

Canada's World Heritage Sites Pre-Application for Wells Gray Provincial Park

Submitted 26 January 2016
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on behalf of the Wells Gray Wilderness Society

Section 1 - Identification of the Site

Section 1A – *Indicate category*

Natural

Section 2 – Description and History

Section 2A – *Description of Site (maximum 200 words) Provide a brief description of the proposed site, including its main heritage features and relevant geographic characteristics. The main focus should be on those features which are relevant to its Outstanding Universal Value.*

Above all, Wells Gray Provincial Park is wilderness: a wild, mountainous, remote, largely untrodden landscape that preserves the watersheds of three pristine rivers in a geologically unique and ecologically complex area of high biological diversity. At 540,000 ha (1.3 million acres), Wells Gray Park is the southern bulwark of a trio of mountain parks set in western Canada's Columbia Mountains.

In what ways does Wells Gray Park merit global recognition? First, it sustains large tracts of inland temperate rainforest, ancient beyond reckoning; second, it supports the world's most diverse macrolichen flora; third, it encompasses the world's two largest rivers (by volume) occurring entirely within a protected area; fourth, it showcases significant ice-contact volcanic features and canyons recording the impact of multiple glaciations; fifth, it preserves intact one of the richest, most extensive subalpine flower meadows in North America; sixth, it contains one of the world's great whitewater rivers; seventh, it anchors a system of protected areas seemingly destined to form a final stronghold of the endangered, uniquely Canadian Mountain Caribou; and eighth, as Canada's 'waterfall park', it contains more major waterfalls, including iconic Helmcken Falls, than any protected area known to us – a feature of increasing biological significance with deepening climate change.

Section 2B – *History and Development of the Site (maximum 200 words). Provide a brief history of the proposed site, including significant events and the development of its major heritage features.*

Established in 1939, Wells Gray Park is named for BC politician Arthur Wellesley Gray, an early advocate of wildland protection. The impetus for the park's creation was its many waterfalls, its spectacular canyon scenery, its (former) fame as a paradise for big game hunters, and its status as a stronghold for the Mountain Caribou. In 1950 the BC government initiated a ten-year wildlife study here, resulting in several classic papers on Mountain Caribou, Moose, wildlife censuses, game management and fire history.

The BC government extended the park southward in the 1950s to capture prime Mountain Caribou winter habitat. In the 1990s it was extended southward again to encompass the extraordinarily lush, extensive Trophy Mountain flower meadows, as well as the lower reaches of the Clearwater River, famed for its world-class whitewater and stunning canyon scenery. During the same period the park was also linked northwards via Cariboo Mountains Provincial Park to Bowron Lakes Provincial Park, creating a vast protected area of 2,500 km² – about the size of Luxembourg. Consistent with its wilderness status, Wells Gray Park is notably “undeveloped,” having no through roads, and few wilderness trails and routes. Access into the interior of the park is mostly by canoe and motorboat.

Section 3 – Proposed Outstanding Universal Value (OUV)

Section 3A – Justification for adding the Site to Canada's Tentative List. Propose why the site may have Outstanding Universal Value. OUV encapsulates why the site is of importance to all humanity. The description should summarize the main attributes which demonstrate the site's OUV. It should be written with careful reference to the Operational Guidelines for the Implementation of the World Heritage Convention. (maximum of 200 words)

Wells Gray Park has long enjoyed an international reputation for its spectacular wilderness setting: “the Canada you dreamed of.” At 540,000 ha, it is the southern bulwark of a 200 km trio of mountain parks set in western Canada's Columbia Mountains – complement to the better known Rocky Mountain Parks, yet a world apart by reason of Wells Gray Park's wetter climate, more diverse geologic history, significantly different biota and conservation profile, and its absence of disruptive through-traffic.

Established ahead of colonial settlement here, Wells Gray Park is in essence a living museum, preserving to a remarkable degree a vast landscape ecologically continuous with its past. As such, it belongs to a class of wilderness reserves now globally rare at temperate latitudes where, in many regions, the opportunity to set such tracts aside disappeared long before the importance of doing so – if only as ecological benchmarks – was appreciated.

In essence Wells Gray Park is a single vast ecosystem: the watershed of three major rivers: the Azure, the Murtle and the Clearwater. Much like the veins of a leaf, its streams and rivers flow inward to a common midrib, the Clearwater, which then continues down a long narrow petiole of parkland to its main branch stream 40 km southward.

Section 3B – *Proposed Outstanding Universal Value by criteria. State which one or more of the 10 criteria for Outstanding Universal Value are being proposed for this site and describe briefly why each was chosen. (max 50 words)*

(vii) contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance

In the north are snow-clad peaks, steep-walled valleys and rushing rivers that thread long narrow lakes. Southward are fir-scented highlands and broad valleys punctuated by volcanoes and infilled by lava flows. Here too are precipitous canyons carved by glaciers and their meltwaters – and waterfalls to take the breath away.

(viii) outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features

Wells Gray Park preserves almost a billion years of earth history, including three million years of volcanism formed by volcanic fire and glacial ice. The resulting volcanic features – Stetson-shaped Tuyas and cone-shaped ‘sugms’ – record multiple glaciations over Recent earth history providing a perfect outdoor classroom of volcanic instruction.

(ix) outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals

Wells Gray Park sustains extensive tracts of ancient Inland Temperate Rainforest – a uniquely Canadian ecosystem critically important to Mountain Caribou and many lichens. Temperate rainforests are globally rare and, though here intact, are otherwise usually modified by human agency including air pollution.

(x) contains the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation

Wells Gray Park anchors a system of wilderness parks created in large part to protect the endangered, uniquely Canadian southern Mountain Caribou – and, if present trends continue, likely to become their final refuge. Wells Gray Park also sustains an extraordinarily rich cryptogamic flora including the world’s most diverse macrolichen assemblage.

Section 3C – *N/A*

Section 3D – *Integrity of the site (for both cultural and natural criteria). Describe the integrity of the site. Integrity is a measure of the completeness or intactness of the features that convey proposed OUV. Key areas to consider are wholeness, adequate size, and absence of threats. (maximum of 100 words)*

Ecological integrity is a key component of Wells Gray Park's bid for World Heritage site status. In addition to size, absence of industrial development, and preservation of a major watershed comprising three major rivers, Wells Gray Park also occurs in a region notably free of the adverse effects of air pollution. Note, however, that its Mountain Caribou population is now in decline owing to on-going intense deforestation immediately adjacent to the park. Geologically, the valley's volcanic history is well captured within Wells Gray Park, excepting a small but significant portion in the 'Three Gorges' area.

Section 3E –Indicate what distinguishes this site from other similar heritage properties around the world, including other properties on the World Heritage List?

Give details on its significance in relation to a maximum of 5 properties of comparable heritage value found worldwide. (maximum of 400 words)

There are 23 natural sites listing "volcanoes" as a key feature; none showcase subglacial volcanism or geologically young volcanism in the context of intra-continental eruptions through metamorphic basement rocks in an alpine setting. This alpine setting is a window to 900 million years of earth's evolution at the western margin of the North America not preserved elsewhere.

Thirty-four natural sites list 'waterfalls'; but none compare with the 'waterfall park' for sheer variety of cataracts and cascades over a variety of bedrock types. Moreover, waterfalls of the 'Helmcken' type are rare, with precipitous and overhanging canyon walls typically associated with basaltic bedrock combined with deep cavernous backdrops formed by winter freeze-thaw activity. Such waterfalls are thus a northern phenomenon.

The same is true of the extraordinary lichen assemblages sustained by Wells Gray Park's waterfall sprayzones: these too occur strictly in winter-cold regions where spray is seasonally interrupted by ice build-up. (Spray zones active year-round support few lichens). Sprayzones are often hotspots for rare tree-dwelling lichens. Note that species dependent on the sprayzones of rivers and streams that originate in mountain glaciers, as in Wells Gray Park, are likely to be at least moderately robust against climate change.

Thirty-four natural sites list 'lichens,' but none support globally significant macrolichen diversity at the level of Wells Gray Park.

Three natural sites list 'caribou' but none support the made-in-Canada Mountain Caribou, distinguished by its small size, outsized hooves and, especially, its exclusive use of tree-dwelling hair lichens (*Bryoria* spp.) as winter forage. The ability to forage on arboreal lichen uniquely enables these animals to pass the winter in high, snowy mountainous regions unavailable to other large mammals. For many Canadians, the Mountain Caribou is a symbol of mountain wilderness.

Four natural sites list temperate rainforests and three list boreal rainforests. Of these, the only North American representative is Washington's Olympic National Park which, however, supports Coastal Temperate Rainforests very different in structure, ecology and biota from the Inland Temperate Rainforests of Wells Gray Park. We emphasize, moreover that Inland temperate

rainforests are globally rare and, in North America, are present exclusively in southern inland British Columbia.

Section 3F – Identify whether the site addresses a particular gap or under-represented area or theme on the World Heritage List.

The mountainous terrain of Wells Gray Park is a window to 900 million years of earth's evolution at the western margin of the North America. Here layered and folded sedimentary rocks record the earliest deposition of sediments along the continental margin, as well as their later deformation during continental collision. Best preserved are geologic events reflecting the last 160 million years. From this time forward, Wells Gray Park has straddled crustal-scale transform-fault-dominated tectonics dominating the geology to the north and extensional-dominated tectonics to the south. This accounts for the spectacular superimposed rock folds, low, medium and high-grade metamorphic mineralization, shear zone textures, granitic intrusions and thrust faults all well exposed in the park.

In the north, towering peaks of tectonized metamorphic and granitic rocks have since been sculpted to razor sharpness by continental ice sheets and mountain glaciers. The scouring action of these glaciers has created land-locked fiords now partly occupied by four long narrow lakes: Hobson, Azure, Clearwater and Murtle.

In the south, and superimposed on this ancient metamorphic landscape, is a volcanic 'overlay' of landforms from eruptions that began about three million years ago. These eruptions likely record weaknesses along the juncture of the two different tectonic regimes to the south and north. Faults cut deep into the earth's mantle providing a conduit through which up-welling magma carried rare mantle material in the form of lherzolite nodules. Because much of this volcanic activity occurred during times of glaciation, Wells Gray Park preserves a great variety of ice-contact volcanics, including Stetson-shaped Tuyas, cone-shaped subglacial "sugms," and areas of pillows, pillow breccias, pepperite (mixed lava and basement cobbles), lava flows (including tubes) and a unique downward-directed 'dykes.'

The word 'Tuya' is a widely accepted geological term named after Tuya Butte in Northern British Columbia where the structures form by subglacial volcanism were first clarified. Wood identified tuyas as lacking in World Heritage protected areas and recommended that a site in Canada (the type area) be added to recognize and protect these unique landforms, which record the ebb and flow of glaciers in the areas where they are preserved. Uniquely, subglacial volcanism in Wells Gray Park records at least three periods of major continental-scale glaciation thus providing a window into earth's changing climate.

The geological landscape of Wells Gray Park is uniquely sculpted by melting glaciers due to the nature of the underlying bedrock. Massive glacial out-burst floods, either during deglaciation or from subglacial eruptions have carved deep canyons into the multilayered volcanic lava flows. The distinctive properties of the columnar-jointed lava flows create precipitous cliffs as the lava bedrock erodes away like slices of bread from the action of water. These vertical, precipitous cliffs create the free-fall waterfalls that Wells Gray Park is internationally famous for, including the iconic Helmcken Falls.

Nowhere in the World Heritage inventory do these geological attributes converge creating a unique landscape that also fills an identified gap in the World Heritage system.

Section 4 – State of Conservation

Section 4A – Describe the current state of conservation of the site, including details on any potential environmental or development threats to the site, or risks presented by natural disasters. Indicate any mitigation measures in place for the threats identified. (maximum of 200 words)

Wells Gray Park's status as a class A provincial park places it under the BC Park Act which accords the highest level of protection available to any BC land base.

Wells Gray Park anchors B.C.'s second largest population of southern Mountain Caribou – a species currently listed as endangered by COSEWIC. Recovery planning for Mountain Caribou in BC began in 2002 and in 2007 yielded the B.C. Government's Mountain Caribou Recovery Implementation Plan. More recently, in 2014, SARA published its own recovery strategy for southern Mountain Caribou, which maps Wells Gray Park as 'critical habitat' for these animals.

Southern portions of the park were subjected to a province-wide Mountain Pine Beetle outbreak (here between 2004 and 2007), now under review by the Mountain Pine Beetle Management Strategy.

Wildfire plays a major role in shaping and sustaining many forest ecosystems within Wells Gray Park and is broadly managed by the BC Wildland Fire Management Strategy. Nonetheless, B.C. Parks generally views wildfire as a natural part of ecosystem process and manages accordingly.

Section 5 – Protection and Management

Section 5A – Demonstrate how the property has adequate long-term legislative, regulatory, institutional and/or traditional protection. If protection measures are not currently in place, indicate what protection mechanism will be afforded the property in the near future, and include a supporting letter from the relevant authority. (maximum of 100 words)

As a Class A park, Wells Gray Park receives regulatory protection under the British Columbia Provincial parks system, which is regulated by the BC Park Act and which provides for the establishment, classification and management of parks, conservancies and recreation areas. Under the authority of the Park Act, Class A parks and conservancies are established by inclusion in the schedules to the Protected Areas of British Columbia Act or by order in council under the Act. Class A parks prohibit activities such as logging, mining and hydroelectric projects.

Section 5B -List the principle owners or competent authorities of the site. As an annex, include a letter from the site owner indicating their consent for this submission. (maximum of 100 words)

The principal owner of Wells Gray is the British Columbia Provincial Parks Service. A letter from Minister Mary Polak, Ministry of Environment British Columbia to Minister Catherine McKenna, Environment and Climate Change Canada, is included in Annex A.

Section 5C - Identify whether the site is located on Indigenous traditional territory. Indicate efforts to make these Indigenous communities aware of the application, with a view towards ensuring their support. Summarize the results of these discussions, including indication of support, issues or concerns raised, and desired level of involvement in the project.

Wells Gray Park is located on the traditional territory of three First Nations: Simpw First Nation, Tsq'escen' (Canim Lake Band) and Xats'ull/Cmetem' (Soda/Deep Creek).

These indigenous groups assert traditional territory overlapping with portions of Wells Gray Provincial Park . The Tsq'escen' and Xats'ull/Cmetem' are two of four bands that make up the Northern Shuswap Tribal Council (Northern Secwepemc te Qelmucw) which is currently in negotiation with BC and Canada under the BC treaty process on behalf of its four member bands. This process has now advanced to Treaty Stage 4 – Agreement-in-Principle negotiations. The Simpcw First Nation is not currently participating in the treaty process but asserts territory that overlaps a large portion of the Wells Gray Park.

These groups have been made aware of this application and their support is currently being sought through appropriate channels, such as direct communications with staff and council members, a request to present at future council meetings and ultimately a request for a letter of support.

Section 5D –List any community groups and/or major stakeholders with an interest in the site and provide a brief summary of their views regarding its proposed inclusion on the Tentative List. Summarize any discussions you've had with your provincial / territorial parks or heritage department regarding your application. (maximum of 200 words)

This application has been completed with input and support from BC Ministry of Environment's Protected Areas Section, Tourism Wells Gray, District of Clearwater and Thompson Rivers University.

The community groups and major stakeholders are aware of the benefits to accrue through inclusion of Wells Gray Park in the UNESCO World Heritage Tentative List, e.g., increased economic development and regeneration in nearby communities, stronger partnerships between stakeholders working toward a common goal, enhanced opportunities for funding and opportunities for learning and research, increased pride in the local area, increased community cohesion (e.g. through development of community organizations), and greater attention to conserving the values represented by the site.

The Thompson Nicola Regional District is in the process of developing an implementation plan for the Wells Gray / North Thompson and Robson Valley as a UNESCO GeoPark. Currently commissioned is an implementation plan that will establish the framework for the Global

GeoPark application process. Upon completion, the plan will be presented to impacted Local Government and First Nations for their review and direction on whether or not to proceed with the project. Clearly World Heritage designation for Wells Gray Park would complement this initiative.

Section 5E – Describe whether a management plan is in place, or how it would be developed that specifies how the Outstanding Universal Value of the property would be protected, presented and transmitted to future generations. (maximum of 100 words)

BC Parks approved its Wells Gray Master Plan in 1986 covering the original appropriation. Subsequent land added to the base is managed by the Wells Gray Recreational Area Interim Management Statement (1991) and Management Direction Statement for Clearwater River Corridor (1999). Long term funding is in place to cover maintenance and repairs as needed, subsidized also by camping fees. With World Heritage status additional funds will be sought to enhance the outreach provided by the park through partnerships with the Wells Gray Wilderness Society, Tourism Wells Gray and other organizations dedicated to enhancing visitor awareness and education.

Section 6 – Development of a nomination dossier

Section 6A – Indicate how the preparation of a World Heritage nomination dossier would be undertaken and resourced, in the event that the site is added to the Tentative List.

The Wells Gray Wilderness Society (WGWS) would accept responsibility for preparing the dossier. The Society is currently building its internal funding capacity – books, workshops, crowd sourcing, etc. - but would seek outside funding as well, e.g., from the BC government, BC Museums Association, Geological Foundation of Canada, and any number of local groups and donors committed to the values preserved in Wells Gray Park. It should also be noted that WGWS includes within its membership much of the technical expertise that will be needed to carry this project through to completion.

Section 7 – Documentation

Keywords: Helmcken Falls; “waterfall park”; subglacial volcanoes; macrolichens; inland temperate rainforest; mountain caribou; tectonic history; whitewater rivers & wild lakes; subalpine flower meadows; winter activities; lava walls & canyons.

ANNEX A: Letter from Provincial Minister

ANNEX B: Letters of support

ANNEX C: Imagery highlighting key features of the application.

ANNEX D: Official map of the boundaries of Wells Gray Provincial Park

ANNEX E: Bibliography and references cited in application Webpage link – Wells Gray World Heritage <http://www.wellsgrayworldheritage.ca/>