



Kootenay

National Park of Canada

Management Plan Implementation Report

2014



Superintendent's Message

It is with pleasure that I present to Canadians this annual report highlighting some recent achievements of Parks Canada in implementing the Kootenay National Park Management Plan. Progress this year has been made on many diverse projects, including: efforts to reduce wildlife mortality on Highway 93S; exciting new research into recently-discovered Burgess Shale fossil sites; visitor facility improvements; engaging new visitors inside the park and reaching out to Canadians where they live and work; ecosystem restoration in Sinclair Canyon; and species-at-risk recovery efforts.

The highlights described in this report reflect our efforts locally to implement Parks Canada's national objectives to conserve and restore Canada's national parks, to connect Canadians with nature, and to bring Parks Canada places to Canadians where they live. By focussing on these key objectives, we will work toward Parks Canada's Strategic Outcome: Canada's treasured natural and historic places will be a living legacy, connecting hearts and minds to a stronger, deeper understanding of the very essence of Canada.

Sincerely,

Ifan Thomas,
Acting Field Unit Superintendent,
Lake Louise, Yoho and Kootenay Field Unit

Park Management Plan Implementation Reporting

This annual report highlights progress and accomplishments for the 2014 calendar year. It provides an opportunity for Canadians to review and provide feedback on the progress and priorities established for the implementation of the Kootenay National Park Management Plan. The park management plan is the guide to how the national objectives of Parks Canada are delivered through on the ground initiatives in Kootenay. These initiatives support the goals of Canada's National Conservation Plan by taking action to conserve Canada's lands and waters, restore Canada's ecosystems, and connect Canadians to nature. Highlights are presented for each of the five key strategies outlined in the park management plan.

Cover photos clockwise from top left: burned forest in the Floe Creek valley (© Parks Canada / T. Keith), ram at Radium (© Parks Canada / A. Dibb), ice climber at Haffner Canyon (© Parks Canada / P. Zizka), hiking in the Stanley Valley (© Parks Canada / P. Zizka).

Annual reports from previous years can be found on-line at: <http://www.pc.gc.ca/eng/pn-np/bc/kootenay/plan/tion-mgmt/plandirecteur-mgmtplan.aspx>.

A Showcase of National Park Stewardship

Parks Canada is a world leader in natural and cultural heritage conservation and restoration. This leadership is demonstrated through innovative scientific research and active ecosystem restoration projects conducted within Parks Canada's protected areas. Several significant restoration and research projects were undertaken in Kootenay National Park during 2014.

Highway 93S Wildlife Crossing Project

In August 2014 the Government of Canada announced that \$9.6 million has been allocated to the second phase of the Highway 93S Wildlife Crossing Project. This project is intended to increase safety for motorists and reduce highway-related wildlife mortality, while ensuring that wildlife can also safely cross the highway corridor. The new funding will support the construction of 6.5km of highway fencing in the Kootenay Crossing area, and up to four wildlife crossing structures. These crossing structures are essential to maintain wildlife habitat connectivity in the Kootenay Valley. The first phase of this project, completed in 2013, included 4.7km of highway fencing and three wildlife underpasses. Work completed in 2014 included planning and initial design work for phase two implementation.



Wolves using an underpass on Highway 93S
(© Parks Canada)

Monitoring of the three existing underpasses in 2014 has begun to document their success. The underpasses have been used regularly by white-tailed deer, occasionally by wolves, and sporadically by moose, mule deer and black bear. Wildlife have begun adjusting to the fencing and structures, with no incursions into the fenced highway being reported in 2014 (in 2013 animals frequently wandered into the fenced portion of the highway at the fence ends).

Burgess Shale Research Expedition

During the summer of 2014 the Royal Ontario Museum (ROM) carried out a major palaeontological research expedition near Marble Canyon. The primary focus of this research was on excavating and studying the new Burgess Shale fossil deposit that was discovered during the ROM's previous expedition in 2012. This site was described in a 2014 scientific paper as being comparable to the original Burgess Shale site, the Walcott Quarry in Yoho National Park, in terms of its species diversity, quality of fossil preservation, and abundance of fossils. The 505 million year old Burgess Shale is one of the most significant fossil deposits in the world, providing the best evidence of the rapid evolution of early life following the Cambrian Explosion. It was designated a World Heritage Site in 1980.

A team of eight to ten researchers worked on the site throughout July and August while staying in a field camp established nearby. During the 9-week field season the crew collected over 1400 field samples, representing an estimated 5,000 to 8,000 individual fossils (many collected samples contain more than one fossil). These specimens have been shipped to the ROM where they are being catalogued and prepared for lab research. While in the park, the scientists also conducted additional exploration and mapping in the surrounding area to investigate the local depositional and tectonic setting of the fossil deposit.



Leptochoiliid fossil from the Marble Canyon research site. (© Parks Canada / T. Keith)

Several Parks Canada Burgess Shale interpreters spent time at the research site learning from the scientists. This experience will allow interpretation staff to relay the current scientific knowledge to park visitors this summer. It is anticipated that the results of this scientific research will lead to numerous future publications in high profile scientific journals, disseminating this knowledge to global audiences.

Visitor Experience (The Dramatic Effects of Fire and Water)

Connecting Canadians to their national parks and national historic sites is a corporate priority for Parks Canada. Providing infrastructure and services that facilitate meaningful engagement with nature is critical to establishing these lasting connections. Some highlights of efforts to achieve this objective are outlined below.

Visitation

Visitation declined slightly in fiscal year 2013-14, down 1.3% from the previous year. The trend has since reversed, with visitation between April and September 2014 rising 7.7% over the same period the previous year.

Fiscal Year	Visitation	% Change from Previous Year
2013-14	428,967	-1.3
2012-13	434,781	1.8
2011-12	427,128	-0.5
2010-11	429,365	0.7
2009-10	426,570	



Hiking through fireweed in Kootenay. (© Parks Canada / S. Morgan)

The Kootenay Explora App

A large percentage of travellers on Highway 93 South never stop to experience the park beyond the road corridor. This “drive-through” visitor segment is one of the target audiences identified in the management plan. The Kootenay National Park Explora driving tour app is a new product that has been developed for this audience. The audio tour features behind-the-scenes stories told by park staff, and provides drive-through visitors with enticements to stop and enjoy the park. Topics covered include the 2003 wildfires, the historical development of the highway, and phase 1 of the Highway 93S wildlife crossing project. A “soft launch” of the app occurred last fall, with an anticipated full launch on various app stores in the spring of 2015.

Paint Pots and Stanley Glacier Trail Bridge Reconstruction

In July and August 2014 two new bridges were constructed on the Paint Pots and Stanley Glacier trails. The previous Paint Pots bridge was destroyed by flooding in 2012, and the Stanley Glacier bridge was damaged by high water events in both 2012 and 2013. The trail approaches to these bridges were also upgraded as part of this work. The completion of these projects has re-established access to two of the most highly visited attractions in the north end of the park.



*Paint Pots Bridge over the Vermilion River.
(© Parks Canada / D McNamara)*

Rockwall Trail Network Bridge Reconstruction

The flooding in 2012 and 2013 also damaged or destroyed numerous bridges in the Rockwall area resulting in the closure of the Numa and Tumbling Creek trails. Parks Canada trail crews have been busy working to repair these remote structures.

In 2014 new support towers were built for the Tumbling-Ochre suspension bridge located at km 4.1 of the trail. These towers have been air-lifted and installed at the crossing site. At km 6.6 new cedar poles have been installed to replace the log bridge that was destroyed there. Decking material is on-site at both locations, and trail crews will complete construction of these bridges as soon as the snow has melted in 2015.



*New bridge being installed over Numa Creek.
(© Parks Canada / J. Hearnden)*

Also in the Rockwall area, the Numa Creek drainage is continuing to recover from a wildfire in 2013 that burned approximately 450ha of subalpine forest. Deadfall and slope failures have occurred along portions of the trail. A trail assessment will be conducted in the spring to evaluate conditions and the potential need for rehabilitation work.

Juniper Trail Extension at Sinclair Canyon

An extension of the Juniper Trail was completed as part of the Sinclair Canyon Restoration Project. The extension leads above the old lodge site to the historic gazebo and then down to the pedestrian underpass. This work provides an improved experience for trail users by providing a direct link to the hot pools and the Redstreak Trail on the south side of the canyon while avoiding the large parking lot and roadway.

Stanley Glacier Burgess Shale Hike

In 2014 Parks Canada launched a new Burgess Shale hike to the Stanley Glacier area. This was the site of palaeontological research in 2008 which ultimately led to the discovery of the new Marble Canyon fossil site in 2012. The new hikes were a tremendous success, with 95% of the limited number of spaces being booked in advance. A total of 20 hikes were provided, with a total of 225 participants.



Visitors looking for fossils on a Burgess Shale hike near Stanley Glacier.
(© Parks Canada)

Volunteering

Volunteering in hands-on projects is an important way for Canadians and international visitors to connect with Canada's national parks. During the past year, volunteers under the direction of Parks Canada trail crews completed light-duty trail brushing on nine kilometres of trails in the north end of Kootenay National Park to improve sight lines and enhance visitor experience. Volunteers also completed GPS mapping of several trails in the north end of the park to improve the accuracy of trail maps. Volunteers also worked on invasive plant control at Kootenay Crossing, white-tailed deer collaring at MacLeod Meadows, and participated in an owl survey. Several volunteers acted as Campground Hosts at Redstreak Campground, and as assistant guides for guided hikes to the Stanley Glacier area.

The Red Chair Program

The Red Chair Program is a new national initiative recently launched by Parks Canada. The program involves the placement of a pair of Adirondack chairs at scenic viewpoints with the aim of having visitors sit, relax and appreciate the view. It is hoped that these visitors will post pictures of themselves in the chairs on social media sites. Two sets of chairs were installed in Kootenay in the fall – one set at Marble Canyon and one set near the Sinclair Canyon restoration area above the Radium Hot Pools. Interpretive panels will be installed near the chairs in 2015.



Red Chairs above Sinclair Canyon. (© Parks Canada)

Celebrating History, Culture and the World Heritage Site

Crooks Meadows is an important cultural heritage site in the Kootenay Valley. The site was home to the Crook family before the area became a national park. In 2014, one of Parks Canada's trail crews rehabilitated the grave site of Charles John Crook. Previously the site had fallen into disrepair, and a large cottonwood tree had fallen on the fence.



John Crook grave site before and after trail crew restoration.
(© Parks Canada / T. Keith)



Bringing the Mountains to People Where They Live

Bringing Parks Canada stories to Canadians where they live and work is an important element of Parks Canada's effort to connect Canadians to their national parks and national historic sites. Parks Canada pursues this objective through various avenues, such as participating in outreach education activities in urban centres, and providing engaging content on internet and social media sites.

2014 marks the second year of the Parks Canada urban outreach program in the Vancouver area. In addition to scheduled programming at the Vancouver Aquarium and Science World, the outreach program targets several special events throughout the Lower Mainland. Kootenay National Park stories of fire management and wildlife monitoring were profiled at Science World and reached approximately 10,300 youth and their families, while special events featured general park information and reached approximately 19,000 people.

Parks Canada also attended the East Kootenay Regional Science Fair in Cranbrook. This event profiled Kootenay National Park's research and monitoring and fire management programs through activities and displays that reached 200 students, parents and teachers.

Thirty members of the Canadian Network for Environmental Education and Communication learned about the park's highway mitigation efforts, bighorn sheep conservation work, and Burgess Shale educational resources through a display at their four-day leadership clinic. Several members also took part in a post-clinic tour of the Sinclair Canyon restoration project.

Ensuring Healthy Park Ecosystems

Conserving and restoring natural ecosystems is critical to ensuring Parks Canada meets its obligation to maintain the ecological integrity of Canada's national parks. Maintaining healthy, intact ecosystems also ensures that Canadians have opportunities to experience and learn about Canada's native biodiversity and ecological processes. Some highlights of ecosystem management initiatives in Kootenay National Park are outlined below.

Sinclair Canyon Restoration Project

Parks Canada made significant progress on the Sinclair Canyon Restoration Project in 2013-2014, fulfilling a major commitment of the management plan. The Sinclair Canyon project includes the removal of remaining old infrastructure and forest thinning and prescribed burning to restore approximately 45 hectares of open Douglas fir-grassland habitat on the slopes of Mount Berland. When completed, this project will re-establish important transitional habitat for Rocky Mountain bighorn sheep, thus improving their access to important alpine ranges during lambing season. The project will also preserve important habitat for the COSEWIC-listed rubber boa.



Aerial view of Sinclair Canyon restoration. (© Parks Canada /J. Cochrane)

The former Radium Lodge facility was demolished and rehabilitated over the fall and winter, making the restoration of the north side of the canyon possible. Mechanical harvesting of mature trees in the vicinity was carried out in conjunction with the demolition project while access for heavy equipment was available. Fire crews subsequently conducted thinning of a fire guard along the northwest edge of the site during the summer of 2014. A prescribed fire on Mount Berland will complete this phase of the restoration work. This burn could occur as early as spring 2015, if conditions and resources permit.

Redstreak Restoration Project

Parks Canada continued to make progress on the Redstreak Restoration Project in 2013-14. The former park administration building was demolished and the site rehabilitated, in conjunction with the demolition work occurring in Sinclair Canyon. The old parking lot at this site has been converted to firewood storage for the Redstreak Campground. This has eliminated the use of the old wood storage site on the Redstreak Bench, which had been a source of wildlife disturbance within the restoration area due to frequent vehicle access requirements.

Parks Canada also attempted prescribed fire operations within the Redstreak Mountain prescribed fire unit in October 2014. Fire crews planned to ignite a 50 hectare section within the larger unit. The desired results were not achieved because forest fuels were not dry enough, and the ignition was followed by incoming cloud cover and rain. Fire crews continued to work in the area, burning slash piles along the upper ridge to strengthen the fire guard that will help to contain the fire the next time it is attempted. This project is intended to restore the ecological process of fire to this fire-dependent landscape. When completed this burn will help restore bighorn sheep winter range and associated open forest/grassland ecosystems, and also reduce the risk of future wildfire to Redstreak Campground and the Village of Radium Hot Springs.

Species at Risk – Whitebark Pine Recovery

Whitebark pine is a characteristic tree species of high alpine habitats in the western cordillera. In 2012, this species was designated as endangered under Canada's *Species at Risk Act*. The principal threats to its survival are: white pine blister rust – a fungus introduced from Europe; mountain pine beetle; and climate change. As part of the recovery effort for this species, Parks Canada vegetation specialists collected seed from whitebark pine trees from the Stanley Glacier area, near the Continental Divide in Kootenay National Park. These seeds will be grown into seedlings to test for resistance to white pine blister rust. If rust-resistant trees are identified, their seeds will be used to grow nursery stock for eventual transplanting into the wild.

To determine the long-term health and changes in white pine blister rust infection rates, vegetation specialists also visited 11 whitebark pine monitoring plots in Kootenay National Park. At each plot, 50 trees were assessed for signs of blister rust infection and infection rates will be compared to the previous 10-years of sampled data.

Managing Bear – Human Conflict

A heavy winter snowpack followed by a late spring made 2014 a challenging one for bear management. The persistence of snow at higher elevations kept lots of bears active in the valley bottoms well into the summer. Parks Canada staff were kept busy dealing with higher than usual numbers of both black and grizzly bears feeding along the roadside into late spring. In Kootenay there were multiple grizzly bears and black bears foraging along Highway 93S within an 11km stretch between the Kootenay Viewpoint and the McKay Operations Compound. While it is common to

see bears along the roadside during spring green up, the volume and various age groups in the zone this year was remarkable, with up to 14 individual bears being present in a single day. Bears observed here in June included a female grizzly with two young-of-year, two different lone grizzly bears, a black bear with two young-of-year, and several other single black bears. In order to provide these bears with the space they required, and to reduce the potential for negative bear-human encounters, Parks Canada implemented a 'no-stopping' zone through this 11km stretch of roadway from June 6 to June 28. Parks Canada staff helped to raise public awareness of the issue, and in cooperation with the local RCMP, helped to ensure the success of this first-time "no-stopping" order.



*Grizzly bear and cubs crossing Highway 93S near Olive Lake.
(© Parks Canada /A. Dibb)*

A Group Access Restricted Activity Order was implemented on the Kindersley-Sinclair hiking trail again this year, and extended from July 15th until October 20. This measure requires hikers to travel in a group of four or more people to reduce the potential for bear-human conflicts when grizzly bears are frequenting the meadows in the pass. There were no reported encounters with bears on the trail while this restriction was in effect.

Reducing Unnatural Wildlife Mortality

Reducing the impact of transportation corridors on wildlife is one of the important goals of the management plan. Data on wildlife mortalities for the year is still being tabulated, but from January to early October there were a total of 20 confirmed mortalities of large and medium-sized mammals on Highway 93S in the park. The 10-year average annual mortality on the highway is 53. In addition to the Highway 93S Wildlife Crossing Project, Parks Canada has implemented other measures aimed at reducing road-related wildlife mortality, such as designing and deploying new wildlife crossing signs when animals are frequenting roadside areas, and using roadside light boards to warn drivers to slow down when wildlife is present.

Looking Ahead...

Some exciting projects and activities to look for in 2015 include:

- Construction of highway fencing and wildlife crossing structures in the Kootenay Crossing area during the summer of 2015.
- Prescribed burns are planned for Redstreak Mountain and Mount Berland (Sinclair Canyon) if the appropriate conditions occur.
- Full launch of the Kootenay Explora app to enhance your drive through the park!

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