Waterton-Glacier International Peace Park

SITE INFORMATION

Country:
Canada, United States of America (USA)
Inscribed in: 1995
Criteria:
(vii) (ix)

Site description:
In 1932 Waterton Lakes National Park (Alberta, Canada) was combined with the Glacier National Park (Montana, United States) to form the world's first International Peace Park. Situated on the border between the two countries and offering outstanding scenery, the park is exceptionally rich in plant and mammal species as well as prairie, forest, and alpine and glacial features. © UNESCO
SUMMARY

2014 Conservation Outlook

Good with some concerns

Waterton Lakes National Park (Alberta, Canada) and Glacier National Park (Montana, United States) can be exemplars for cooperation across national frontiers and offer positive examples of working together to achieve results, but there is always room for improvement. Managers at the Park level work diligently to manage according to their respective countries’ laws and policies applying the broader World Heritage values and goals to their actions and while there are both existing and potential threats, overall, the threats are being addressed in a manner that could be a model for other transboundary areas. Concerns remain at the landscape scale, particularly regarding wildlife security and connectivity and climate change adaptation.

Current state and trend of VALUES

Low Concern
Trend: Stable

The values for which Waterton-Glacier International Peace Park was inscribed have been well preserved and are stable, but threatened by a number of threats, particularly climate change. All threats are addressed as part of a robust management program but there is concern for species migration both by connectivity to other protected areas and vertically, in elevation, within the property.

Overall THREATS

Low Threat

Existing threats are moderate to high and include invasive species, glacier retreat, residential and commercial development on the boundaries and road corridors. All threats are known and actively being addressed through management action and research. However, their cumulative impacts need to be
taken into account to ensure connectivity between species population. Climate change offers the greatest potential threat and may cause significant impact to the site’s unique ecological complexes but the effects of potential energy development could further fragment connectivity and wildlife migration across international boundaries. While there are both existing and potential threats, overall, the threats are being actively addressed through research and management action, although funding limits available resources to apply to problems.

**Overall PROTECTION and MANAGEMENT**

**Mostly Effective**

Protection and management are overall effective and provide a positive example to other trans-boundary sites that seek to protect Outstanding Universal Value transcended by boundaries.
FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ Superlative scenery
    Criterion:(vii)

Both Waterton Lakes (Canada) and Glacier (United States of America) national parks were originally designated by their respective nations because of their superlative mountain scenery, their high topographic relief, glacial landforms, and abundant diversity of wildlife and wildflowers. (Statement of Significance; R1)

▶ Unique ecological complexes
    Criterion:(ix)

The property occupies a pivotal position in the Western Cordillera of North America resulting in the evolution of plant communities and ecological complexes that occur nowhere else in the world. Maritime weather systems unimpeded by mountain ranges to the north and south allow plants and animals characteristic of the Pacific Northwest to extend to and across the continental divide in the park. To the east, prairie communities nestle against the mountains with no intervening foothills, producing an interface of prairie, montane and alpine communities. The international peace park includes the headwaters of three major watersheds draining through significantly different biomes to different oceans. The biogeographical significance of this tri-ocean divide is increased by the many vegetated connections between the headwaters. The net effect is to create a unique assemblage and high diversity of flora and fauna concentrated in a small area. (Statement of
Significance; R1)

Assessment information

Threats

Current Threats

Low Threat

Existing threats are moderate to high and include invasive species, glacier retreat, residential and commercial development on the boundaries and road corridors. All threats are known and actively being addressed through management action and research. However, their cumulative impacts need to be taken into account to ensure connectivity between species population.

► Housing/ Urban Areas, Tourism/ Recreation Areas

Low Threat

Proposed and existing sales of private, developable land outside Glacier National park entrances could result in increased accommodations, and increased visitor use. Presently, there are limited numbers of services and accommodations but development can be detrimental to park values (R4, R8). In Waterton, although Nature Conservancy of Canada has protected 110 sq km on eastern boundary (Waterton Park Front Project), new acreages continue to be built, which impedes wildlife movement, leads to increased carnivore mortality. However, there has been significant opposition by adjacent land owners to large scale recreational developments proposed for areas near the park boundary. This has led to these proposals being turned down by local municipalities.

► Invasive Non-Native/ Alien Species

High Threat

Inside site
Outside site

Non-native plants are established near visitor use corridors. Glacier National Park has an active treatment and eradication program that is budget dependent that includes a well-established native plant nursery to treat disturbed areas. While the problem exists outside the park, treatment is sporadic, uncoordinated and ineffective. (R16) Glacier National Park is also susceptible to aquatic invasive species which are found to be introduced regionally by people who travel from infected regions, including on watercraft, fishing gear, trailers, etc. An active inspection system is underway both in the park and in the surrounding region to prevent inadvertent introduction (R7). Non-native plants, fish, insects, and pathogens are also affecting the flora and fauna of Waterton Lakes. (Parks Canada, 2008). The white pine population of both parks has been heavily impacted by blister rust, a non-native pathogen. Waterton has an active white pine restoration program while Glacier is monitoring natural response.

Air Pollution

Low Threat

Shell Canada gas plant about 30 km north of the Waterton Lakes National Park raises some concerns over emissions. But with prevailing winds from south and west, the impact is minimal. Threat from air-borne pollutants from further afield is much higher and ongoing, as some of these contaminants accumulate preferentially in colder areas of the global environment, such as high elevations, due to a process called global fractionation (Landers et al. 2008).

Temperature changes

High Threat

The effects of global climate change are well-documented and an active science program exists. However, the glaciers have been in retreat for several thousands of years, and while the rate has changed the knowledge that glaciers were in retreat has been known since the creation of national
Other Ecosystem Modifications

High Threat
Outside site

Concentrations of large carnivores and aquatic species migration (bears, wolves, salmonids) have been adversely affected over time by settlement and road corridors becoming a barrier to connectivity between species populations. Isolated populations suffer species loss and with loss of major carnivores, as umbrella species, leading to loss of species of all types (R23, R25, R26). However, measures have been undertaken to address the issue. In 2013, Teck Resources, which operates large mines in British Columbia, purchased for conservation purposes Flathead Townsite and the Alexander Creek, two large parcels of private land which are of great significance to the integrity and connectivity of the World Heritage site. Management plans are being prepared. Southern Alberta Land Trust and the Nature Conservancy of Canada have also purchased parcels or secured easements of private land along Highway 3 for connectivity purposes. However, concerns remain at the Michel Creek linkage. Alberta’s 2014 South Saskatchewan Land Use identifies connectivity across Highway 3 as a biodiversity value which could have a positive impact.

Potential Threats

Low Threat

Climate change offers the greatest potential threat and may cause significant impact to the site’s unique ecological complexes but the effects of potential energy development could further fragment connectivity and wildlife migration across international boundaries.

Mining/Quarrying

Low Threat
Outside site

The Province of British Columbia banned oil and gas and mining in most of the Canadian Flathead Valley in 2010. In 2013, the Government of Canada made a policy commitment to similar effect on the portion of the Dominion
Coal Block in the Canadian Flathead but it has not yet been legislated. These actions have eliminated a major threat. However, reciprocal action under a 2010 Memorandum of Understanding between British Columbia and Montana has not yet occurred on the US side. The State of Montana has made partial efforts to prevent coal mining and oil and gas in its portion of the Flathead Valley by a state board’s actions to ban surface access on Coal Creek state lands. Various efforts in the US Senate and House of Representatives to pass bills banning oil and gas and mining on the extensive federal lands in the Flathead Valley adjacent to the WHS have not yet passed.

► **Tourism/ Recreation Areas**

**Low Threat**

**Inside site**

The target set out in the management plan of Waterton Lakes National Park is to increase visitation to the park by 2%/year for 5 years (PMP 2010). One key action to achieve this was to build a new multi-use (mainly bicycle) trail, which resulted in 7 km of new linear disturbance. However, any additional infrastructure is only implemented following careful and rigorous environmental review.

In the Glacier National Park commercial operations are closely regulated, but improvements to facilities and increased services may lead to increased visitor demand and increased numbers of park visitors, leading to greater pressures on natural values through use (R22).

► **Invasive Non-Native/ Alien Species**

**Low Threat**

**Inside site**

In the Glacier NP recreational fishing is minor, but popular. Even though actively managed, there is potential to introduce changes to aquatic ecosystems by this activity (R11, R22, R27).

► **Temperature changes**

**High Threat**

**Inside site**

**Outside site**

Climate change offers the greatest potential threat and may cause significant
impact to the site’s unique ecological complexes (R20, R23, Roush, 2009).

► Roads/ Railroads

**Low Threat**

**Inside site**

**Outside site**

While minor, both rail and motor traffic in this major east-west corridor can affect wildlife populations, especially grizzly bears which have been adversely affected by railroad spills of grain that becomes an attractant as an unnatural food source, resulting in accidental death from collision with road and rail traffic (R9, R24). In Canada, national policy changes to increase visitation has led to pressure to open some park roads that are closed in winter. This has been offset by Waterton Lakes NP being designated a “three season park” with reduced services in winter. The management plan does identify as a goal pursuing modest additional winter recreational opportunities such as cross-country skiing and associated tracking, but there are no plans for these developments at this time.

### Protection and management

#### Assessing Protection and Management

► **Boundaries**

**Highly Effective**

Sufficient and effective (R23)

► **Sustainable finance**

**Mostly Effective**

Is considered sufficient in the USA, although there will always be budget and staffing fluctuations based on national priorities and direction (R23). In Canada, the available budget has decreased since 2012 as a result of budget cuts.

► **Staff training and development**

**Mostly Effective**
In both countries the parks have dedicated and well-trained staff. However, the recent budget cuts have also resulted in decrease of the number of staff members.

▶ **Sustainable use**

*Mostly Effective*

Overall, effective; however, in Canada, new requirements for parks to increase visitation and revenue has the potential to impact values at a time when resource staff levels have been reduced.

▶ **Relationships with local people**

*Mostly Effective*

In Glacier NP relationships with local people are solid, supportive and valued; but relationship with Salish-Kootenai and Blackfeet tribal officials can always be improved (R5, R6, R14, R21, R22, R23). In Canada an External Relations section was created within the park administration few years ago, which has increased focus on stakeholder communication. Progress has been made to improve the relationship with aboriginal partners.

▶ **Legal framework and enforcement**

*Highly Effective*

The Waterton-Glacier International Peace Park comprises Waterton Lakes National Park, Alberta, Canada and Glacier National Park, Montana, USA, both of which are ranked as IUCN Category II Protected Areas. Waterton Lakes National Park was set aside as a Forest Reserve in 1895 and reclassified as a Dominion Park in 1911 and a National Park under the National Parks Act in 1930. It is Crown Land administered by Parks Canada, Gatineau, Quebec and managed from a parks headquarters in Waterton, Alberta. Glacier National Park was originally established as a National Park under its own legislation in 1911. It is Federal
Land administered by the US Department of the Interior National Park Service, Washington, D.C., and managed from a parks headquarters in West Glacier, Montana (R23). The Peace Park was established in 1932 by parallel acts of the United States Congress and the Canadian Parliament. It was the world’s first Peace Park. Because it straddles the Canada-US border it is also governed by the Boundary Waters Treaty between Canada and the United States. The legal framework for the property is considered highly effective.

► Integration into regional and national planning systems
Highly Effective

In the USA the integration of Glacier NP into the national planning system is considered effective (R22). In Canada good integration is ensured through Crown Managers Partnership and Prairie Conservation Forum.

► Management system
Mostly Effective

Collaborative management occurs between Waterton Lakes and Glacier NPs, and also between the parks and surrounding lands in the Crown of the Continent ecosystem through an array of partnerships with stakeholders. These arrangements are designed to reach across traditional jurisdictional boundaries in the interest of rational approaches to management. Currently the emphasis of joint programs of the two parks is on fire management, public safety and rescue operations, management of shared wildlife populations, control or eradication of non-native weeds and pest animals, maintenance and restoration of biodiversity and ecological processes, and impacts of habitat fragmentation (R23).

► Management effectiveness
Mostly Effective

Good, although resource management staff are always challenged with funding needs in both countries (R2, R3, R6, R7, R9, R14, R19, R20, R22, R23, R24)

► Implementation of Committee decisions and recommendations
Highly Effective
In 2010 the World Heritage Committee welcomed “the commitments made by the Province of British Columbia to remove mining threats from the Flathead River Basin, and the initiatives in the United States of America regarding extinction of mining licenses” and congratulated the States Parties on the successful transboundary cooperation and the signing of the new Memorandum of Understanding regarding the Flathead River Basin, but also requested the States Parties to continue working on the issues of connectivity (Decision 34COM 7B.20). As for climate change mitigation and adaptation strategies mentioned in Decision 33COM 7B.22, in 2014 Waterton Lakes National Park helped to organize and present a conference on Climate Change Adaptation in Missoula Montana as a member of the Crown Managers Partnership (CMP). The final report of that forum and several other climate change adaptation initiatives are being compiled and will be used by Parks Canada and the CMP to guide the development of adaptation strategies.

► Education and interpretation programs
   Mostly Effective

   Very good (although there could be greater emphasis on the World Heritage status) (R23). In Canada, the Action on the Ground project and external funding has enabled award-winning Waterton Ecosystems Investigators Camp for students throughout southern Alberta. In-park education programs are also offered.

► Tourism and interpretation
   Highly Effective

   Tourism and interpretation programmes are very good (R23).

► Monitoring
   Highly Effective

   Good (R3, R6, R7, R9, R11, R13, R14, R16, R17, R18, R19, R20, R24), however, the reduction of staff and budgets is of some concern.

► Research
   Highly Effective
Good (R3, R6, R7, R9, R11, R13, R14, R16, R17, R18, R19, R20, R24)

Overall assessment of protection and management

Mostly Effective

Protection and management are overall effective and provide a positive example to other trans-boundary sites that seek to protect Outstanding Universal Value transcended by boundaries.

Assessment of the effectiveness of protection and management in addressing threats outside the site

Mostly Effective

External land use threats to the parks have been a major concern but the situation has improved since World Heritage listing. The extensive purchase and easement program of low elevation prairie lands adjacent to Waterton Lakes National Park by the Nature Conservancy of Canada in the area of the Waterton Biosphere Reserve has increased habitat available for park mammals especially in spring and fall. The Province of Alberta’s South Saskatchewan Land Use Plan, 2014 created a 54,588 ha wildland park immediately adjacent to the north boundary of Waterton Lakes which enhances the WHS’ s ecological integrity.

Best practice examples

World heritage values, international trans-boundary cooperative management, wildlife-human interaction, natural fire regime reestablishment, International Peace Park issues, working with indigenous Tribes. Specific programs:

Native America Speaks; an educational and interpretive program by the National Park Service in cooperation with the Blackfeet and Salish-Kootenai tribes and the Glacier Conservancy where American Indian tribal members present interpretive programs for park visitors about traditional stories, practices, and folkways.

Crown Managers Partnership: a cooperative effort by managers of both Glacier and Waterton Lakes national parks to involve adjacent land managers and political entities in a broad effort to coordinate management activities at
a landscape scale.

Reserved Water Rights Compacts: Development of formal, treaty-level compacts with both the State of Montana and adjacent Indian Tribes for water rights issues to insure necessary water for species conservation in Glacier National Park.

The Restoring Terrestrial Ecosystems Together (RTET) project was a major 5-year investment of funds that were external to the park budget. The tripling of on-the-ground efforts to control non-native plants and restore grasslands and threatened whitebark and limber pine forests has made tremendous progress. Unfortunately, this external funding is ending at a time of budget and staff cuts and it is doubtful whether this progress can be maintained. As part of RTET, a pilot initiative to bring regional school children to the park for multi-day stays and field exercises attracted a major NGO funding partner. The program won a provincial Emerald Award.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ Superlative scenery

Good

Trend: Stable

Values of this property have been maintained through continuing management, monitoring and research. Superlative scenic values of the site remain stable and largely intact (R1, R22, R23, R25).

▶ Unique ecological complexes

Low Concern

Trend: Stable

During the last 5 years, the values have been stable, but the loss of glaciers in the headwaters and invasion by non-native species are of some concern. Measures to address the threat posed by invasive species are being undertaken.
Summary of the Values

Assessment of the current state and trend of World Heritage values

Low Concern
Trend: Stable

The values for which Waterton-Glacier International Peace Park was inscribed have been well preserved and are stable, but threatened by a number of threats, particularly climate change. All threats are addressed as part of a robust management program but there is concern for species migration both by connectivity to other protected areas and vertically, in elevation, within the property.

Additional information

Key conservation issues

Loss of connectivity
Regional

Protected areas become increasingly isolated from other non-protected areas and critical species lose the ability to maintain genetic diversity with the potential loss of island populations.

Climate change
Global

Effects are dramatic, certainly on loss of glaciers (which has been occurring since glacial retreat) but more importantly for beetle infestations that can increase potential for wildfire.

Invasive species
Local

Non-native plants, fish and exotic pathogens continue to invade the site and
Benefits

**Understanding Benefits**

▶ **Is the protected area valued for its nature conservation?**

Glacier, along with Waterton Lakes National Park, together and separately, actively manage large populations of charismatic mega-fauna, particularly grizzly bears in a manner to maintain healthy and natural populations of wildlife and aquatic species while still available for the benefit and enjoyment of park visitors.

▶ **Outdoor recreation and tourism**

Destination for sightseeing, boating, hiking and skiing in the winter. Mostly regional visitation, but also international. Supports a seasonal business community.

▶ **Importance for research, Contribution to education**

Good resource for research, and for disseminating knowledge about natural processes, ecosystems and species, particularly because so much biodiversity is contained within such a small area.

▶ **Water provision (importance for water quantity and quality)**

Although a small park, the Waterton Lakes NP serves as a water tower for regional communities and agriculture.

▶ **Wilderness and iconic features**

There are numerous prayer flag and vision quest sites within the Waterton Lakes National Park that are actively visited by First Nations

▶ **Is the protected area valued for its nature conservation?**

Glacier, along with Waterton Lakes National Park, together is a key link in the
landscape conservation effort to insure genetic diversity among increasingly isolated populations of key indicator and umbrella species.

Summary of benefits

Glacier along with Waterton Lakes National Park as a World Heritage property is the oldest legislated trans-boundary protected area in the world. Both Parks have a history of working together, both formally and informally, across national frontiers to cooperatively manage world heritage and national park values of benefit to, not only park visitors, but as an example to others in the world, to both the conservation and broader community of people. Glacier, along with Waterton Lakes National Park, together and separately, actively manage large populations of charismatic mega-fauna, particularly grizzly bears in a manner to maintain healthy and natural populations of wildlife and aquatic species while still available for the benefit and enjoyment of park visitors. These two national parks increasingly serve as positive examples of the World Heritage program through education of visitors and resolution of joint management challenges through national laws and legislation as a means to implement the idea of world heritage in a protected area, especially for protected areas that cross national frontiers.

Projects

Compilation of active conservation projects

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<th>Organization/individuals</th>
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<th>Brief description of Active Projects</th>
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<tr>
<td>1</td>
<td>US National Park Service</td>
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<td>All organizations and projects work through the Park. The Park’s current General Management Plan guides all conservation and management activity. See R22 at <a href="http://parkplanning.nps.gov/document.cfm?parkID=61&amp;projectId=39894&amp;documentID=44643">http://parkplanning.nps.gov/document.cfm?parkID=61&amp;projectId=39894&amp;documentID=44643</a> Individual projects are funded in terms of importance as outlined in various plans and park proposals. Projects done in conjunction with outside conservation groups and park partners are part of this process. Active park planning issues can be found at <a href="http://parkplanning.nps.gov/parkhome.cfm?parkID=61">http://parkplanning.nps.gov/parkhome.cfm?parkID=61</a></td>
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<td>2</td>
<td>Parks Canada</td>
<td>Restoration of whitebark and limber pine forests</td>
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<td>3</td>
<td>Parks Canada</td>
<td>Control of non-native plants</td>
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<td>4</td>
<td>Parks Canada &amp; Alberta Environment and Sustainable Resources</td>
<td>Population estimates of grizzly bears using hair snag from rub trees</td>
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<td>5</td>
<td>Crown Managers Partnership</td>
<td>Crown Managers Partnership long-term ecological health monitoring for Crown of the Continent area</td>
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### REFERENCES

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<td>2</td>
<td>&quot;Transboundary Cooperation to achieve wilderness protection and large landscape conservation,&quot; Locke, Harvey; 2011-2012 Park Science, US National Park Service</td>
</tr>
<tr>
<td>5</td>
<td>Assessment of Septic Leachate: A Survey of Lake McDonald Glacier National Park, F. Richard Hauer, Flathead Lake Biological Station, University of Montana, 2007</td>
</tr>
<tr>
<td>12</td>
<td>Comments and Observations to the IUCN Mission of September 2009, Re: Waterton-Glacier International Peace Park World Heritage Site; David Mihalic, Missoula, Montana</td>
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<td>Jack Stanford, Professor and Director of the Flathead Lake Biological Station, University of Montana (personal communication)</td>
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<td>22</td>
<td>Modeled Climate-Induced Glacier Change in Glacier National Park, 1850-2100; Myrna H. P. Hall and Daniel B. Fagre; BioScience 53: 131-140, 2003 NOTE: Numerous studies and research have been accomplished on this issue, much of which is accessible through the Northern Rocky Mountain Science Center, United States Geological Survey in Glacier National Park. See <a href="http://nrmsc.usgs.gov/research/glacier_retreat.htm">http://nrmsc.usgs.gov/research/glacier_retreat.htm</a></td>
</tr>
</tbody>
</table>
Number | References
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26 | Note: Glacier National Park and the Blackfoot Nation's Reserved Rights: Does a Valid Tribal Co-Management Authority Exist? Sholer, Curt; 29 Am. Indian L. Rev. 151
36 | St. Mary River-Milk River Basin Study Draft Report; US Department of the Interior, Bureau of Reclamation, January 2012
### References

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<tr>
<td>42</td>
<td>US Code of Federal Regulations, 16 USC 170, Hunting and Fishing</td>
</tr>
<tr>
<td>44</td>
<td>Wildland Fire Use: Managing for a Fire-Smart Landscape, Fire Science Digest, January 2009</td>
</tr>
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