remains a key community concern because no significant amount of housing units have been developed beyond the required numbers for new commercial development. Parks Canada has not taken any actions to redevelop their underdeveloped properties.
 - g) The economics and availability of a storage area in the Park for solid waste management is a growing concern for Parks Canada and the Municipality of Jasper. In particular, the lifespan of the landfill at the Transfer Station is a concern.
 - h) The current monitoring framework does not consider air quality and consumption of electricity. Air quality measurements could provide essential data to determine levels of pollution over time in various locations. This would also be pertinent relative to climate change (greenhouse gas emissions) monitoring. Electrical consumption is an important consideration because the community does not function on the power grid.
 - i) With respect to solid waste monitoring, diversion rates could be substantiated with data specific to recycling commodities and organics diversion. This would support changes in diversion rates over time and contributes to a greater focus on alternative solid waste management practices.
 - j) Additional resources are needed to develop a formal community information gathering and service evaluation system that can be used by major stakeholders to plan integrated economic, social, environmental and visitor services, and facilities to meet strategic direction.
 - k) The existing Parks Canada Information Centre does not meet the requirements of a modern visitor centre. It has neither the space nor the amenities (bathrooms, booking agent, learning opportunities) that a growing number of visitors expect.
 - l) Few opportunities have been provided to engage youth in stewardship of the national park. Local residents can make an important contribution to manage the overall effects of human use on the park, and youth need to be engaged in stewardship activities and decision-making processes.