

Periodic Report on the Application of the World Heritage Convention

Section II

Report on the State of Conservation of Waterton-Glacier International Peace Park

1 INTRODUCTION

1a State Party

CANADA and the UNITED STATES OF AMERICA

1b Name of World Heritage Site

Waterton-Glacier International Peace Park

1c Geographic Coordinates

Canada: Latitude 49°00' - 49°12' N / Longitude 113°40' - 114°10' W

USA: Latitude 48°15' - 49°00' N / Longitude 113°15' - 114°30' W

1d Date of inscription

09/12/95

1e Date of subsequent extension(s)

Not applicable

1f Organization(s) responsible for the preparation of report

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2 STATEMENT OF SIGNIFICANCE

2a Original justification for inscription

The nomination from the State Parties indicated that the joint properties merited consideration for the World Heritage List by meeting all four of the criteria established for natural area nominations. Specifically, it stated: (i) Waterton Glacier International Peace Park is an outstanding example representing major stages of the earth's history, including the highly preserved Lewis Overthrust, virtually unaltered Proterozoic Sedimentary Rocks and six species of Stromatolite fossils; (ii) Waterton Glacier International Peace Park occupies a pivotal location in the western cordillera of North America, which has resulted in the evolution of plant communities, and ecological complexes that occur nowhere else in the world; (iii) Waterton Lakes and Glacier were designated as national parks because of their superlative mountain scenery, high topographic relief, glacial landscape, pristine lakes, and abundant diversity of wildlife and wildflowers; and (iv) Waterton Glacier International Peace Park provides critical habitat for self-sustaining populations of grizzly bears, gray wolves and wolverines, nesting bald eagles, and migratory stopovers for peregrine falcons; and there are two endemic fish species and 24 rare and endemic plants.

2b Criteria for initial inscription

Cultural Criteria:

Natural Criteria:

ii

iii

2c Agreed upon Statement of Significance

At the time of inscription, the World Heritage Committee agreed upon a Statement of Significance.

Agreed upon Statement of Significance

The World Heritage Committee inscribed the site on the World Heritage List under criteria N(ii) and N(iii).

Waterton-Glacier International Peace Park has a distinctive climate, physiographic setting, mountain/prairie interface and tri-ocean hydrographical divide as well as significant scenic values and the cultural importance of its International Peace Park designation.

2d Criteria added after initial inscription

Since the initial inscription, the World Heritage Committee has not added additional criteria to the inscription.

3 STATEMENT OF AUTHENTICITY/INTEGRITY

3a Initial evaluation of authenticity/integrity

In 1994, the State Parties stated that ecosystem-based management initiatives had been successfully undertaken on both sides of the United States-Canada border so as to enhance the integrity of the ecosystem of which the International Peace Park is the core. The Guiding Principles and Operational Policies for Parks Canada have codified the approach of supporting such initiatives. Similarly, the Management Policies of the US National Park Service (NPS) provide clear direction to park managers to participate in and lead ecosystem management initiatives, especially in regional land use planning, to protect migratory species, to preserve scenic views, and to maintain air and water quality. In the 1994 nomination, the United States and Canada cited 9 ecosystem-based initiatives that involved one or both parks and enhanced the integrity of the International Peace Park.

In 1995, the IUCN noted that Waterton-Glacier International Peace Park is less complete in its coverage of its ecosystem than existing World Heritage Sites in the region and that the small size in relation to ecosystem boundaries could make the unit more prone to loss of species in the long run unless extra effort is made to manage cooperatively the public and private lands adjoining the park. The IUCN stated that a missing

element of the Waterton-Glacier area is the adjoining Akamina/Kishinena area in British Columbia, a portion of which has been given provincial park protection and recommended that the authorities be encouraged to pursue the creation of a single transboundary Rocky Mountain Biosphere Reserve. The World Heritage Committee recommended that “the site be eventually expanded with the cooperation of the Government of British Columbia to include the adjacent protected area in the Akamina-Kishinena.”

3b Significant changes in authenticity/integrity

Since inscription, there have been significant changes in the authenticity/integrity of the site.

Description of changes in authenticity/integrity

- Proposal to expand Waterton Lakes National Park: In October 2002, the Prime Minister of Canada announced an interest in expanding the western boundary of Waterton Lakes National Park across the continental divide into the Flathead River drainage of British Columbia. This expansion would encompass lands with significant biological diversity including highly productive grizzly bear habitat. In addition to expanding the size of Waterton Glacier International Peace Park, this expansion would add increased security to the adjacent Glacier National Park and the existing portion of Waterton Lakes. A final decision to expand Waterton Lakes is contingent on the support of the Province of British Columbia and First Nations. If supported, the process would take approximately 5-10 years to complete.

- Management Plans: Glacier National Park adopted a new General Management Plan in 1999 that will guide park management for the next 20 years. The plan provides for management that will continue the classic western park character. Over 95 per cent of the park would be managed for its wilderness character and for the integrity of its unique cultural and natural heritage. The 2000 park management plan for Waterton Lakes National Park legally designates approximately 84 per cent of the park as wilderness.

- Crown of the Continent Ecosystem Managers Partnership: In 2001 the two International Peace Park Superintendents invited 20 adjacent land and resource managers to discuss their respective responsibilities and explore opportunities for improved interagency cooperation. An outcome of this 2-day workshop was the formation of a Crown Managers Partnership (CMP) that is focusing on five issues of integrity that are best addressed at the regional or ecosystem scale: collaboration in sharing data and in standardizing assessment methodologies; cumulative effects of human activity across the ecosystem; increased public interest in how public lands are managed; increased recreational demands and visitation; and maintenance and sustainability of shared wildlife populations. An interagency steering committee, appointed by the CMP partners, has developed a work plan to tackle these issues and to report back to the Crown managers. The Steering Committee is being assisted in these efforts by the Miistakis Institute for the Rockies and by the Transboundary Policy, Planning, and Management Program at the Universities of Montana and Calgary.

- Land Use Plans, Flathead County, Montana: Local land use plans were adopted in 1994 and 1998 respectively for private lands in the two river valleys on the western and southern boundaries of the park. The plans restrict the minimum size of new residential lots, and provide minimum set back requirements for new construction near streams (Resolution 1049A of 12/29/94 and Resolution 1349A of 10/28/98 by the Flathead County Board of Commissioners).

- The Southern Rocky Mountains Management Plan was recently completed by the Province of British Columbia. The Plan provides management direction for a large area of provincial crown land stretching from the International Peace Park to the Height of the Rockies Provincial Park, just south of Banff National Park. For the first time, the Plan provides limits to motorized recreation access in the planning area. It is anticipated that this direction will provide an enhanced level of habitat security for shared wildlife populations.

- Private Land Conservation: In 1997, the Nature Conservancy of Canada (NCC), with some support from Waterton Lakes National Park, initiated the Waterton Front Project to secure approximately 14 164 hectares (34 999 acres) of ranchland from subdivision and associated development pressures. NCC has secured approximately 70 per cent of the project area through conservation easements and land purchases.

4 MANAGEMENT

MANAGEMENT REGIME

4a Ownership/Management

Management under protective legislation

Description: Glacier National Park is managed under the authority of the National Park Service Organic Act of August 25, 1916 and related management policies. The park is owned by the United States Government on behalf of the American people. It is managed by the NPS, a federal agency. As a national park it receives the highest level of conservation protection afforded by the federal law of the United States. Waterton Lakes National Park is managed under the authority of the Canada National Parks Act and the Parks Canada Agency Act, plus Parks Canada's Guiding Principles and Operational Policies.

4b Level of authority

National

Description: see 4c and 4e

4c Legal status

Glacier National Park is a part of the NPS of the United States of America. Glacier was created by an Act of the United States Congress on May 11, 1910 (36 Stat. 354). Except for a few small private inholdings, all land within the park is owned and managed by the U.S. Government.

Waterton Lakes National Park is part of the national parks system of Canada. It was originally designated as a Forest Park in 1895. All land within the park is owned and managed by the Canadian government and is dedicated to the people of Canada for their benefit, education and enjoyment.

4d Agency/agencies with management authority

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4e Protective measures and means of implementing them

For Glacier:

· An Act of May 11, 1910 (36 Stat 354) provided for the establishment of Glacier National Park "...and

dedicated (it) as a public park or pleasure ground for the benefit and enjoyment of the people.... and for the preservation of the park in a state of nature..... and for the care and protection of fish and same within the parks boundaries.”

- An Act of Aug 25, 1916 (39 Stat. 535) which establishes the United States NPS and which states that the fundamental purpose of national parks is “...to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner as by such means as will leave them unimpaired for the enjoyment of future generations.”
- The National Parks and Recreation Act of 1978 (Public Law 95-625) which requires that all US NPS Units have a current general management plan.
- National Park Service Concession Management Improvement Act of 1998 (Title 4 of Public Law 105-391)
- National Historic Preservation Act of 1966 (16 U.S.C. 470 as amended by P.L.96-575)
- National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) · Federal Water Pollution Control Act (33 U.S.C.208, 303, 401, 402, 404, 405, 407, 511, 1288,1314, 1341, 1342, 1344)
- Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)
- Clean Air Act, as amended (42 U.S.C. 7401 et seq.)
- American Indian Religious Freedom Act (42 U.S.C. 1966)
- Code Federal Regulations, Title 36, Chapter1, National Park Service, Department of Interior

For Waterton Lakes:

- The Canada National Parks Act (2000). It requires that “maintenance or restoration of ecological integrity, through the protection of natural resources and natural processes, shall be the first priority of the Minister when considering all aspects of the management of parks.”
- The Parks Canada Agency Act (1998), established an Agency “for the purpose of ensuring that Canada’s national parks, national historic sites and related heritage areas are protected and represented for this and future generations and in order to further the achievement of the national interest as it is related to those parks, sites and heritage areas and related programs.”
- Parks Canada’s Guiding Principles and Operational Policies
- The Canadian Environmental Assessment Act (1992)
- The Species at Risk Act (2002)
- The Fisheries Act (1985)
- The Migratory Birds Convention Act (1994)

4f Administrative and management arrangements

For Glacier:

Glacier National Park is a unit of the US NPS. Day-to-day management is directed by the Park Superintendent who supervises a staff of 101 full-time employees organized into 6 divisions (Administration, Interpretation, Resource Management, Facility Management, Project Management and Concessions Management). The Superintendent oversees management of the park on a day-to-day basis. The Superintendent reports to a Regional Director, who reports to the Director of the NPS.

Management direction for the park comes from the statutes and regulations cited in section 4e above. Management direction is also provided by Management Policies prepared by the headquarters office of the US NPS (US Dept of Interior, National Park Service, 2000, Management Policies- 2001, Washington DC).

Glacier National Park is 410,187 hectares (1 013 594 acres) in total area. The owner of all of this area is the Government of the United States with the exception of approximately 155 hectares (387 acres) of land that remains as privately owned lots. Private landowners within the park pay local property taxes and are subject to local jurisdictions for zoning, water and sewer standards etc.

The International Boundary Commission has administrative authority over the 63 km (39 miles) of international border between the two parks. This authority is limited to a 6 metre (20 feet) strip within Glacier on the United States side of the border, and within Waterton Lakes on the Canadian side of the border.

The Montana Department of Transportation has management authority for 6 km (3.7 miles) of federal highway (US Highway 2) within the park and located near the park's southern border. This highway right-of-way is 18 metres (66 feet).

For law enforcement purposes, the federal government has exclusive jurisdiction on all lands within the park boundaries with the exception of the 6 km of U.S. Highway 2 where the State of Montana and the federal government have concurrent jurisdiction.

For Waterton Lakes:

Day-to-day management of Waterton Lakes is directed by the Field Unit Superintendent who reports via the Executive Director of Mountain Parks and Director General, Western and Northern Canada to the Chief Executive Officer of the Parks Canada Agency. Management direction for the park comes from the acts and regulations cited in Section 4e, as well as by the Guiding Principles and Operational Policies (1994) and the Waterton Lakes National Park of Canada Management Plan (2000).

Waterton Lakes National Park is 52,500 hectares (129 728 acres) in total area. The owner of all of this area is the Government of Canada. All privately occupied land in the park is leased from the government. All highways are owned and maintained by the Government of Canada.

For Waterton-Glacier International Peace Park World Heritage Site:

A Memorandum of Understanding between the US NPS and Parks Canada provides for cooperation in management, research, protection, conservation and presentation of the shared International Peace Park and World Heritage Site. Management and operations of the two parks are coordinated.

4g Significant changes in management regime since inscription

None at Glacier.

Waterton Lakes National Park is managed according to the Canada National Parks Act of 2000 which strengthens the commitment to preserving ecological integrity

4h Management plan

There is a management plan in place for the site.

Summary of management plan

There is no single integrated management plan for the World Heritage Site but management objectives and policies for the two parks are similar and management is coordinated.

For Glacier:

Management plans are required by law for all US National Parks. Glacier's 1999 General Management Plan (GMP) provides that the park will continue to be managed for its wild character and for the integrity of Glacier's unique natural and cultural heritage, while continuing traditional visitor services and facilities. Approximately 95 per cent of the park will continue to be managed as wilderness. (US Dept of Interior, National Park Service, 1999, Glacier National Park, Final General Management Plan and Environmental Impact Statement)

The GMP focuses on eight critical issues facing the park over the next 20 years and provides direction as to how each issue will be addressed by park managers. These issues include: visitor use on the Going-to-the-Sun road; preservation of the Going-to-the-Sun Road; preservation of historic hotels and visitor services; eliminating scenic air tours over the park; banning personal watercraft from all park waters; managing increased winter use; building removal from the Divide Creek flood plain; and constructing a West Side Discovery Center and Museum. A complete copy of the 1999 GMP is available at www.nps.gov/glac/home.htm

For Waterton Lakes:

All Canadian national parks are required by law to have a current management plan which is reviewed at least every five years. The most recent Waterton Lakes National Park of Canada Management Plan was approved in May, 2000. It stresses the maintenance and restoration of ecological integrity, encourages regional coordination and places a cap on development within the park. This revised management plan will guide the overall direction of the park for the next 10 to 15 years. The objectives of the plan are to:

- Set out a vision for the future;
- Preserve and strengthen the ecological integrity of the park in a way that integrates ecological, social, and economic values;
- Promote high quality visitor experiences based on the park's ecological and cultural heritage;
- Establish clear limits to development associated with appropriate activities;
- Support Parks Canada's initiative to renew heritage presentation; and
- Involve others in protecting the shared ecosystem.

Parks Canada has adopted "ecosystem-based management." It is a holistic approach that involves working with others to achieve common goals. Multi-disciplinary in nature, it seeks to integrate biological, physical and social information. The goal is a healthy park, environmentally, economically and socially, within a broader regional landscape.

The park management plan can be accessed on the website at:

URL: http://www.parksCanada.gc.ca/pn-np/ab/waterton/plan/plan1_e.asp

FINANCIAL RESOURCES

4i Annual operating budget

\$ 11,103,000 (US dollars for FY03) [Glacier] ; \$4,104,000 (Can dollars for FY03) [Waterton Lakes]

STAFFING LEVELS (HUMAN RESOURCES)

4j Staffing levels

Full time:	153
Part time:	10
Seasonal:	410
Other:	109

The figures above are the combined staffing level totals for both Waterton Lakes National Park and Glacier National Park.

Full time: 117 Glacier 36 Waterton

Part time: 5 Glacier 5 Waterton

Seasonal: 380 Glacier 30 Waterton

Other: 32 Glacier 77 Waterton

Staffing at Glacier is divided into 6 divisions: administration (21 employees), interpretation and education (11 employees), science and resource management (18 employees), facility management (64 employees), concession management (3 employees) and visitor services (37 employees). In addition, there are approximately 100 individuals who work as seasonal volunteers, and approximately 750 employees who work seasonally for concession businesses.

Staffing at Waterton Lakes consists of: administration (15 positions), resource conservation (40 positions), visitor services and communications (44 positions); and townsite and technical services (19 positions). "Other" includes volunteers and students.

SOURCES OF EXPERTISE AND TRAINING IN CONSERVATION AND MANAGEMENT TECHNIQUES

4k Sources of specialized expertise, training and services

For Glacier:

- Denver Service Center (regional US NPS staff with specialized expertise in such areas as cultural resources, compliance, engineering, writing and editing).
- Rocky Mountain Cooperative Ecosystem Study Unit (provides research and resource management assistance to Glacier by faculty and graduate students at participating colleges and universities)
- Northern Rocky Mountain Science Center, U.S. Geological Survey (research scientists stationed at Glacier specializing in natural sciences)
- Flathead Lake Biological Station (University of Montana unit specializing in fresh water ecological research)
- Harpers Ferry Center (US NPS unit that develops interpretive materials for parks)
- Mather and Albright Training Centers (for US NPS employees)
- Miistakis Institute for the Rockies (University of Calgary affiliated organization providing ecosystem based services to governments, industry, and the conservation community)
- Many of Glacier's permanent staff have advanced college degrees, particularly in the biological sciences. Currently, two permanent staff members have PhD's; one in fisheries and one in oceanography.

For Waterton Lakes:

- Western Canada Service Centre (regional national parks staff with specialized expertise in cultural resources, environmental assessments, townsite planning etc.)
- Parks Canada National Office (parks staff with national specialized expertise in policy, international relations etc.)
- Miistakis Institute for the Rockies
- Various universities through Memoranda of Understanding (MOU) and directed research opportunities
- Alberta Sustainable Resource Development (provincial government staff who conduct shared wildlife surveys)

VISITATION

4l Visitor statistics available

Visitor statistics are available for the site.

Annual visitation, methodology and trends

The annual visitation at Glacier in 2002 was 1,905,681. The trend in visitation numbers at Glacier since inscription in 1995 has remained at a relatively stable level. Numbers have ranged from a low of 1.68 million to a high of 1.90 million with no clear up or down trend.

Traffic counters are installed at 8 park entrance locations in Glacier; numbers are reduced by bicycles, non-recreation vehicles and duplicate re-entries (a multiplier of 2.9 visitors/vehicle is applied at most of these entrance sites). Visitation statistics and the methodology used to calculate for Glacier can be accessed on the WEB at www.nature.nps.gov/stats

The visitation in Waterton Lakes in 2002 was 406,081. Visitation since 1995 has increased about 6 per cent, with an apparent peak in 1999. Numbers have ranged from a low of 347,000 to a high of 425,000. A traffic counter is installed at one entrance location in Waterton Lakes and the actual numbers of cyclists and bus passengers are also recorded.

4m Visitor facilities

Visitor service areas of the International Peace Park are indicated on a map in the Waterton-Glacier Guide. The Waterton-Glacier Guide may be viewed by visitors at entrance stations, at the visitor centers, and at park headquarters. A copy of the Waterton-Glacier Guide is enclosed and may also be viewed at the Glacier National Park website <http://www.nps.gov/glac/home.htm>. (to view the Guide click on "maps and brochures"). The guide is a general park informational brochure that is updated three times annually. Glacier has accommodations for approximately 1,700 guests at lodging facilities accessible by automobile. Waterton

Lakes has accommodations for approximately 1,300 persons at public lodgings in the park. Glacier has 1,021 individual campground sites accessible by automobile. Waterton Lakes has 391 individual campsites (located in three road-accessible campgrounds). Locations of park campgrounds are identified in the Waterton-Glacier Guide. In addition Glacier maintains 2 backcountry chalets accessible only by trail that provide overnight accommodations. Glacier maintains 1,202 km (747 miles) of backcountry trails and 65 backcountry campgrounds. Descriptions of these campgrounds are found in the park's Backcountry Guide. A copy of the Backcountry Guide may be viewed at the park's website <http://www.nps.gov/glac/activities/bcguide1.htm>. Waterton Lakes maintains 210 km (130 miles) of trails and 9 backcountry campgrounds. Other facilities and services include roads, riding stables, boat tours, restaurants, grocery stores and gift shops.

See also section 4t.

4n Tourism/visitor management plan

There is a tourism/visitor management plan in place for the site.

Summary of tourism/visitor management plan

The tourism/visitor management plan for the site is part of the management plans for the two national parks.

For Glacier:

Glacier's 1999 General Management Plan (GMP) states that visitor use will be managed to preserve park resources along with a broad range of opportunities for people to experience, understand, learn about, and enjoy the park. The plan divides the park into six geographic areas, each with its own management philosophy and anticipated visitor experience. The six geographic areas are further divided into four areas: the visitor service zone, the day use zone, the rustic zone and the backcountry zone.

Several of the critical issues for which management direction is provided in the GMP specifically involve tourism and visitor management.

- Visitor Use on the Going-to-the-Sun Road. The NPS will continue to protect the Going-to-the-Sun road as a national historic landmark, retaining the historic character of the road and thus maintaining its traditional use. Visitors will continue to have the freedom to drive personal vehicles. An efficient public transportation system will continue and be improved. A comprehensive use plan will be developed to address the increasing use of the road corridor.
- Preservation of Historic Hotels and Visitor Services. The NPS will insure the integrity of the historic structures and provide for the preservation of these important elements of America's cultural heritage. Funding will be sought for a comprehensive rehabilitation effort to preserve the national historic landmarks and the park's other historic lodging. The NPS will explore alternatives for funding the rehabilitation of the buildings. A visitor services plan will be developed that will incorporate the economic feasibility of rooms, room numbers and services. The value of the concessionaire's possessory interest will be determined. The NPS will ensure the design integrity of any new facilities with the historic structures and will upgrade utilities, housing for concession employees, accessibility, and infrastructure where applicable.
- Scenic Air Tours. The NPS will request that the Federal Aviation Administration prohibit all commercial sightseeing tours over the park. A scenic air tour management plan will be developed if provided for and directed by law.
- Personal Watercraft. The NPS will permanently ban personal watercraft from all park waters.
- Winter Use. The NPS will respond to an increase in winter use only within the existing facilities and/or infrastructure. Adequate parking and restroom facilities will be provided where appropriate. The NPS will mitigate impacts on wildlife that may result from increased visitor use during the winter.
- West Side Discovery Center and Museum. The NPS will construct a "discovery" center and museum inside the park in the vicinity of the T-intersection north of the West Glacier entrance station that will concentrate development in the Apgar area. The center will also serve the educational community, and interpretive needs to introduce and educate visitors about park values.

A complete copy of the 1999 GMP is available at www.nps.gov/glac/home.htm

The 2004 Commercial Services Plan and Environmental Impact Statement (CSP) will help Glacier National

Park determine the overall mix, types, and level of services to be offered to visitors in various areas of the park, and also to determine the maximum number of rooms to be offered in the park. The CSP and related studies provide an implementation strategy for rehabilitation of the historic hotels and commercial facilities in the park. The plan also provides information and environmental compliance that will allow the park to proceed with rehabilitation efforts. The CSP implements one of the decisions in Glacier's General Management Plan and will be used to guide park management for the next 20 years or more. Glacier National Park's CSP is currently available at www.nps.gov/glac/home.htm.

The CSP defines those commercial services that are necessary and appropriate; presents alternatives for those services; and analyzes the impacts of providing such services in the park. It also presents alternatives for each developed area that contains commercial services including alternatives to address housing and other support needs. Alternatives were also analyzed in the CSP for commercial services that are not restricted to a specific geographical location such as guided underwater diving, day hiking, and backpacking. Alternatives were also analyzed for commercial services and their support needs that occur in each of the park's developed areas. The biggest changes that are proposed by this plan include additional employee housing at Many Glacier, rearranging guest lodging and employee housing at Lake McDonald, Rising Sun and Swiftcurrent, completing the historic cabin loops at Swiftcurrent Motor Inn, and alternative levels of service for Granite Park Chalet. Other changes include allowing guides to accompany visitors in their private cars, limiting party sizes for commercially guided hiking parties and bicycle tours, adding guided underwater diving services and providing firewood sales in campgrounds.

For Waterton Lakes:

Guidance for visitor management is included in the 2000 Waterton Lakes National Park of Canada Management Plan which addresses opportunities for public understanding, appreciation and enjoyment while maintaining ecological integrity. Some of the key strategic goals identified are:

- A well-informed tourism industry respects the social and ecological values of Waterton Lakes National Park of Canada;
- Appropriate facilities and services allow visitors with varying interests to enjoy the park;
- Canadians and their international guests appreciate and understand the nature and history of Waterton Lakes National Park, the role the park plays in Canada's national parks system, and its international significance; and
- Visitors experience the park without impairing its ecological and commemorative integrity.

The plan continues the provision of picnic areas, campgrounds, parkways, the golf course, hiking and horse riding opportunities and boating on Waterton and Cameron Lakes.

For Waterton-Glacier International Peace Park World Heritage Site:

In 1999 the Waterton-Glacier International Peace Park Heritage Tourism Strategy was developed by the Waterton-Glacier International Peace Park Heritage Tourism Council, which is a partnership of both national parks and numerous stakeholders, including regional tourism associations and businesses, aboriginal groups, and provincial/state agencies. The primary aim of the strategy is to sustain the International Peace Park as a tourism destination by preserving and celebrating the beauty and ecological integrity of the park and encouraging the same goal in surrounding areas. There are four linked objectives:

- To make all visitors and residents aware they are in a national park, International Peace Park and World Heritage Site by actively fostering appreciation and understanding of the nature, history and culture of the peace park and surrounding areas;
- To protect the Crown of the Continent ecosystem by encouraging environmental stewardship initiatives upon which sustainable heritage tourism depends;
- To encourage, develop and promote viable opportunities, products and services where they are appropriate and consistent with heritage and environmental values; and
- To strengthen employee orientation, training and accreditation programming as it relates to sharing heritage understanding with visitors.

SCIENTIFIC STUDIES

4o Key scientific studies and research programs

For Glacier:

- Monitoring bear populations in Glacier National Park and surrounding Northern Continental Divide areas using DNA
- Big horn sheep ecology and conservation in Glacier National Park
- Global climate change research – a focus on mountain ecosystems
- Post-fire burn assessment by remote sensing by NPS
- Glacier retreat in Glacier National Park
- Amphibian research monitoring initiative: Rocky Mountain region
- Whitebark pine and limber pine ecology
- Restoring whitebark and limber pine communities in Glacier National Park
- Biocomplexity in the Environment: Emergent Properties of Alluvial River Flood Plains
- Predator-prey ecology studies in the North Fork of the Flathead River valley

For Waterton Lakes:

- Ecological land classification of Waterton Lakes National Park; integrated resource description and wildlife
- The historic role of fire in Waterton Lakes National Park
- Estimating population size of grizzly bears using hair capture and DNA fingerprinting in Southwest Alberta
- Movement and status of bull trout in the Belly River of Alberta and Montana
- Genetic population structure of cutthroat trout and rainbow trout in Banff and Waterton Lakes National Park
- Arachnida inventory project in WLNP
- Ongoing studies of the sedimentary geology of selected stratigraphic units of the Belt-Purcell Supergroup, Waterton Lakes National Park
- Macro-invertebrate and zooplankton biodiversity in lakes, ponds and rivers in Waterton Lakes National Park
- Dendroclimatological investigations of Douglas fir in Waterton Lakes National Park

For Waterton-Glacier International Peace Park World Heritage Site:

- International Peace Park vegetation mapping project

Use of results of scientific studies and research programs

The managers of the Waterton-Glacier International Peace Park World Heritage Site use the results of scientific studies in many aspects of their job. Examples include:

- protection of threatened and endangered species (predator-prey ecology studies involving the gray wolf; population studies of the grizzly bear)
- resource restoration (studies involving whitebark and limber pine ecology and their restoration; planning for prescribed fires; post-fire burn assessments)
- cultural resource protection (studies that led to the designation of the Going-to-the Sun Road as a National Historic Landmark and to the addition of over 100 park structures on the National Register of Historic Places)
- interpretation of the resource for park visitors (climate change studies, ethnographic studies)
- wildlife habitat monitoring and management (vegetation mapping project)
- successional patterns of vegetation

Role of WHS designation in design of scientific studies and research programs

Glacier National Park has used the World Heritage Site designation to help justify new research projects and programs. Examples include the Crown of the Continent Learning Center and the Transboundary Policy, Planning, and Management Program and the Global Climate Change Research Program referenced in section 4o of this report. Many researchers capitalize on the opportunity to conduct research in both parks collaboratively. Waterton Lakes National Park highlights the World Heritage Site in interagency discussions with neighbouring jurisdictions, to emphasize the significance of ecological integrity and the need for coordinated research and management of resource issues.

EDUCATION, INFORMATION AND AWARENESS BUILDING

4p WHS plaque

There is a plaque at the site indicating that it is a World Heritage Site.

4q Use of WHC logo

The World Heritage Convention logo is not used on all publications for the site.

4r Educational programs for schools

There are educational programs about the site's World Heritage values aimed at schools.

Description of educational programs for schools

Programs cover the full range of national park themes and include references to World Heritage Site status.

For Glacier:

- winter ecology program for local schools – daily snowshoe trips in spring and fall offered by Glacier National Park staff
- presentations by Glacier staff in local schools, including those on the Blackfeet Indian Reservation (First Nations)
- Glacier Institute environmental education classes held within Glacier National Park
- development of a science education program called “Work House” regarding the natural and human aspects of Glacier National Park developed for use in Native American (First Nation) classrooms.
- establishment of a Crown of the Continent Learning Center at Glacier National Park that includes a strong outreach component to local schools as well as in-park learning opportunities, teacher workshops, computer lab, and student internships.

For Waterton Lakes:

- Waterton Lakes National Park offers both in-park and classroom-based programs for local and regional schools on a variety of topics
- teachers' guides are available that provide background information for educators as well as suggestions for pre- and post-visit activities
- the Waterton Resource Guide is a complete source of reference materials about the park; it is available in both official languages and in three different versions for educational use
- Waterton Lakes National Park's website is designed to provide educators with quick and easy access to information about the park's natural and cultural history, maps, recreational information and links to other related resources.

4s Special events and exhibitions

There are special events and exhibitions concerning the site's World Heritage values.

Description of special events and exhibitions

For Waterton-Glacier International Peace Park World Heritage Site:

- annual 3-day Waterton-Glacier International Peace Park Superintendent's hike (local stakeholders invited from USA and Canada)
- annual Rotary International Peace Park assembly (sponsored by the Great Falls, Montana and Calgary, Alberta Rotary International clubs)
- International Peace Park hike on trail alongside Upper Waterton Lake that crosses the international border (hike is led by an interpreter from Glacier and an interpreter from Waterton Lakes)
- interpreter exchanges for public programs between Glacier and Waterton
- Waterton-Glacier International Peace Park Ambassador Program – workbook that provides information about the International Peace Park, including purpose, significance and special designations; used in staff orientation programs
- Year of the Great Bear, an international initiative to highlight the significance of the Rocky Mountains for grizzly bear protection
- International Year of Mountains, a United Nations' program to recognize the ecological and cultural importance of mountains
- International Year of Fresh Water and the Wonder of Water initiative, a United Nations' program to emphasize the universal value of water

4t Facilities, visitor centre, site museum, trails, guides, information materials

Glacier National Park has 2 museum/archive facilities housing a total of approximately 400,000 museum collection and archival items. Waterton Lake ational Park's archival collection houses approximately 100 historical objects, as well as 7000 historic photographs, negatives, aerial photographs and other documentary records. In addition, there are over 13,648 items in the park's archaeological/floral/faunal specimen collection.

Visitor centers provide a full range of interpretive and informational materials.

For Glacier:

Apgar Visitor Center

Logan Pass Visitor Center

St.Mary's Visitor Center

For Waterton Lakes:

Waterton Park Visitor Reception Centre

4u Role of WHS designation in education, information and awareness building activities

The meaning and importance of the World Heritage Site designation are explained in a number of important ways to visitors to the Waterton-Glacier International Peace Park. Both parks use the designation to highlight the values of the site with a variety of audiences:

- in the text of the Waterton-Glacier Guide that is provided to all park visitors;
- in the text of the Waterton-Glacier International Peace Park Ambassador Program. The Ambassador Program is a short textbook that provides a basic understanding of the purpose and significance of the International Peace Park and a familiarity with its natural and cultural heritage. The Ambassador Program textbook is used as a training and reference source for the staff of the International Peace Park as well as by concessionaires and others who provide visitor services in and adjacent to the International Peace Park;
- as a component of the Waterton-Glacier Heritage Tourism Strategy that promotes the linkage of sustainable ecosystems and sustainable businesses in the Waterton-Glacier area;
- as a topic in the International Peace Park hike that is led by interpreters from both Glacier and Waterton

Lakes. During this hike the interpreters explore with participants, the meaning of such designations as International Peace Park, International Biosphere Reserve, and World Heritage Site;

- in general interpretive programs for the public, agency presentations to the public and to stakeholders; and
- to highlight importance of the area in intervenor hearings.

5 FACTORS AFFECTING THE PROPERTY

5a Development Pressures

The World Heritage Site nomination identified external threats having the potential to adversely affect park wildlife populations, air and water quality and aesthetic values. These included: logging and hydrocarbon exploration occurring along the periphery and an open pit coal mine proposed near the International Peace Park periphery. The nomination also discusses bear mortality caused by grain spills on the railroad tracks along Glacier's southern border and it discusses actions taken by the International Peace Park in support of regional land use planning.

Actions and plans to address these factors include:

Logging and hydrocarbon development:

Some of the land adjacent to the International Peace Park is managed for multiple use including logging and hydrocarbon development. These lands include those managed by tribal (First Nations), provincial, state, crown, federal and private owners. In the 8 years since inscription, logging and hydrocarbon development on adjacent lands has remained stable with the exception of a short-term increase in salvage logging on lands adjacent to GLAC that were burned in recent wildfires.

International Peace Park managers address logging and hydrocarbon development by participating in the planning processes of the agencies responsible for such lands and by participating in ecosystem management initiatives as described in section 3b1. Examples include providing technical comments on proposed amendments to the Flathead National Forest Plan (USA) and participation in the provincial meetings regarding the development of the Southern Rocky Mountains Management Plan for the South East Kootenay region of British Columbia (Canada).

Open pit coal mining:

In the early 1980's, a strip mining operation was proposed in the Province of British Columbia, close to Glacier's western boundary. This development would have included two large open pit coalmines on Cabin Creek, a tributary of the Flathead River, which forms a boundary of the park. Canada and the United States agreed to refer the issue to the International Joint Commission (IJC). The Commission was charged with studying the issue and reporting back to the two national governments. The Commission's 1989 report, based on 4 years of study, advised that the mine not proceed because of the uncertainty of mitigation and potential for long-term degradation. The IJC also emphasized the need for a bi-national initiative to develop sustainable management strategies for the whole watershed.

The proposed coal strip mine has consequently not gone ahead, and the IJC recommendations have been instrumental in driving ecosystem-based management on both sides of the border.

Two of these initiatives include the Flathead Basin Commission and the North Fork of the Flathead Strategic Planning Process. Subsequent to inscription, the Province of British Columbia has completed an intensive planning process for lands that include the Flathead River drainage in Canada. This process resulted in greater predictability as to how lands would be managed in this watershed and included comments from both Waterton Lakes National Park and Glacier National Park and from the Flathead Basin Commission. Also, subsequent to inscription, the state of Montana and the Province of British Columbia have signed an Environmental Cooperation Agreement that will result in a workplan being developed to address transboundary environmental issues, including management of the Flathead River in British Columbia and Montana.

Bear mortality caused by grain spills on railroad tracks:

The Burlington Northern Santa Fe railroad forms part of the southern boundary of the International Peace

Park. Problems with grain spills along these tracks caused a mortality sink for grizzly and black bears. Glacier National Park encouraged the railroad to improve the quality of the rail lines in this corridor and to intensively clean up past grain spills. The park also provided leadership by having the Burlington Northern Environmental Stewardship Area partnership (since renamed the Great Northern Environmental Stewardship Area (GNESA)) established in 1991 and, subsequently, in obtaining funding for a grizzly bear management specialist. This specialist works with the railroad and other stakeholders to coordinate grizzly bear management efforts in the area.

The GNESA partnership includes state, federal and local governmental agencies, local businesses, and residents. Efforts of this partnership have helped reduce the number of bear casualties in the rail and highway corridor that parallels the southern boundary of Glacier. Since inscription, GNESA has also secured funding to employ an executive director. Recent accomplishments include: continued funding for a bear management biologist, coordination of a river permitting conference, initiation of a comprehensive mapping project, the use of new technology to haze bears away from rail trestles, and securing funding for an education program regarding how residents of this corridor can minimize bear-human conflicts on their property.

Regional land use planning:

Some privately owned lands adjacent to the International Peace Park are being subdivided and developed for homesites and commercial use. Since inscription, actions to address this issue include:

- continued participation by the International Peace Park in local government planning processes for privately held land adjacent to the International Peace Park. US NPS emphasis continues to be to secure protection for riparian habitat, winter range, wildlife corridors, and aesthetics as well as protecting air and water quality. Since 1994, zoning regulations have been adopted for privately owned lands in the Flathead River drainage adjacent to Glacier (see section 3b1). The focus of Waterton Lakes has been on influencing the maintenance of agricultural landscapes and minimizing fragmented residential development;
- International Peace Park collaboration with The Nature Conservancy, Canada, and The Nature Conservancy of Montana to seek non-governmental solutions to protect the natural integrity of privately owned lands adjacent to the International Peace Park. Park staff work with these non-government organizations to identify values at risk and to provide educational opportunities for potential donors. The non-government organizations sought and received funding from private sources to purchase properties in fee or to protect them via conservation easements;
- formation of the Crown of the Continent Ecosystem Managers Partnership in 2001 (see section 3b1); and
- continued support for the Waterton Biosphere Association and associated initiatives.

Work continues on these various initiatives and no new concerns are evident.

5b Environmental Pressures

The World Heritage Site nomination for Waterton-Glacier International Peace Park did not identify environmental pressures.

Current environmental pressures on the International Peace Park include:

- Air quality: related to criterion (iii). Currently, air quality in the International Peace Park is good however visibility is occasionally marred by airborne particulate matter including smoke and dust. Sulfuric compounds from industrial emissions can also contribute to local haze and health concerns. Glacier is designated as a class I area under the U.S. Clean Air Act which gives the park manager an affirmative obligation to protect air resources from external effects. International Peace Park managers strive to maintain air quality by participating in the permitting processes of adjacent agencies and industries. Changes in air quality are detected through an extensive monitoring program (see 6b1).
- Water Quality: related to criterion (ii). Currently water quality in International Peace Park is very good. For the most part the International Peace Park occupies the upper reaches of drainage basins. Baseline monitoring in 1984-1990 (see 6b1) documented that Glacier National Park lakes tend to have low dissolved solids and low buffering capacity, thus making them sensitive to acidic deposition and phosphorus loading respectively. Glacier's managers strive to maintain water quality by participating in the permitting processes of adjacent

agencies and industries including the Flathead Basin Commission, a regional water quality partnership.

Detailed water quality monitoring information exists for Waterton Lakes dating from 1972-1986, and for 1989-90. Generally, water quality in the park is good to excellent, with no deterioration (and some improvement) noted over the monitoring period. Specific concerns include some trace accumulations of pesticides in park lakes, derived from atmospheric sources.

· Climate change: related to criterion (ii). Climate change has and will continue to have important impacts to the International Peace Park natural resources. Scientific data collected in Glacier indicates that park glaciers have shrunk dramatically over the past century; that the park's tree line is creeping higher in elevation; that the alpine tundra zone is shrinking, and that subalpine meadows are filling in with tree species. The ecological significance of losing the park's glaciers is likely affecting stream baseflow in late summer and increasing water temperatures thus influencing the distribution and behavior of aquatic organisms and food webs. While managers of the International Peace Park are not in a position to affect global climate change through their management actions, the extensive monitoring occurring within Glacier National Park (see 6b1) will help clarify the impacts of climate change on the park and thus help prompt action by State Parties to slow or reverse this global problem.

5c Natural Disasters and Preparedness

The World Heritage Site nomination for Waterton-Glacier International Peace Park did not discuss natural disasters and preparedness.

Potential natural disasters in the International Peace Park include wildfire, flooding and avalanche. In particular they can influence criteria (ii) and (iii). As they are natural events, the results are not necessarily negative.

Actions and plans to address these factors include:

In Glacier:

- plans to remove administrative, housing and maintenance facilities from the Divide Creek flood plain to location(s) out of the flood plain in order to reduce the manipulation of fluvial processes
- plans to remove dormitories from Snyder Creek flood plain to reduce the manipulation of fluvial processes
- plans for streambank stabilization in the Rising Sun and Two Medicine Developed areas

In Waterton Lakes:

- relocation of the Parks Canada storage area from Blakiston Creek alluvial fan to the government compound to reduce the manipulation of fluvial processes
- continued access on Blakiston Fan to day use facilities in ways that respect the dynamic nature of the alluvial fan

5d Visitor/Tourism Pressures

The World Heritage Site nomination for Waterton-Glacier International Peace Park stated that continuing growth in visitation levels had resulted in demands for new overnight accommodations, sewage disposal facilities, and administrative expansion. These can influence criteria (ii) and (iii). The management plans for both parks have objectives for the provision of facilities in ways which minimize the disruption of natural processes.

Since inscription occurred in 1995:

- No significant changes in the number of lodging accommodations have occurred within Glacier National Park and no significant changes are anticipated in the future. The Glacier National Park Commercial Services Plan provides for continuing approximately 500-540 lodging units parkwide, in addition to lodging provided at the park's backcountry chalets and lodging on private lands within the park. www.nps.gov/glac/home.htm
- Several new lodging accommodations have been constructed in the park gateway communities of Kalispell, Whitefish, and Columbia Falls. Such growth is anticipated to continue.

- Glacier is currently constructing a new wastewater treatment plant for public and private facilities in the Lake McDonald area. New sewer and water lines are being installed in this same area. Other sewage disposal and water facilities throughout the park have been maintained on a regular basis.
- Additional fixed roof accommodation (110 units) was developed in the Waterton community in 1997 (for a total of 415 units). This development was restricted to the existing community. A proposal to double the capacity of the Prince of Wales Hotel, outside the community boundary, was rejected.
- In 2000, Parks Canada put in place legislation and regulations to prevent any future increases in commercial development.
- To minimize the impact of displacing commercial development, Waterton Lakes National Park has worked closely with non-government organizations and land owners to prevent additional development of private property near the park boundary (see 3b1 above).
- The management plan for Waterton Lakes National Park requires the investigation of options to use sewage for irrigation purposes on the golf course in Waterton Lakes and eliminate all discharge in aquatic environments

5e Number of inhabitants within property, buffer zone

There is a small and stable population within the World Heritage Site. Surrounding areas within a few hours travel time of the site are experiencing steady population growth. These areas provide the majority of visitors and continued increases in visitor numbers are expected. Continued management attention is required to ensure no adverse effect on criteria (ii) and (iii). Actions are detailed in 3b1, 4h1, 4n1, 4o1 and 4u.

- In 2003, there were approximately 50 permanent residents within Glacier National Park and 60 permanent residents in Waterton Lakes National Park.
- Glacier is included in Flathead and Glacier counties, Montana, USA. In 2000, the populations of these counties were 74,471 and 13,247 respectively. The population of Flathead County grew 25.8 per cent between 1990 and 2000 while the population of Glacier County grew 9.3 per cent during the same decade.
- The Southwest Kootenay region of British Columbia, Canada, had an estimated population of 18,000 in 2000. This region borders Waterton Lakes National Park and Glacier National Park to the west and northwest respectively.
- The population in South West Alberta towns and rural municipalities (Pincher Creek, Cardston, Willow Creek, Crowsnest Pass and First Nations) is approximately 36,000 residents. The City of Lethbridge has approximately 72,000 residents (130 km from park) while the City of Calgary has approximately 1 million residents (250 km from park).

5f Other

Not applicable.

6 MONITORING

ADMINISTRATIVE ARRANGEMENTS FOR MONITORING PROPERTY

6a Formal monitoring program

There is a formal monitoring program established for the site.

Description of formal monitoring program

1. Air quality

Air quality monitoring at Glacier involves a number of partners including: the NPS's Air Quality Division, the State of Montana, the U.S. Environmental Protection Agency, the Natural Resource Ecology Laboratory at Colorado State University, the National Atmospheric Deposition Program at the Illinois State Water Survey, and the Columbia Falls Aluminum Company. Air quality monitoring began at Glacier in 1970 when a fluoride-monitoring program was established.

For Glacier:

Dry deposition data are available at <http://www.epa.gov/castnet>

Wet deposition data are available at <http://nadp.sws.uinc.edu>

Visibility data are available at

http://vista.cira.colostate.edu/IMPROVE/Data/DataQuery/IMP_Aer_Data_Access.asp

Ozone data are available at <http://www2.nature.nps.gov/ard/gas/netdata1.htm>

Fluoride data are archived at Glacier, contact: Superintendent_GLAC@nps.gov

2. Water quality

Water quality monitoring at Glacier includes the following partners: the Flathead Lake Biological Station (University of Montana) the U.S. Environmental Protection Agency, the State of Montana, the Flathead Basin Commission and citizen volunteers. An important background document is the paper "Monitoring of selected lakes in Glacier National Park from 1984-1990: (Ellis, B.K., J.A., Stanford, et al, 1992 Open File Report 129-92, National Park Service, Glacier National Park, West Glacier, Montana. Flathead Lake Biological Station, the University of Montana, Polson). Periodic sampling of selected lakes and streams in Glacier National Park from 1997 to the present can be found at the following websites:

<http://www.umt.edu/biology/flbs/Research/WaterQual.htm> and

<http://www.umt.edu/biology/flbs/Sentinel/WaterQual.htm#VMP>

Waterton Lakes monitors for fecal coliforms at eight locations during the operating season and at three locations during the fall/winter season.

3. Amphibians

Glacier monitors changes in number of breeding sites of boreal toads. Partners: Rocky Mountain region, U.S. Geological Survey, Northern Rocky Mountain Science Center, Missoula, Montana, http://www.fort.usgs.gov/research/rarmi/rarmi_intro.asp.

Waterton Lakes monitors 20 index sites for the presence/absence of a suite of amphibian species: boreal toad, long-toed salamander, northern leopard frog, spotted frog, tiger salamander, and boreal chorus frog. An annual report is available from Waterton Lakes.

4. Trail, campsite, and river monitoring

At Glacier, the following parameters are monitored annually: overnight use, day use, trail conditions, backcountry campground conditions and limits of acceptable change standards on Flathead Wild and Scenic

River. The US Forest Service and Flathead National Forest are partners in monitoring the Flathead Wild and Scenic River. (U.S. National Park Service, Glacier National Park, State of the Backcountry Reports 1992 – 2002, West Glacier, Montana, on file a Glacier National Park).

5. Climate change

Ten climate stations are currently operated in Glacier, including hourly readings for: time, wind speed, wind direction, temperature, soil temp. soil moisture, RH, solar radiation and some stations have snow depth and precipitation sensors as well. (Fagre, D.B., P.L. Comanor, J.D. White, F.R. Hauer, and S.W. Running. 1997. Watershed responses to climate change at Glacier National Park. *Journal of the American Water Resources Association*. 33(4):755-765; . White, J.D., S.W. Running, P.E. Thornton, R.E. Keane, K.C. Ryan, D.B. Fagre, and C.H. Key. 1998. Assessing simulated ecosystem processes for climate variability Research at Glacier National Park, USA. *Ecological Applications*. 8(3):805-823.)

Waterton Lakes National Park has six weather stations. Two of these stations are general weather stations operated by the Meteorological Survey of Canada. Three of the stations are Park Fire Information Stations (two year round and one summer only). One station is operated winter-only for avalanche forecasting purposes. On-line climate station information is available from Environment Canada at http://www.msc-smc.ec.gc.ca/climate/station_catalogue/index_e.cfm. The Waterton Park Townsite climate station has records going back to 1942. Two of the climate stations have been automated since 1988. Depending on the station, the following information is recorded: temperature, precipitation, relative humidity, wind speed, wind direction, snow depth, snow pack temperature and snow pillow.

6. Glacier studies

Glacier studies at Glacier National Park include measurements of perimeter, area, and mass balance. Repeat photography has also been used to document many of the glaciers in Glacier National Park. (Hall, M.P. and D.B. Fagre. 2003. Modeled climate-induced glacier change in Glacier National Park, 1850-2100. *Bioscience*. 53(2):131-140. Key, C.H., D.B. Fagre, and R.K. Menicke. 2002. Glacier retreat in Glacier National Park, Montana. Pages J365-J381 In R.S. Jr. Williams and J.G. Ferrigno, editors. *Satellite Image Atlas of Glaciers of the World, Glaciers of North America - Glaciers of the Western United States*. United States Government Printing Office, Washington DC, USA).

7. Streamflow

Hourly streamflow measurements are taken at eight locations in Glacier. (Hauer, F.R., D.B. Fagre, and J.A. Stanford. 2003. Climatic patterns, hydrologic processes and nutrient dynamics in a pristine montane catchment in northwest Montana, USA. *Verh. Internat. Verein. Limnol.* Streamflow measurements are conducted at sites on the Waterton and Belly rivers in and near WLNP, jointly by Environment Canada and Alberta Environment (River Forecast). See <http://www3.gov.ab.ca/env/water/> and <http://www.climate.weatheroffice.ec.gc.ca>. In addition, a lake hydrology gauge is in place on the Upper Waterton Lake.

8. Vertebrate monitoring

Waterton Lakes National Park conducts annual monitoring of breeding passerines, Columbian ground squirrels, raptor (osprey, prairie falcon, golden and bald eagle) nests, streamside birds (harlequin duck and dipper) and wetland birds (sandhill crane, hooded merganser, Barrow's goldeneye, ring-necked duck, common loon, red-necked grebe, wood duck and common merganser).

KEY INDICATORS FOR MEASURING STATE OF CONSERVATION

6b Agreed upon key indicators

No key indicators for measuring the state of conservation of the site's World Heritage values have been agreed upon.

Future development of key indicators

The site managers are developing comprehensive monitoring programs for each national park, which will also permit reporting on the condition of the World Heritage Site values, especially for criterion (ii).

In addition to the existing monitoring described under section 6a1, Glacier National Park is developing a comprehensive monitoring program as part of the US NPS's Natural Resource Challenge – a 5-year strategic initiative which includes a vital signs monitoring component. Funding to begin this program has been appropriated by the US Congress. Goals of the Vital Signs initiative include:

- Determine status and trends in selected indicators of the condition of park ecosystems to allow managers to make better-informed decisions and to work more effectively with other agencies and individuals for the benefit of park resources;
- Provide early warning of abnormal conditions of selected resources to help develop effective mitigation measures and reduce costs of management;
- Provide data to better understand the dynamic nature and condition of park ecosystems and to provide reference points for comparisons with other altered environments;
- Provide data to meet certain legal and congressional mandates related to natural resource protection and visitor enjoyment; and
- Provide a means of measuring progress towards performance goals.

A potential listing of the Vital Sign indicators for Glacier National Park includes (1) those indicators required to be included in the monitoring program for legal reasons (e.g., Threatened and Endangered species); (2) those indicators required for performance management reporting purposes or because funding was provided for a specific purpose; and (3) those indicators selected by park networks from a list of recommended vital signs or identified as a priority by the network. The formal selection of Vital Sign indicators for Glacier National Park is scheduled for 2004.

Glacier National Park produces an annual Superintendent's Report.

Waterton Lakes' monitoring strategy was designed as part of the Ecosystem Conservation Plan for Waterton Lakes National Park (1998). Many of these actions have since been incorporated into the park management plan (2000). Some of the indicators identified are now being monitored (see following sections), but others have not been initiated yet. Ecological integrity objectives were identified for monitoring and for research, and key indicators fall within these objectives:

- Viable populations of native species include their full range of genetic diversity;
- All trophic levels are fully represented in the regional ecosystem, including primary producers, herbivores, predators and decomposers;
- Populations of native species whose populations have become small, have lost significant genetic diversity, or are threatened or endangered are restored to viable status;
- The landscape contains full successional sequences of terrestrial and aquatic community types and the ecological processes that sustain them;
- Ecological processes that have been reduced or eliminated from ecosystems function again within the normal range of variation;
- Ecological connections function in the larger landscape to allow gene flow among populations;
- Sufficient unfragmented habitat exists to allow populations of native species to persist at viable levels;
- Human influences upon the ecosystem (including human harvest, disturbance and pollutants) are at levels where native plant and animal populations remain viable and natural processes are operating within the historic natural range of variability; and
- Quality services of appropriate types enable park visitors and residents of the area to enjoy and understand the ecosystem and appreciate its role in support of regional sustainability.

Information collected through these monitoring programs is used in Parks Canada's national State of Protected Heritage Areas Report, issued every two years and will be used in a State of the Park Report for Waterton Lakes, to be prepared every five years, in conjunction with a review of the management plan. Waterton Lakes National Park's monitoring program is being reviewed as part of a national park system wide effort to improve park monitoring and reporting programs.

RESULTS OF PREVIOUS REPORTING EXERCISES

6c State Party actions in response to World Heritage Committee recommendations

At the time of inscription, the World heritage Committee recommended that:

1. the State Parties consider creating a single “Biosphere Reserve” from the three Biosphere Reserves already existing in the area;
2. the World Heritage Site be expanded with the cooperation of the government of British Columbia to include the adjacent protected area in the Akamina/Kishinena; and
3. a World Heritage dedication ceremony be held.

It is unlikely that action on recommendation 1 will occur in the near future.

The proposed expansion of Waterton Lakes National Park into the Flathead Valley of British Columbia has deferred consideration of recommendation 2. The proposed expansion would include Akamina-Kishinena Provincial Park, as recommended by the World Heritage Committee.

A World Heritage Site dedication ceremony was held in East Glacier, Montana, on September 19, 1998.

7 CONCLUSIONS

WORLD HERITAGE VALUES

7a Main conclusions regarding the state of the property's World Heritage Values

Waterton-Glacier International Peace Park World Heritage Site continues to retain and protect the values for which it was designated. Changes since inscription are positive and improve protection of the site. Some key examples are:

- Recent management plans for both national parks re-affirm that approximately 95 per cent of the World Heritage Site will be managed for its wilderness character;
- The General Management Plan for Glacier National Park sets important direction for issues such as commercial aircraft overflights and winter use, as well as for re-investment in infrastructure;
- The management plan for Waterton Lakes National Park capped commercial development and emphasizes strengthened ecological integrity;
- There has been considerable investment in the conservation of adjacent private lands; and
- Parks Canada has announced its desire to expand Waterton Lakes National Park through the addition of lands in the Flathead Valley of British Columbia.

MANAGEMENT AND FACTORS AFFECTING SITE

7b Main conclusions regarding the management of and factors affecting the property

Waterton-Glacier International Peace Park is embedded in a larger regional ecosystem called the Crown of the Continent Ecosystem. Both parks contribute to social, economic and ecological values in this larger ecosystem. However, the ecological integrity of both parks is also impacted by internal and external pressures. More specifically:

- Rapid changes in land use and development pressures on private lands remain a concern to the Waterton-Glacier International Peace Park World Heritage Site. However, progress by non-governmental organizations in securing private lands (through purchase and conservation easements) has substantially reduced the risk to the World Heritage Site; and
- The Flathead Valley in British Columbia, Canada remains an important area for conservation of shared wildlife resources with the Waterton-Glacier International Peace Park. The Government of Canada has expressed an interest in expanding Waterton Lakes National Park into the Flathead. However, progress on this commitment will not proceed further without the support of the Province of British Columbia and First Nations.
- Limits to commercial growth and the footprint associated with the private leases/inholdings are defined in

the management plans for both Waterton and Glacier. Restoration of important ecological processes (i.e., fire and flooding) and native biodiversity are recognized as important management priorities in management plans for both Waterton and Glacier.

As noted in 4f, a MOU supports co-operation of the two park administrations, especially when dealing with partners in the larger ecosystem.

PROPOSED FUTURE ACTION(S)

7c Approved future actions

The managers of Waterton-Glacier International Peace Park World Heritage Site continue to pursue the recommendations of the World Heritage Committee and to protect the values for which the site was designated.

- Parks Canada will continue its attempts to expand Waterton Lakes National Park into the Flathead Valley; if successful, this would provide the opportunity to enlarge the World Heritage Site; if there is no success, the Province of British Columbia would be invited to nominate Akamina-Kishinena Provincial Park as an addition to the World Heritage Site.
- Both national parks will continue implementation of their management plans and the emphasis on retaining the wilderness character of the World Heritage Site; the plans support retention of the geological, ecological and aesthetic values for which the site was designated.
- Both national parks will continue to work with non-government organizations to secure adjacent private lands from incompatible development; such actions compensate for the small size and resulting vulnerability of the site.

RESPONSIBLE IMPLEMENTING AGENCY(IES)

7d Agency(ies) responsible for implementing actions

Agency Name: US Dept. of the Interior
Name: Holm, Michael O.
Title: Superintendent, Glacier National Park
Address: P.O. Box 128
City: West Glacier, Montana
Postal Code: 59936
Telephone: 406 888-7901
Fax Number: 406 888-7904
Email: GLAC.Superintendent@nps.gov

Agency Name: Parks Canada
Name: Lamb, Peter
Title: Field Unit Superintendent, Waterton Lakes Field Unit
Address: P.O. Box 50
City: Waterton Park, Alberta
Postal Code: T0K 2M0
Telephone: 403 859-5116
Fax Number: 403 859-2650
Email: watertoninfo@pc.gc.ca

TIMEFRAME FOR IMPLEMENTATION

7e Timeline for implementation of actions

The timeframe for Waterton Lakes National Park is 5-10 years and for Glacier National Park is 1-20 years.

NEEDS FOR INTERNATIONAL ASSISTANCE

7f Anticipated Requests for International Assistance

It is not anticipated that International Assistance, through the World Heritage Fund, will be requested.

ACTIONS STATE PARTY INTENDS TO REQUEST FROM WORLD HERITAGE COMMITTEE

7g Potential Decisions for the World Heritage Committee

- Change to Statement of Significance

Signatures on behalf of State Parties:

For Canada

For the United States of America

Christina Cameron
Director General, National Historic Sites
Parks Canada
and
Head of the Canadian Delegation to the
World Heritage Convention

Paul Hoffman
Deputy Assistant Secretary
Fish and Wildlife and Parks
U.S. Department of the Interior

Date _____

Date _____