



Parks Canada Basic Impact Analysis

1. PROJECT TITLE & LOCATION

Protection Mountain Campground Redevelopment

2. PROPONENT INFORMATION

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3. PROPOSED PROJECT DATES

Planned commencement: April 2016
Planned completion: October 2016

4. INTERNAL PROJECT FILE

2015-047L

5. PROJECT DESCRIPTION

The Protection Mountain campground is located within Banff National Park, approximately 17 km east of Lake Louise on the Bow Valley Parkway. As one of only five campgrounds in the immediate vicinity (within 50 square km), the redevelopment of the campground to accommodate current and future visitor needs is a priority. Of the existing 89 campsites currently available, only 14 were designed to accommodate RV's, however RV use has been identified as the preference of nearly 70% of campers using Alberta's mountain national parks (The Praxis Group, 2009). The Protection Mountain Campground Concept Design includes a new campsite layout and associated amenity refurbishments to improve visitor experience in this area. The new layout will include a total of 72 campsites, accommodating up to 56 RV camper units and 16 tent campers. The redesign of the campground allows for navigation of campsites and roadways by Class A recreational vehicles, which may be up to 45 feet or 13.7 meters in length.

The final concept design includes:

- Revise road layout to accommodate RV's of a certain class size (Class A).
- Road and trail refurbishment may include compacted fine gravel trail mix, surface hardening admixture, or asphalt paving depending on availability and pricing of materials.
- Refurbish kitchen shelters, and washroom buildings in tent camping area. This includes the removal of hazardous substances (asbestos ceiling tiles, floor tiles and lead paint).
- Provide wheelchair access to two washroom buildings.
- Create two wheelchair accessible campsites near an accessible washroom.
- Implement a vegetation restoration plan including the planting of shrubs and saplings for privacy screening, and hydroseeding areas that need reclamation.





- Remove stumps from 2011 tree clearing that exist in the 2m offset of new and existing roads and within alignment of proposed roads and camping pads.
- Replace kitchen shelter roofing from cedar shakes to seam metal roofing material.
- Add grey water sinks to washrooms on the outside of the building
- Refurbish existing potable water standpipes and provide drainage for greywater disposal.
- Provide new signage.
- Convert all tenting loops to RV camping, with approximately 15 tent pads remaining. The old tent sites and access roads not used will be scarified and hydroseeded.
- Renovate all three kitchen shelters, including the removal of hazardous materials, replacing the roof, removing windows, removing wood stoves, and adding stainless steel countertops.
- Upgrade the culverts on the campground access road.
- Remove the dead and dying immature trees remaining from the 2011 tree clearing and transplant white spruce and lodgepole pine saplings from nearby sites.
- Planting of shrub islands between the sites to add privacy screening
- Decommissioning of overhead electrical lines and installation of buried electrical transmission lines.
- Decommissioning the septic field at the staff accommodations.



Figure 1: Current layout of Protection Mountain



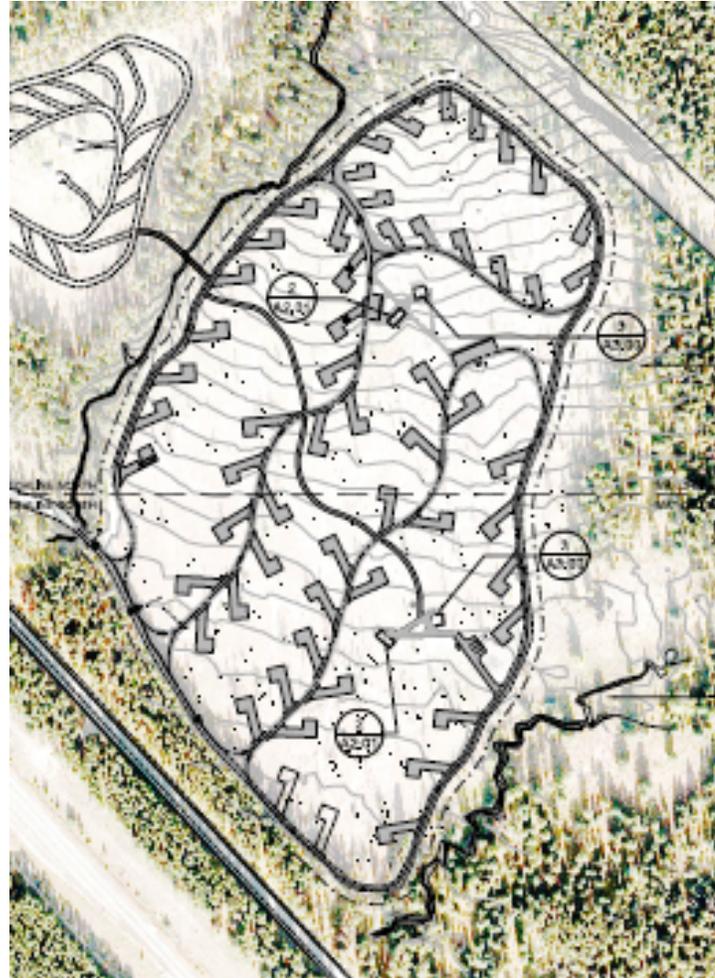


Figure 2: Proposed Protection Mountain Campground re-development final concept plan

6. VALUED COMPONENTS LIKELY TO BE AFFECTED

The valued components that may be affected include natural resources such as air quality, soil and landforms, vegetation, aquatic resources, and wildlife. There is a potential to uncover cultural resources. Visitor experience may be negatively affected during construction; however, the final outcome will result in an enhanced experience through improved access and better facilities.

7. EFFECTS ANALYSIS

Air Quality

There could be short term impacts to air quality due to increased emissions from gas and diesel operated machinery associated with the project. If construction occurs during dry periods in the spring, summer or fall, dust may be a short term issue. No long term impacts are anticipated.





Soils and Landforms

There is potential for soil damage and rutting as a result of grubbing and equipment access to project sites, as well as soil loss as a result of wind or water erosion of disturbed soils. Loss of organic matter in soil also reduces nutrient content and water holding capacity and increases vulnerability to wind and water erosion. Repeated equipment travel along a route can also result in soil compaction (an alteration of soil structure affecting the substrate's water holding capacity, levels of aeration, microbial diversity and overall productivity). Compacted soils are vulnerable to water erosion. Vegetation associated with compacted soils is not only vulnerable to direct trampling from equipment, but also from the limited capability of compacted soils to provide the moisture and nutrient regime necessary for survival, which in turn impedes site rehabilitation. Improper excavation and backfilling can result in loss of topsoil and/or loss of soil structure due to topsoil and subsoil mixing, as well as slope instability, ground subsidence and/or ground surface mounding/frost heave.

There is a potential for impacts associated with improper handling of asbestos and lead paint during removal of the existing buildings. There is also a potential for spills of hazardous materials.

Aquatic Resources

There are four streams that flow through the campground and all of them, with the exception of the stream located northwest of the RV camping area have been observed to be fish bearing. Section 35 of the *Fisheries Act* prohibits serious harm to fish, which is defined as "*the death of fish or any permanent alteration to, or destruction of, fish habitat*". The wetland located immediately east of the main campground entrance has been found to contain habitat for amphibians including long-toed salamanders (*Ambystoma macrodactylum*), wood frogs (*Rana sylvatica*), and a species at risk, the boreal toad (*Anaxyrus boreas*) (McIvor, 2005).

During construction there is a potential for sediment to be released to the waterbodies. Sediment can bury fish eggs and food sources, change streambed characteristics, and clog and abrade mucouse membranes causing suffocation or injury. Removal of vegetation in the riparian zone can reduce or degrade fish and amphibian habitat. Spills can reduce water quality and cause fish and amphibian death. During culvert work, the risk of sedimentation of the creek and water entering the creek must be mitigated.

Vegetation

The project will cause a short term loss of vegetation. Existing vegetation may be disturbed by material stockpiling, vehicle and equipment access, trenching, grading and clearing. The site was previously cleared, and only minor tree removal is expected. A comprehensive re-vegetation plan is expected to restore several tree and shrub species within the campground, providing long term positive effects ecologically and aesthetically.

Wildlife





There will be short term sensory disturbance for the duration of the project, which may cause habitat avoidance by wary species. The increased camper capacity at the campground may affect use of the wildlife corridor. There is a potential to impact the Boreal Toad, a COSEWIC (Special Concern) listed species, during culvert upgrades. No impact to nesting birds is expected.

Visitor Experience and Safety

Visitor services and will be enhanced by opening the campground with upgraded infrastructure. Site access by the general public could have a negative impact on visitor safety.

Residual Effects

The project location is currently a developed campground, however it has been closed for a number of years. Reopening the campground with increased capacity will increase the number of visitors in the area and the number of vehicles on the Bow Valley Parkway. The increased human presence could have a negative effect on wildlife; however the effect is expected to be minimal as there is no net loss of habitat or increase in the campground area. The safety of the Bow Valley Parkway will be improved through another project alleviating some of the issues with increased traffic to and from the campground once it is open.

Cumulative Effects

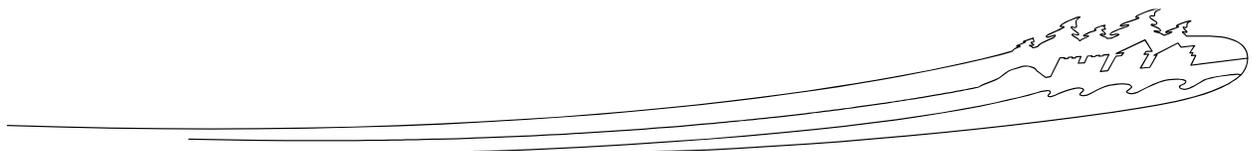
The Altalink line rebuild will be concurrent with the Protection Mountain Campground Upgrade, causing a large tract of sensory disturbance in the area.

8. MITIGATION MEASURES

Best Management Practices

- It is expected that the work will be conducted according to the applicable best management practices (BMPs). Parks Canada internal BMPs will be followed, but in the absence of Parks BMPs federal, provincial, and industry BMPs may be applied.
- Trade waste will be removed from the Park.
- Asbestos, and other hazardous materials, will be removed prior to building demolition, transported and disposed of in accordance with applicable provincial and federal regulations.
- Treated wood will be disposed of as per Parks Canada's "Guide for the Use, Handling and Disposal of Pressure Treated Wood" standards.
- All toxic/hazardous materials will be stored and handled using industry best practices and applicable provincial and federal regulations.
- Road work will be conducted according to Parks Canada's *National BMPs for Highway, Parkway and Roadway Infrastructure* (2015).
- Culvert work should be conducted according to the Department of Fisheries and Oceans *Measures to Avoid Causing Harm to Fish and Fish Habitat*.

Environmental Protection Plan





- The Contractor is required to prepare an Environmental Protection Plan (EPP) in accordance with Parks Canada Environmental Procedures before initiation of construction. The EPP will outline:
 - Details on how the work limits will be marked and procedures to ensure operations will remain within the clearing boundaries to minimize damage to vegetation and soil damage. This includes an Erosion and Sediment Control plan that details how sediment will be prevented from entering watercourses.
 - A Spill Response Plan will be prepared and will detail the containment and storage, security, handling, use and disposal of empty containers, surplus fuels or other hydrocarbon products to the satisfaction of the Departmental Representative and LLYK ESO and in accordance with all applicable federal and provincial legislation.
 - An Emergency Response Plan that outlines procedures to follow in the case of an emergency (e.g., wildlife encounter, equipment malfunction/failure, fire).
 - A Fire Prevention Plan which describes the fire prevention equipment (e.g., fire extinguishers) and procedures on-site in the event of a fire. Should a fire occur, Banff Dispatch and the Fire Duty Officer must be notified immediately.

Air Quality

- Minimize idling of equipment.
- Stabilize soil and other material storage piles against wind erosion.
- Cover and contain fine particulate materials during transportation to and from the site.
- Minimize vehicle traffic on exposed soils.
- Wet down exposed soil and dry areas if dust becomes a concern.
- Avoid site preparation during dry and windy periods.

Soils and Landforms

- Use existing roadways or disturbed areas to access and travel within the site.
- Identify and avoid soils susceptible to compaction (e.g. fine textured and organic soils).
- Store construction materials in one area of the site. Flag clearly to reduce the area of disturbance and limit soil compaction.
- Keep site clearing to a minimum and stay within project footprint.
- Phase work to minimize exposure of disturbed areas.
- Direct runoff and overland flow away from working areas and areas with exposed soils.
- If a prolonged period of exposure is expected, protect exposed soils with temporary cover (e.g. mulch, gravel, erosion blanket, vegetative cover).
- Halt activity on exposed soils during periods of high rainfall and runoff.
- Assess site for erosion control requirements and implement control measures as required (e.g. tarps, straw bales, erosion blankets, silt fencing).
- Minimize changes to the surface that could affect infiltration and runoff characteristics and maintain effective surface drainage to limit direct runoff into surface waters.





- Fuel and other hazardous materials must be stored in secondary containment capable of holding 110% of the material volume. Secondary containment must be provided for pumps and generators.

Aquatic Resources

- All work conducted will be setback at least 30 m from the high water mark of wetlands and streams unless on existing roadways.
- No removal of vegetation within 30 m of creeks or wetlands.
- Do not deposit any substances into watercourses or wetlands.
- Fueling and other activities involving hazardous substances will take place at least 100 m away from all surface water and on a hard surface. Spill kits will be present during fueling.
- Equipment will be regularly inspected for spills or leaks.
- All vehicles will have spill kits and personnel must know how to use the spill kit materials.
- No water removal from surrounding creeks or wetlands will be permitted.
- Clean tools and equipment off-site to prevent the release of wash water that may contain deleterious substances.
- The wetland area is habitat for the boreal toad, a species listed By COSEWIC as Special Concern. If toads are observed in the work area, they will be allowed to escape the area.

Culvert Replacement

- The following timing restrictions should be implemented for any work impacting the watercourses and wetland to prevent impacts to fish and amphibians:
 - Fall spawning fish are known from the streams in the Protection Mountain area. The timing restriction to protect fall spawning fish runs from August 15 – May 15. However, precautions should be taken at all times as the streams in the Protection Mountain area flow into the Bow River which has both spring and fall spawners.
 - Restricted periods for amphibian breeding and migration life stages are from April 1 – May 30 and September. Work impacting the amphibian habitat should be avoided during these times.
- Culvert work should be conducted according to the Department of Fisheries and Oceans *Measures to Avoid Causing Harm to Fish and Fish Habitat*.
- Installation of effective erosion and sediment control measures before starting work to prevent sediment from entering the water body.
- Manage water flowing onto the site, as well as water being diverted from the site such that sediment is filtered out prior to the water entering a waterbody. For example, pumping/diversion of water to a vegetated area.
- Site isolation measures (e.g. silt fence) for containing suspended sediment where in-water work is required.





- Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized, suspended sediment has resettled to the bed of the waterbody and runoff water is clear.
- Removal of non-biodegradable erosion and sediment control materials once site is stabilized.
- Regular and unscheduled surveillance by a Parks Canada Environmental Surveillance Officer will be completed throughout the duration of the project.

Vegetation

- Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species, noxious weeds and soils from off site.
- It is prohibited to disturb, destroy, or take a nest, egg, or nest shelter of a migratory bird (Migratory Birds Regulations, Section 6). The nesting period from mid-April and until the end of August. Tree removal should avoid nesting periods if possible. If trees must be removed during the nesting period, a bird survey conducted by a qualified professional will be required. Any tree removal must be approved by the ESO.
- Trees and other vegetation debris must be removed from the site and disposed of.
- Noxious weeds including Canada Thistle, Tall Buttercup, and Bird Vetch may be present in the work. Weed infestation areas must be flagged and machinery should not travel through these areas to prevent the spread of seeds. Pre-work invasive species control may be required.
- Species used for re-vegetation should be native species that grow in the ecosite. Wildlife attractants should not be planted to reduce human-wildlife conflicts.
- Seed mixes and plant species must be approved by Parks Canada.

Wildlife

- Work will be restricted to daylight hours.
- If wildlife is present within the work area, allow animals to escape the area.
- Food and food waste will be stored inside a vehicle or wildlife proof bins.
- Do not harass or feed wildlife.
- Potential problem and/or habituated wildlife, wildlife mortality, and carnivores (wolves, cougars, bears) will be reported to Banff Dispatch (403.762.1473).
- Observe local speed limits.
- Excavations must be clearly marked and flagged and a means of escape must be provided.

9. PUBLIC/STAKEHOLDER ENGAGEMENT & ABORIGINAL CONSULTATION

9 a) Indicate whether public/stakeholder engagement was undertaken in relation to potential adverse effects of the proposed project:

No





Yes (describe the process to involve relevant parties and indicate how comments were taken into consideration).

9 b) Indicate whether Aboriginal consultation was undertaken in relation to potential adverse effects of the proposed project:

- No
- Yes (describe the process to involve relevant parties and how the results were taken into consideration).

10. SIGNIFICANCE OF RESIDUAL ADVERSE EFFECTS

No residual effects are anticipated.

11. SURVEILLANCE

- Surveillance is not required
- Surveillance is required

Regular and unscheduled surveillance by a Parks Canada Environmental Surveillance Officer will be completed throughout the duration of the project.

12. FOLLOW-UP MONITORING

Follow-up monitoring is:

- not required
- legally required (e.g. under the Species at Risk Act or Fisheries Act)
- required in accordance with the Parks Canada Cultural Resource Management Policy

13. SARA NOTIFICATION

Notification is:

- not required
- required under the *Species at Risk Act* (outline the nature of and response to any notification).

14. EXPERTS CONSULTED

Include Parks Canada experts. Add as many entries as necessary for the project.

Department/Agency/Institution: Parks Canada	Date of Request: 2015-09-02
Expert's Name & Contact Information: Brianna Burley (403) 522-1232	Title: Human-Wildlife Conflict Specialist
Expertise Requested: suggestions to reduce human-wildlife conflict in the campground re-design plan.	
Response: Recommended removal of vegetation that is attractive to wildlife and setting the tent sites farther away from the transmission line that functions as a wildlife corridor. Feedback provided to Visitor Experience staff during initial consultation.	
Department/Agency/Institution:	Date of Request:
Expert's Name & Contact Information:	Title:





Expertise Requested:	
Response:	

15. DECISION

Taking into account implementation of mitigation measures outlined in the analysis, the project is:

- not likely to cause significant adverse environmental effects.
- likely to cause significant adverse environmental effects.

NOTE: If the project is identified as likely to cause significant adverse effects, CEAA 2012 prohibits approval of the project unless the Governor in Council (Cabinet) determines that the effects are justified in the circumstances. A finding of significant effects therefore means the project CANNOT go ahead as proposed.

FOR SARA REQUIREMENTS:

- There are no residual adverse effects to species at risk and therefore the SARA-Compliant Authorization Decision Tool was not required

OR, the SARA-Compliant Authorization Decision Tool ([Appendix 2](#)) was used and determined:

- There is no contravention of SARA prohibitions
- Project activities contravene a SARA prohibition and CAN be authorized under SARA
- Project activities contravene a SARA prohibition and CANNOT be authorized

16. RECOMMENDATION AND APPROVAL

(Add additional blocks as required)

Prepared by: EIA author : Jeanette Goulet, EA Scientist	Date: 2016-04-21
Recommended by: Functional manager of the project: John Gibbons	Date: 2016-04-21
Approved by: Alex Kolesch	Date: 2016-04-22
Signature: 	

18. NATIONAL IMPACT ASSESSMENT TRACKING SYSTEM

- Project registered in tracking system
- Not yet registered (*CEAA 2012 requires PCA submit a report to Parliament annually. EIAs must be entered in the tracking system **by the end of April** to enable reporting.*)





*****Ensure that all required mitigation measures and conditions (e.g. follow-up monitoring requirements) are included in project permits and authorizations*****

