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Parks Canada Waterton Lakes National Park General Project Best Management Practices

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Canada

Parks Canada Waterton Lakes National Park General Project Best Management Practices

Recommendation & Approval – Version 2.0

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Definitions

Sensitive Features are any areas designated by the IAO or through the EIA process as locations that require additional care and consideration for project activities. Sensitive features are defined in the supplemental mitigations section. Examples of sensitive features include but are not limited to nests, dens and roosts, locations of cultural resources, critical habitat or residences for SAR, riparian areas, fescue grasslands, wildlife corridors, rare ecotypes, areas of management concern, etc.

Abbreviations

AIA	Archaeological Impact Assessment
AOA	Archaeological Overview Assessment
BIA	Basic Impact Analysis
BMP	Best Management Practices
CABIN	Canadian Aquatic Biomonitoring Network
CCME	Canadian Council of Ministers of the Environment
CEAA	Canadian Environmental Assessment Act
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CRZ	Critical Root Zone
DBH	Diameter at Breast Height
DFO	Department of Fisheries and Oceans
DIA	Detailed Impact Analysis
EAS	Environmental Alignment Sheets
EI	Ecological Integrity
EIA	Environmental Impact Analysis
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
GBSA	Grizzly Bear Secure Areas
HDD	Horizontal Directional Drill
IAO	Impact Assessment Officer
IDA	International Dark-Sky Association
LED	Light-emitting diode
LEED	Leadership in Energy and Environmental Design
PCA	Parks Canada Agency
PM	Project Manager / Functional Manager of Project
RAP	Restricted Activity Permit
SAR	Species at Risk
SARA	<i>Species at Risk Act</i>
SO	Surveillance Officer
TPZ	Tree Protection Zone
UNESCO	United Nations Educational, Scientific and Cultural Organization
UV	Ultra-violet
VC	Valued Component
WLNP	Waterton Lakes National Park



Introduction

The *Waterton Lakes National Park General Project Best Management Practices* will allow an identified suite of project activities to be undertaken in such a manner that there will not be resulting significant adverse environmental effects.

The Best Management Practice (BMP) pathway is applied when there is a suite of routine, repetitive projects or activities, with well understood and predictable effects. This fulfils Parks Canada's obligations under the *Canadian Environmental Assessment Act 2012* as a manager of federal land, see the [Guide to the Parks Canada EIA Process](#). The BMP maximizes efficiency through creation of a pre-approved impact assessment for the defined suite of projects, to which standard mitigation and environmental management measures can be applied.

The *Waterton Lakes General Project Best Management Practices* can be applied in the following ways:

- Direct application: Use as is when the proposed project falls within the scope of the BMP(s) and its application will ensure there are no significant residual adverse effects.
- Application along with supplemental mitigations: Additional mitigations or slight modifications are required to ensure all potential impacts are mitigated and to provide project-specific clarifications (e.g., critical timing windows, contact information, SAR or cultural resources considerations). Supplemental mitigations are outlined in the supplemental mitigations section or by filling in check boxes in the appropriate sections of the BMP.
- Application as part of a Basic Impact Analysis (BIA) or Detailed Impact Analysis (DIA): where one or more BMPs may not address all the potential adverse effects of a proposed project, Field Units can apply the BMP(s) as part of a BIA or DIA.

The impact assessment officer (IAO) will review a proposed project and advise the functional manager of the project if and how this BMP should be applied. The IAO's advice will be based on whether the project falls within the scope of the BMP, and whether application of the mitigation measures in the BMP will adequately address potential adverse effects of the project. The IAO will also be responsible for adding any required supplemental mitigations to ensure site specific considerations are addressed.

Project Managers are responsible for ensuring all mitigation measures applicable to the project are added to the terms and conditions of any permits or contracts issued for the project.

The IAO must ensure the project, IA pathway applied and determination are recorded in the Parks Canada National Impact Assessment [Tracking System](#).

Project Managers are responsible to ensure all mitigation measures applicable to the project are added to the terms and conditions of any permits or contracts issued for the project.

These BMPs have been compiled from a number of available documents, as listed at the end of this document, and have been adapted to address the predictable effects of routine, repetitive project or activities within the Waterton Lakes Field Unit.



Scope of Application

This BMP outlines the impact analysis of repetitive and routine projects¹. Site security, worker safety and visitor safety are not included in the scope of this document. If a project involves some or all of below activities, and the initial assessment of site and project indicate “the project is unlikely to result in significant adverse environmental effects” the BMP can be applied.

Projects that this BMP would likely be applied to include:

- The proposed maintenance, repair or upgrade of an **existing** development.
- **New** projects with restricted footprints that do not include sensitive habitats.
- Proposed restoration of **new** and **existing** developments.

For projects where further EIA is warranted, this BMP may be utilized as part of the mitigation package for the analysis. Therefore, this document also presents a minimum standard to provide consultants and contractors for environmental protection measures on work sites. In these cases, additional protection measures and mitigations may be required.

Exceptions

Supplemental analysis and/or mitigations are required for the following project activities:

- New projects or developments in natural areas;
- Projects adjacent to sensitive features;
- Work that may impact aquatic or terrestrial wildlife habitat connectivity, such as new fences or culverts;
- Physical works immediately adjacent to the international boundary;
- Elongation of culverts; realigning water courses; dredging; or work below the high water mark of a fish bearing water body;
- Bridge projects needing work to occur below the High-Water Mark², with permanent; alteration to the water course, such as replacement of piers/abutments or permanent installation of structures on the bed of a water body;
- Greater than 5% increase in land use footprint (e.g. project expansion); and,
- Work which might adversely impact any potential or established Aboriginal and Treaty rights or traditional use³.

¹ For repetitive and routine projects on roadways, highways and parkways, refer to the Parks Canada National Best Management Practices - Roadway, Highway, Parkway and Related Infrastructure.

² High-water Mark is the usual or average level to which a body of water rises at its highest point and remains for a sufficient time so as to leave a mark on the land. (Fisheries and Oceans, 2015).

³ Parks Canada must engage in additional and separate consultations with Aboriginal groups if there is a possibility of a project adversely affecting established or potential Aboriginal or Treaty rights. This is required to fulfil federal government responsibilities in upholding the honour of the crown. If there is uncertainty regarding the need for Aboriginal consultation with respect to a project, refer the matter to Parks Canada Legal Services for advice. Guidance on consultation may be sought from the [Aboriginal Affairs Secretariat](#) and from the guidance document “[A Handbook for Parks Canada Employees on Consultation with Aboriginal Peoples](#)”.



If the project has the potential to have an adverse effect on the critical habitat of a species at risk (with endangered, threatened, or extirpated status) the project will require a separate environmental impact analysis.

If the project has the potential for residual adverse effects on a listed species at risk (including effects to individuals and residence of the individuals) the project will require a separate environmental impact analysis.

Note: If there is any uncertainty regarding potential adverse effects to species at risk, consult a member of the **National Office Species Conservation team**.

Approved Geographic Area of Application

This BMP is intended for use on projects completed in Waterton Lakes National Park (WLNP).

Roles and Responsibilities during Construction

The following is a select list of key roles that will be in place during the construction program⁴. The responsibilities of the key roles are not limited to those that are stated below, as this is a select list of roles most relevant to compliance with environmental commitments and regulations for projects where the proponent is the Parks Canada Agency (PCA).

Project Manager (PM)

The Project Manager is accountable to deliver the project and is responsible for managing risk, scope, time and budget. The Project manager is the Technical Authority and is the contractor's unique point of contact. The Project manager reviews and develops contract change order and supporting documents and conducts pre-construction meetings and chairs project team meetings. Note that where the proponent of a project is external to Parks Canada, a functional manager of the project within the Agency is designated.

Project Inspector

The Project Inspector reviews plans for compliance to building codes and development guidelines. The Project Inspector performs inspections on behalf of the Project manager and monitors contract compliance in consultation with procurement office. The Project Inspector is responsible for keeping daily logs.

Project Leader

The Project Leader is accountable for the overall success of the project. The Project Leader recommends approval to proceed to the construction phase and approves changes in scope, budget or schedule in consultation with Procurement Officer.

Impact Assessment Officer (IAO)

The Impact Assessment Officer is responsible for drafting and/or reviewing the EIA and ensuring that the scope of work of the environmental analysis complies with Parks Canada's responsibilities under the *Canadian Environmental Assessment Act 2012* as well as all other

⁴ The list of roles and key responsibilities have been modified from the PCA document *Construction Site Roles and Responsibilities*.



relevant regulations and guidelines. The IAO may also function as the SO for project construction.

Surveillance Officer (SO)

The Surveillance Officer is responsible for on-site surveillance of the work in accordance with the Parks Canada EIA and environmental regulations and guidelines. The SO will provide direction regarding environmental assessment / environmental infractions or emergencies through the Project Manager unless necessary. As the Parks Canada representative for environmental concerns, the SO may consult with relevant specialists to determine appropriate implementation for mitigation measures. The SO has the authority to stop work for National Parks Act violations, however, during normal operations does not give direction to the Contractor.

Consultants

Consultants recommend contract amendments, reviews and approves shop drawings and provides advice on project compliance. Consultants perform inspections on behalf of the Project Manager.

Environmental Consultants

Under the direction of the IAO, environmental consultants are responsible for producing deliverables as required for the Project, including, but not limited to: Environmental Impact Assessment, site-specific mitigation strategies, Environmental Alignment Sheets (EAS), Environmental Management Plan.

Prime Contractor

The Prime Contractor is responsible for developing a site-specific Occupational Safety and Health Management Plan. The Prime Contractor is responsible for guarding the health and safety of those working on and visiting the site through implementing occupational safety and health induction training. The Prime contractor also obtains materials and labour necessary to successfully complete the project. The Prime contractor will engage and plan the work of sub-contractors and acquire all necessary licenses and permits, provide any required EIA construction planning documents for review (see [Submissions Section](#)) and record minutes of site meetings.

Banff Dispatch 403-762-1473

911 provides 24-hour emergency dispatch services and will connect callers with emergency or other Parks Canada services as required (e.g., Warden/Law Enforcement Services, Duty Officers). Banff dispatch at 403-762-1473 can be used for 24 hour notification to Parks Canada in non-emergency situations. When calling, if unsure what services you require, request a Waterton Duty Officer.

Environmental Overview

Environmental Setting

Waterton Lakes National Park (WLNP) occupies approximately 505 km² in the southwest corner of Alberta in the southern Rocky Mountains. WLNP forms part of the Waterton-Glacier International Peace Park, and is a designated UNESCO World Heritage Site due to its significant ecological, scenic and cultural values. The park is rich in biodiversity, which includes 1001



vascular plant species, 23 fish species, 6 amphibian species, 4 reptile species, 62 mammal species and over 250 bird species.

As part of the Crown of the Continent ecosystem, WLNP makes up part of a north-south wildlife corridor including migratory bird and bat flight pathways (Lausen 2012). Five ecoregions - foothills parkland, montane, lower subalpine, upper subalpine and alpine – are represented within WLNP boundaries.

Ecological Integrity

Ecological Integrity (EI) is defined in the Canada National Parks Act as “a condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes”.

The indicators used to assess EI in WLNP include: Forest, Freshwater, and Grasslands. Measures of these indicators are summarized and include: Terrestrial Birds, 5-Needled Pine – Health Transects, Area Forest Area Disturbed by Fire, Sensitive Species Secure Habitat, Multi-species Mammal Occupancy, Stream Biotic Health (CABIN), Lake Fish Index, Water Quality, Amphibian Occupancy, Stream Fish Community Index, Grassland Birds, Non-Native and Native Plants, Grassland Extent, Elk, and Grassland Area Disturbed by Fire.

Species at Risk

WLNP is host to a number of species that are Endangered, Threatened and Special Concern under Schedule 1 of the *Species at Risk Act* (SARA). Species listed as Endangered, Threatened and Special concern under COSEWIC, as well as the Alberta *Wildlife Act* are also considered in managing species at risk within WLNP. A list of species at risk and defined and proposed critical habitat within WLNP is found in the [appendices](#).

Components of the environment that may be affected

Potential effects from projects occurring within WLNP are well understood and predictable. They include:

Water Resources:

- Adverse modifications to surface drainage patterns
- Reduced water quality due to increased erosion, sedimentation, transportation of debris and contamination (i.e. from leaks and accidental spills, etc.)
- Physical alteration of aquatic habitat

Soil/Land Resources:

- Change in slopes, landforms and landscape
- Soil compaction and rutting
- Slope instability due to increased soil exposure and improper excavation and storage
- Soil contamination

Air quality:

- Decreased ambient air quality (i.e. from dust, equipment emissions, etc.)
- Increased ambient noise levels
- Temporary increased levels of CO₂ and other pollutants
- Temporary increased localized temperatures from paving and equipment operation



Vegetation:

- Damage to and/or removal of vegetation in immediate or adjacent areas
- Introduction of non-native species populations, or expansion of existing populations

Wildlife:

- Introduction of non-native species populations, or expansion of existing populations
- Wildlife sensory disturbance causing displacement/preferred habitat avoidance
- Wildlife habituation/attraction to artificial food sources
- Impeded/altered wildlife movement
- Damage to nests/disruption of nesting animals
- Mortality from project activities
- Damage to the quality of nesting / spawning / roosting habitats

Cultural Resources:

- Adverse effects on the heritage value or character-defining elements of a cultural resource
- Impacts to archaeological resources (known or potential)

Visitor Experience / Safety

- Decreased quality of visitor experience due to temporary area closures, operation of equipment, sensory disturbance
- Potential impacts to visitor safety due to construction activities



Mitigation Measures

To use the document efficiently, keep the activity mitigation lists that apply to the project expanded and collapse the other activities by clicking on the section titles, print this as a pdf or paper document and include this section with the EIA determination record. This will reduce the overall size and scope of the mitigations to present to contractors and project managers. Supplementary mitigations specific to the project can be defined at the beginning of the mitigations section.

Modules

1. GENERAL ACTIVITIES MITIGATIONS MODULE



Mitigation Package

Parks Canada Waterton Lakes National Park General Project Best Management Practices

Recommendation & Approval – Version 2.0

Modified for: **WLNP Crandell Mountain Campground Rare Plant Salvage and Propagation 2020**

Contact Information

Project Manager:

Jason Russell 403-462-7632

Impact Assessment Office: 403-859-5185

Lindsay Howes: 403-632-6681

Danika Gerylo: TBD

Parks Canada Emergency Dispatch:

Banff Dispatch: 403-762-1473

First Contact Authority (for SPILLS):

First Contact Authority: 780-422-4505

OR 1-800-222-6514

24-hour Emergency Dispatch*:

Police, Fire, Ambulance: 9-1-1

* In an Emergency, 9-1-1 operators can also notify Banff Dispatch.



1. General Activities Mitigations Module

Construction activities involve the use of laydown/staging areas, equipment operations, storage and handling of hazardous materials. Potential adverse effects include: alteration of vegetation, erosion and sedimentation, constriction for wildlife movements and introduction/spread of non-native vegetation.

- 1.1. All employees must attend an environmental briefing with a SO before beginning work at the site to review and explain the mitigations that are conditions of the project approvals. Employees must attend this briefing before beginning their work at this site.
- 1.2. All equipment and vehicles will be made available for inspection by the SO on arrival to WLNP. The Prime Contractor will give 48 hours' notice and schedule equipment inspection with the SO. Water trucks require a written restricted activity permit from the SO to enter the Park. The permit is received at initial inspection.

Construction Timing / Visitor Experience

- 1.3. Confine construction activities to hours set below, and if possible to periods of low visitation in order to reduce sensory disturbance to wildlife and visitors.
- 1.4. Time activities to minimize vehicle conflicts on access roads (*i.e.*, where possible, schedule activities so that equipment operations does not disrupt traffic flow; result in wildlife collisions).
- 1.5. All Parks Canada designated speed limits apply to construction vehicles. Additional speed restrictions may be required to protect wildlife and visitor safety.

	Required	Location(s)	Notes
Additional Speed Limits	<input type="checkbox"/>		
Work Hour Restriction	<input type="checkbox"/>		
Designated Truck Routes	<input type="checkbox"/>		

Timing Windows

- 1.6. Timing windows to reduce erosion, maintain compliance with the *Migratory Birds Convention Act*, *Fisheries Act*, *Species at Risk Act* and may be part of best practices to reduce erosion and environmental effects. See detailed mitigations for timing windows under [Erosion and Sediment Control](#), [Vegetation Removal](#) and [Buildings](#) modules where these activities are part of project works. A summary of these restrictions is made below.

Consideration	Applicable	Restricted Window	Notes
Migratory Bird General Breeding Period	<input type="checkbox"/>	April 1 to August 31	
Bat Maternity Roost Activity Period	<input type="checkbox"/>	April 1 to August 31	
Bat General Activity Period	<input type="checkbox"/>	April 1 to October 31	
Amphibian Calling Window	<input type="checkbox"/>	April 15 to June 15	



Consideration	Applicable	Restricted Window	Notes
Bull Trout Restricted Work Periods	<input type="checkbox"/>	August 31 to August 15	
Other Fish Species Restricted Work Periods	<input type="checkbox"/>	Consult IAO	
Grassland Dormancy	<input type="checkbox"/>	October 1 to February 28	
Additional Timing Considerations (e.g., weed seed set, soil protection)	<input type="checkbox"/>	Dry late summer and fall conditions	

Work Site Conditions/Staging/Laydown

- 1.7. Minimize vegetation-clearing activities and ground disturbance by staging on existing hardened areas wherever possible.
- 1.8. Delineate the work zone; clearly mark the limits to active construction, sensitive features and the access and egress locations.
- 1.9. The Prime Contractor is responsible for security and safety of the work site.
- 1.10. Strong winds are a regular occurrence in WLNP. Prevent materials from blowing off of work site.
- 1.11. If contamination is found, cease work immediately and if necessary, implement Emergency Response Plan.

Wildlife Observations and Encounters

- 1.12. Notify the SO immediately of any dens, litters, nests, carcasses (road kills or other), wildlife encounters, or carnivore (bears, wolves or cougars) observations on or around the worksite.
- 1.13. If wildlife is observed at or near the work site, allow the animal(s) the opportunity to leave the work area to the surrounding habitat and away from areas of potential conflict.
- 1.14. If potentially dangerous wildlife (e.g., bear, cougar, wolf, deer, sheep) persistently enter the work area or display aggressive behaviour, the contractor will immediately stop work, notify 9-1-1 or Banff Dispatch (403-762-1473), and safely evacuate the area.
- 1.15. Contractor will make bear spray, bear spray training, and wildlife awareness training mandatory to all workers on site.
- 1.16. Secure all materials that might attract wildlife (e.g. petroleum products, human food, recyclable food and drink containers and garbage).
- 1.17. No feeding, baiting or luring of any wildlife (including bears, small mammals, birds); do not approach or harass wildlife in any way. Notify the SO immediately if wildlife obtain garbage or human food. If wildlife get into attractants that have been intentionally or accidentally left out, individuals or the contractor could be charged under the *Canada National Parks Act* Regulations.

Equipment Operations & Fuelling

- 1.18. Equipment movements and workers' private vehicles shall be restricted to the designated footprint of the construction area.
- 1.19. Protective measures, including using appropriately sized equipment, or protective access matting must be employed if entry into wet areas is required.



- 1.20. Due to the importance of fescue grassland within WLNP, vehicles must not be driven onto any open grassland areas unless it has been designated by the SO as a parking area prior to construction activities.
- 1.21. Machinery must arrive on site in a clean and dry condition and be maintained free of fluid leaks, vegetative material (*i.e.*, invasive species, noxious weeds) and soils from off-site. All construction equipment from outside WLNP will be washed prior to arrival to minimize the risk of introducing weeds or aquatic invasive species. Additional weed-cleaning stations may be designated by the SO depending on project activities and locations (see table below).

	Required	Location(s)	Notes
Are additional weed cleaning stations required?	<input type="checkbox"/>		

- 1.22. Inspect equipment daily for fluid/fuel leaks and maintain equipment in good working order.
- 1.23. Equipment fuelling and maintenance sites will be identified by the Contractor and approved by the SO. Fuelling should occur on hardened areas > 100 m from streams, wetlands, waterbodies or watercourses. Fuelling personnel shall maintain presence at and provide immediate attention to the fuelling operation.
- 1.24. Mobile fuel containers (e.g., slip tanks) shall remain in the service vehicle at all times.
- 1.25. Operate machinery on land above the high water mark, on ice, or in another manner that minimizes disturbance to the banks and bed of any water body.
- 1.26. Limit machinery crossing (fording) a stream or watercourse to a one-time event (*i.e.*, over and back), and only if no alternative crossing method is available. If repeated crossings of the watercourse are required, construct a temporary crossing structure in compliance with the *Fisheries Act*.
- 1.27. For fording equipment without a temporary crossing structure, use stream bank and bed protection methods (e.g., swamp mats, pads) if minor rutting is likely to occur during fording.
- 1.28. Use temporary crossing structures or other practices to cross streams or water bodies with steep and highly erodible (e.g., dominated by organic materials and silts) banks and beds.
- 1.29. Equipment that will work adjacent to or within a stream or watercourse should be free of external grease, oil or other fluids, excessive mud, dirt and vegetation before entering the work area.

Small Equipment

- 1.30. All small equipment (e.g., chainsaws, mowers, etc.) should be kept in good working condition and free of oil and fuel leaks.
- 1.31. Where possible, chain oil should be vegetable-based.
- 1.32. Fuelling of chainsaws will take place outside of riparian areas and sensitive features.

Site Clean Up/Waste Disposal

- 1.33. Clean tools and equipment at an appropriate off-site facility to prevent the release of wash water that may contain deleterious substances.



- 1.34. Sweep up loose material or debris. Any material that may pose a risk of contamination to soils, surface water or groundwater should be disposed of appropriately off-site.
- 1.35. No construction waste (sawdust, soil, vegetation, debris, pumped water, hydrocarbon, chemicals, cement, asphalt, etc.) shall be allowed to enter an aquatic habitat or be deposited on undisturbed lands unless the said lands are part of the project works and approved for temporary waste storage.
- 1.36. Construction, trade, hazardous waste and domestic waste materials shall not be burned, buried or discarded at the construction site or elsewhere in WLNP. These wastes shall be contained and removed in a timely and approved manner and disposed at an appropriate waste landfill site located outside WLNP.
- 1.37. Construction waste storage containers, shall be emptied when 90% full. Waste containers will have lids, be wildlife proof if containing attractants, and waste loads shall be covered while being transported.
- 1.38. Sanitary facilities, such as a portable container toilet, shall be provided and maintained in a clean condition. Sanitary facilities must be in good condition, and located away from sensitive resources including water bodies.
- 1.39. Camping and other recreational activities at the work site by contractors is not permitted without prior approval from the IAO and the Project Manager. These activities, if deemed appropriate, are conditional upon specific mitigations that address risks to wildlife, safety and any other additional environmental effects.

Air Quality Mitigations

- 1.40. Diesel equipment used on the project shall be fuelled with low sulfur diesel fuels and shall conform to local emission requirements.
- 1.41. Minimize idling of engines at all times.
- 1.42. Schedule dust generating activities during periods with lower wind speeds.
- 1.43. Ensure fine materials being transported are covered and protected.

Cultural Resources

- 1.44. All work in WLNP is subject to the accidental finds clause whereby on finding any unexpected Cultural Resources, workers shall stop work in the immediate area and notify the SO. Parks Canada's Terrestrial Archaeology section will provide advice and assessment of significance and determine requirements to mitigate the chance find. Examples of archaeological artefacts encountered in WLNP include buried bison bones, stone tools, and above ground cairns.
- 1.45. Where deep excavation is planned within the townsite, notify the Parks Canada Terrestrial Archaeology section to coordinate a site visit to look at the subsurface deposits with buried soils whenever possible.
- 1.46. If applicable, follow additional mitigations outlined in the Cultural Resources Impact Assessment.

	Required	Location(s)	Notes
Are additional mitigations for cultural resources required?	<input type="checkbox"/>		



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Appendix 1 Regulatory Guidance

Jurisdictions

While all projects on lands managed by Parks Canada must adhere to Federal law and regulation, it is considered best practice to refer to local community, regional, provincial regulation and best practices where federal guidance is silent and/or attempt to meet those targets if it can reduce the overall impact of the project.

Some of the project activities reviewed have potential environmental impacts that are addressed by various provincial, federal and territorial acts and regulations. All activities must meet current environmental law and regulations in their design and construction. The following is a brief description of some of the key federal acts and regulations. Further review, understanding and application of other federal, provincial and territorial environmental laws are part of a rigorous approach to project planning and execution.

Canada National Parks Act and Regulations-Parks Canada

All work inside National Parks and Protected Areas must be performed in accordance with the laws and regulations set out in the *Canada National Parks Act* and Regulations. This includes the requirement for most activities described to only be done under a permit such as: business licence for contractor, disturbance of natural objects, travel in restricted areas, special events or use of disposal sites.

Fisheries Act - Fisheries and Oceans Canada

If a project is to be conducted near water, it is the proponent's responsibility to ensure they avoid causing **serious harm to fish** in compliance with the ***Fisheries Act***. The **[advice in on the Fisheries and Oceans website](#)** will help a proponent avoid causing harm and comply with the Act.

If the water body in the project area has fish or is connected to waters at any time that have fish the project must meet the **[self-assessment criteria on the Fisheries and Oceans website](#)**, if not a project review can be made by Fisheries and Oceans Canada to assess whether the project requires authorization or authorization can be requested directly. Given the level of detail required for a review and/or authorization request the EIA officer may need to consider a more involved EIA pathway in those circumstances.

Migratory Bird Convention Act – Environment Canada

The purpose of this Act is to implement the Convention by protecting and conserving migratory birds - as populations and individual birds - and their nests. Section 6 - prohibits the disturbance, destruction, or taking of a nest, egg, or nest shelter of a migratory bird.

In Canada, the general nesting period may start as early as mid-March and may extend until end of August. This is a general nesting period that covers most federally protected migratory bird species. This period varies regionally across Canada mainly due to differences in species assemblages, climate, elevation and habitat type. Generally, the nesting period is delayed in more northerly latitudes, corresponding to vegetation development and food availability. (Environment Canada, 2014). To help with determining regionally relevant periods where nesting is likely to occur, Environment Canada is publishing estimated regional nesting periods within large geographical areas across Canada referred as "nesting zones". These periods are



estimated for each zone and consider the time of first egg-laying until the young have naturally left the vicinity of the nest. Field Units may wish to refine this section and add their known local nesting periods.

Species at Risk Act

If a species listed under the *Species at Risk Act* (SARA) is found within the project area, any potential adverse effects from the proposed project to the individuals of the species, their residences and/or their critical habitat must be understood. Species at risk considerations require specific expertise, due to additional legal requirements under the SARA and CEAA 2012. If the projects or activities to be addressed by the BMP could affect a listed species or its critical habitat, the EIA officer may need to consider a more involved EIA pathway in those circumstances.



Appendix 2 Species at Risk and Critical Habitat

Table 1 Species at Risk Occurring in Waterton Lakes National Park

Species	SARA status	COSEWIC	Provincial Status
Vascular Plants			
Bolander's Quillwort	Threatened	--	--
Limber Pine	--	Endangered	Endangered
Whitebark Pine*	Endangered	--	Endangered
Arthropods			
Half-moon Hairstreak*	Endangered	--	--
Western Bumble Bee	--	Threatened (southern subspecies)	--
Amphibians			
Long-toed Salamander	--	Not at risk	Special Concern
Northern Leopard Frog	Special Concern (Western Boreal/Prairie Populations)		Threatened
Western Tiger Salamander	--	Special Concern (Prairie/Boreal Population)	--
Western Toad	Special Concern (Calling and/or Non-calling populations)	--	--
Reptiles			
Western painted turtle (note that status depends on population definition)	Special Concern	--	--
Birds			
Band-tailed Pigeon	Special Concern	--	--
Bank Swallow	--	Threatened	--
Barn Swallow	--	Threatened	--
Barred Owl	--	Not assessed	Special Concern
Black Swift	--	Endangered	--
Bobolink	--	Threatened	--
Canada Warbler*	Threatened	--	--
Chestnut-collared Longspur*	Threatened	--	--
Common Nighthawk*	Threatened	--	--
Ferruginous Hawk*	Threatened	--	Endangered
Harlequin Duck	--	Not assessed (western population)	Special Concern
Horned Grebe	--	Special Concern	--
Lewis's Woodpecker*	Threatened	--	--
Loggerhead Shrike	Threatened	--	Special Concern
Long-billed Curlew	Special Concern	--	Special Concern
Olive-sided Flycatcher*	Threatened	--	--
Peregrine Falcon	Special Concern	--	Threatened
Prairie Falcon	--	Not assessed	Special Concern
Red-headed Woodpecker*	Threatened	--	--
Rusty Blackbird	Special Concern	--	--
Short-eared Owl	Special Concern	--	--
Sprague's Pipit	Threatened	--	Special Concern
Trumpeter Swan	--	Not at Risk	Special Concern
Western Grebe	--	Special Concern	Threatened
Western Screech-Owl*	Endangered	--	--
White-winged Scoter	--	Not assessed	Special Concern
Whooping Crane	Endangered	--	--
Fish			
Westslope Cutthroat Trout	Threatened	--	Threatened



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Species	SARA status	COSEWIC	Provincial Status
Bull Trout	--	Threatened (Saskatchewan-Nelson Population)	Threatened
Pygmy Whitefish	--	Special Concern (Waterton Population)	Threatened
Mammals			
American Badger	--	Special Concern	Data Deficient
Grizzly Bear	--	Special Concern (Western Population)	Threatened
Little Brown Myotis*	Endangered	--	Data Deficient
Plains Bison	--	Threatened	--
Western Small-footed Myotis	--	Not assessed	Special Concern
Wolverine	--	Special Concern (Western Population)	Data Deficient

*species with no published recovery strategy

Defined critical habitat exists for Bolander's Quillwort and Half-moon Hairstreak.

Contact the Impact Assessment Office for more information, including information regarding other habitats important for species at risk, as well as species at risk without defined critical habitat maps to date.

Additional information on Species at Risk is included in the Multi-species Action Plan.

Parks Canada Agency. 2017. Multi-species Action Plan for Waterton Lakes National Park of Canada and Bar U Ranch National Historic Site of Canada [Proposed]. Species at Risk Act Action Plan Series. Parks Canada Agency, Ottawa. iv + 30 pp. [G:\Resource Conservation\Species at risk\Action Planning 2013-2016\WLNP BURNHS Action Plan](#)

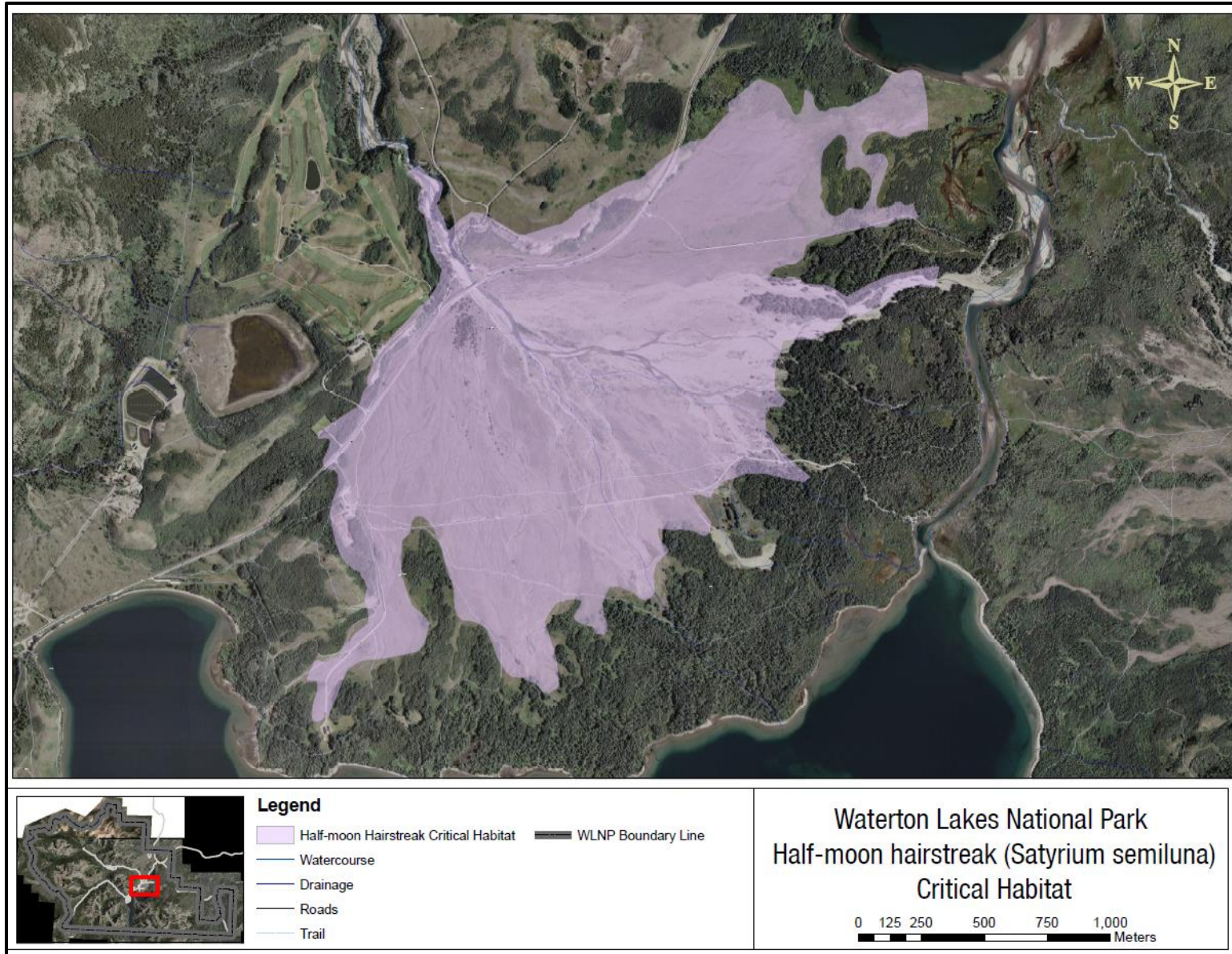


Figure 1 Waterton Lakes National Park Half-moon Hairstreak (*Satyrium semiluna*) Critical Habitat

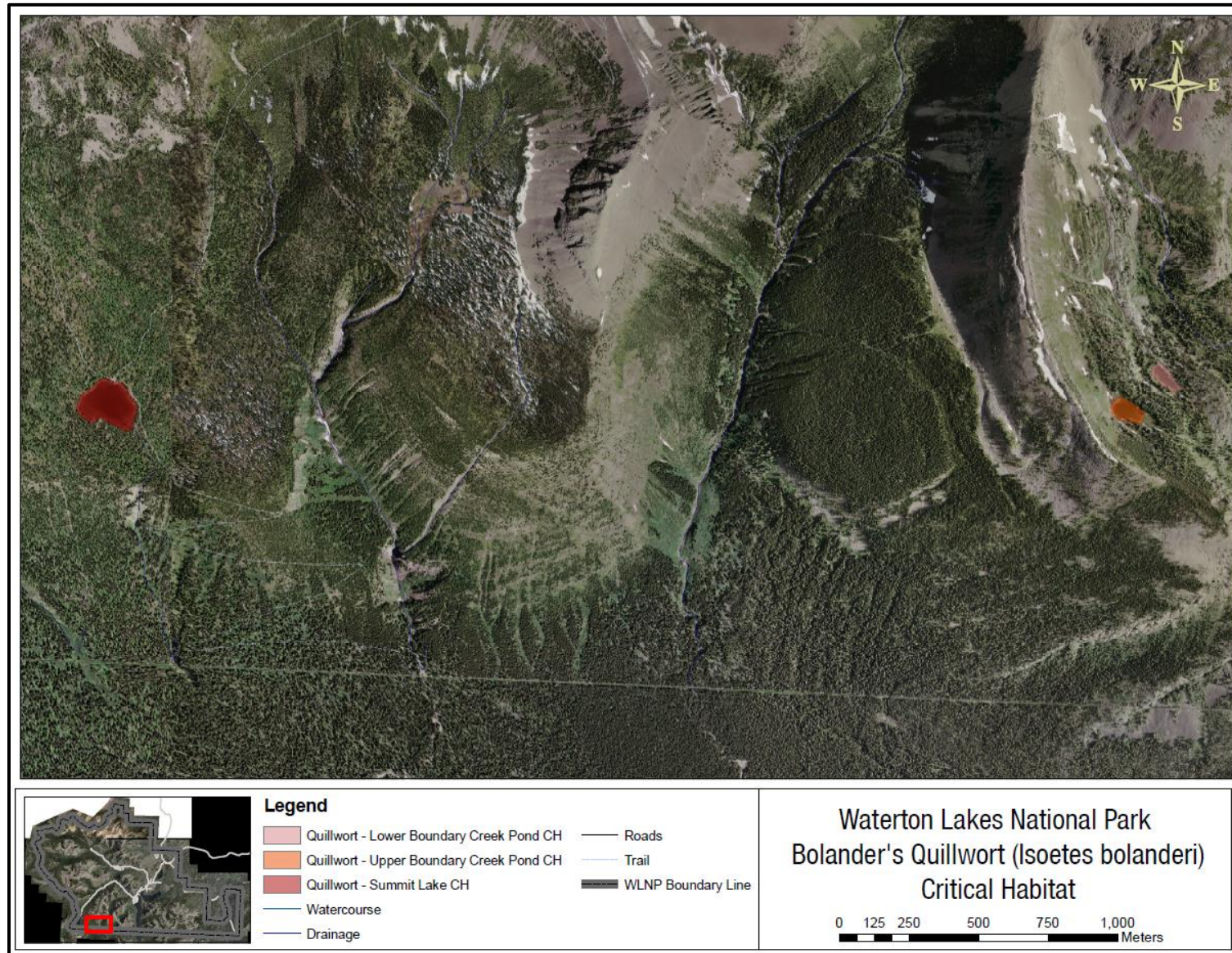


Figure 2 Waterton Lakes National Park Bolander's Quillwort (*Isoetes bolanderi*) Critical Habitat



Appendix 3 List of Non-Native Species of Local Concern

Contact the Impact Assessment Office for more information about potential site specific non-native species of concern.

Table 2 Non-native Species Listed by the *Alberta Weed Control Act*

Common Name	Scientific Name
<i>Prohibited Noxious</i>	
autumn olive	<i>Elaeagnus umbellata</i> Thunb.
balsam, Himalayan	<i>Impatiens glandulifera</i> Royle
barberry, common	<i>Berberis vulgaris</i> L.
bartsia, red	<i>Odontites vernus</i> (Bellardi) Dumort
buckthorn, common	<i>Rhamnus cathartica</i> L.
cinquefoil, sulphur	<i>Potentilla recta</i> L.
crupina, common	<i>Crupina vulgaris</i> Pers. ex Cass.
dyer's woad	<i>Isatis tinctoria</i> L.
Eurasian water milfoil	<i>Myriophyllum spicatum</i> L.
flowering rush	<i>Butomus umbellatus</i> L.
garlic mustard	<i>Alliaria petiolata</i> (M. Bieb.) Cavara & Grande
goatgrass, jointed	<i>Aegilops cylindrica</i> Host
hawkweed, meadow	<i>Hieracium caespitosum</i> Dumort.
hawkweed, mouse-ear	<i>Hieracium pilosella</i> L.
hawkweed, orange	<i>Hieracium aurantiacum</i> L.
hoary alyssum	<i>Berteroa incana</i> (L.) DC.
hogweed, giant	<i>Heracleum mantegazzianum</i> Sommier & Levier
iris, pale yellow	<i>Iris pseudacorus</i> L.
knapweed, bighead	<i>Centaurea macrocephala</i> Puschk. ex Willd.
knapweed, black	<i>Centaurea nigra</i> L.
knapweed, brown	<i>Centaurea jacea</i> L.
knapweed, diffuse	<i>Centaurea diffusa</i> Lam.
knapweed, hybrid	<i>Centaurea</i> × <i>psammogena</i> Gáyér
knapweed, meadow	<i>Centaurea</i> × <i>moncktonii</i> C. E. Britton
knapweed, Russian	<i>Rhaponticum repens</i> (L.) Hidalgo
knapweed, spotted	<i>Centaurea stoebe</i> L. ssp. <i>Micranthos</i> (Gugler) Hayek
knapweed, squarrose	<i>Centaurea virgata</i> Lam. ssp. <i>squarrosa</i> (Willd.) Gugler
knotweed, giant	<i>Fallopia sachalinensis</i> (F. Schmidt Petrop.) Ronse Decr.
knotweed, hybrid Japanese	<i>Fallopia</i> × <i>bohemica</i> (Chrtek & Chrtková) J. P. Bailey
knotweed, Japanese	<i>Fallopia japonica</i> (Houtt.) Ronse Decr.
loosestrife, purple	<i>Lythrum salicaria</i> L.
medusahead	<i>Taeniatherum caput-medusae</i> (L.) Nevski
nutsedge, yellow	<i>Cyperus esculentus</i> L.
puncturevine	<i>Tribulus terrestris</i> L.
ragwort, tansy	<i>Jacobaea vulgaris</i> Gaertn.
rush skeletonweed	<i>Chondrilla juncea</i> L.
saltcedar	<i>Tamarix ramosissima</i> Ledeb.
saltlover	<i>Halogeton glomeratus</i> (M. Bieb.) C.A. Mey.
St John's-wort, common	<i>Hypericum perforatum</i> L.
starthistle, yellow	<i>Centaurea solstitialis</i> L.
tamarisk, Chinese	<i>Tamarix chinensis</i> Lour.
tamarisk, smallflower	<i>Tamarix parviflora</i> DC.



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Common Name	Scientific Name
thistle, marsh	<i>Cirsium palustre</i> (L.) Scop.
thistle, nodding	<i>Carduus nutans</i> L.
thistle, plumeless	<i>Carduus acanthoides</i> L.
Noxious	
baby's-breath, common	<i>Gypsophila paniculata</i> L.
bellflower, creeping	<i>Campanula rapunculoides</i> L.
bindweed, field	<i>Convolvulus arvensis</i> L.
blueweed	<i>Echium vulgare</i> L.
brome, downy	<i>Bromus tectorum</i> L.
brome, Japanese	<i>Bromus japonicus</i> Thunb.
burdock, great	<i>Arctium lappa</i> L.
burdock, lesser	<i>Arctium minus</i> (Hill) Bernh.
burdock, woolly	<i>Arctium tomentosum</i> Mill.
buttercup, tall	<i>Ranunculus acris</i> L.
chamomile, scentless	<i>Tripleurospermum inodorum</i> (L.) Sch. Bip.
clematis, yellow	<i>Clematis tangutica</i> (Maxim.) Korsh.
cockle, white	<i>Silene latifolia</i> Poir. ssp. <i>alba</i> (Miller) Greuter & Burdet
daisy, oxeye	<i>Leucanthemum vulgare</i> Lam.
dame's rocket	<i>Hesperis matronalis</i> L.
henbane, black	<i>Hyoscyamus niger</i> L.
hoary cress, globe-podded	<i>Lepidium appelianum</i> Al-Shehbaz
hoary cress, heart-podded	<i>Lepidium draba</i> L.
hoary cress, lens-podded	<i>Lepidium chalepense</i> L.
hound's-tongue	<i>Cynoglossum officinale</i> L.
mullein, common	<i>Verbascum thapsus</i> L.
pepper-grass, broad-leaved	<i>Lepidium latifolium</i> L.
scabious, field	<i>Knautia arvensis</i> (L.) Coult.
sow thistle, perennial	<i>Sonchus arvensis</i> L.
spurge, leafy	<i>Euphorbia esula</i> L.
tansy, common	<i>Tanacetum vulgare</i> L.
thistle, Canada	<i>Cirsium arvense</i> (L.) Scop.
toadflax, Dalmatian	<i>Linaria dalmatica</i> (L.) Mill.
toadflax, yellow	<i>Linaria vulgaris</i> Mill.

Table 3 List of non-native species of local concern considered invasive in natural habitats.

Common Name	Scientific Name



Appendix 4 Zoning & Planning Areas

Several zoning and area designations are useful in planning, understanding potential project effects and for developing and choosing appropriate mitigations. Five zones plus an Environmentally Sensitive Site (ESS) are outlined in the [Park Management Plan](#).

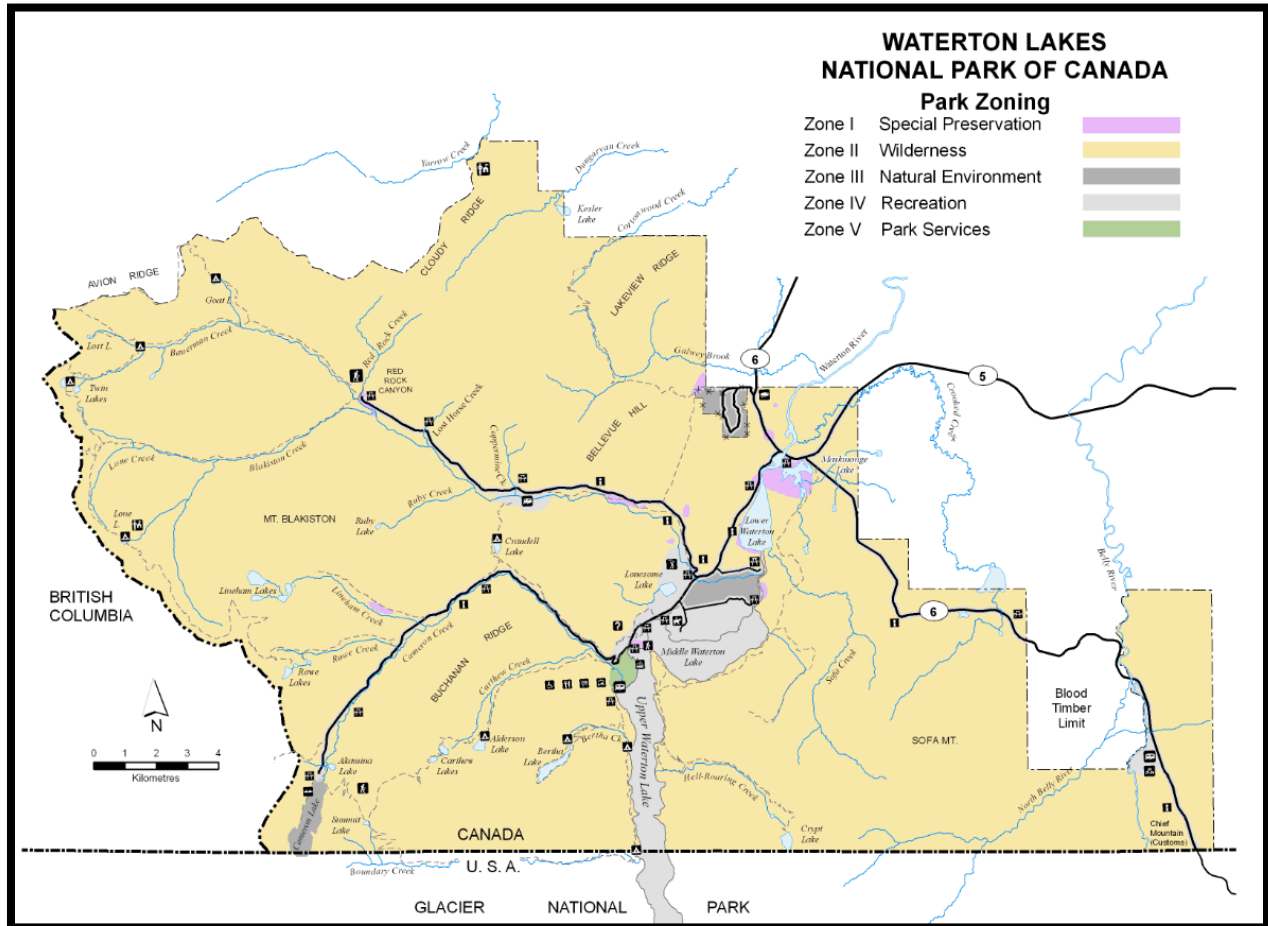


Figure 3 Waterton Lakes National Park of Canada Park Zoning Map

Zone I: Special Preservation

- Resource sensitivity is the key consideration in designating Zone I areas.
- The Maskinonge wetlands contain some of the few remaining wetlands in southwestern Alberta. This area is an important waterfowl staging and nesting area. Several rare bird species such as Trumpeter swans, Hooded mergansers and Red-necked grebes frequent the area. Two significant archaeological sites on the shores of Maskinonge Lake have been included in the Zone I designation.
- The Historic Sites and Monuments Board of Canada recommended the Lineham Discovery Well, the first oil well in Western Canada, as a national historic site on May 17, 1965. The site is marked with a plaque which commemorates the “First Oil Well in Western Canada.”



- There are approximately 250 known archaeological sites in Waterton Lakes National Park, dating back almost 11,000 years. Zone I designation is applied to the most significant of these sites.

Zone II: Declared Wilderness Area

- Only those activities are allowed which are required for: park administration; public safety; provision of basic user facilities including trails and rudimentary campsites; the carrying on of traditional resource harvesting activities where authorized; and in exceptional circumstances, access by air.
- For more information on DWA consult [G:\Common\Planning\Declared Wilderness Areas](#)

Zone III: Natural Environment

- Applies to areas where visitor use requires facilities that exceed the acceptable standards for Zone II.
- Motorized access is limited and controlled.
- Rigorous protection is required because of the area's ecological and aesthetic importance.

Zone IV: Recreation

- Zone IV also includes the Upper and Middle Waterton Lakes to accommodate motorized access. Note that trailer launched and motorized watercraft are no longer permitted in Upper and Middle Waterton Lakes.

Zone V: Park Services

- The [Community Plan](#) outlines the **Land Use Districts** in the Waterton Community (Environmental Reserve, Recreational Reserve, Commercial Retail, Commercial Accommodation, Institutional, Campground, Parking, Cottage)

Environmentally Sensitive Sites (ESS)

- The Park Management Plan recognizes the foothills rough fescue grasslands as an ESS in Waterton Lakes National Park. The foothills rough fescue grasslands form a narrow band that stretches along the plains and foothills from southern Alberta into Montana. The ESS is not spatially defined, however, a figure that outlines the grassland portions of WLNP is included below.

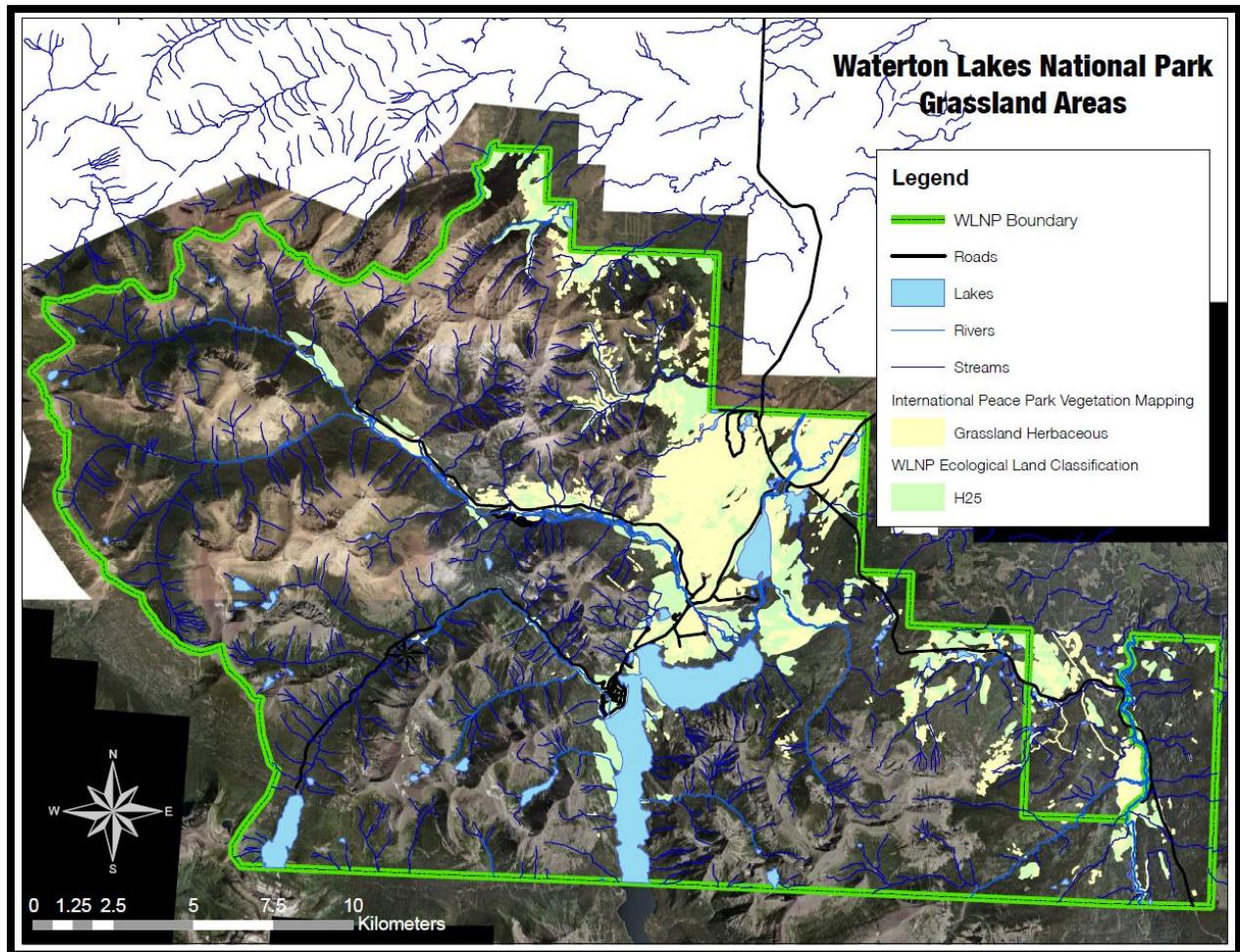


Figure 4 Grassland Areas in Waterton Lakes National Park.

Avalanche Mapping

Avalanche hazard zone mapping has been completed for the Waterton Townsite, Parks Compound, Little Prairie Day Use Area, and other key sites in WLNP. Consult with the Visitor Safety Specialist for additional information related to avalanche risks and project design.

<G:\Resource Conservation\Visitor Safety\AVALANCHE\Avalanche Mapping>

Planning Areas

In addition to formal zoning, the park management plan identifies several Planning Areas that may be useful in in planning, understanding potential project effects and for developing and choosing appropriate mitigations. Some of the key ecological factors, seasonal closures and other considerations that may be relevant to impact analysis in each planning area is included below. (Note that information additional to the Management Plan is included.)

Survey	Notes
Waterton Valley	Seasonal closure of the fan reduces disturbance of elk during rut. Area contains critical habitat for half-moon hairstreak butterfly.



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Appendix 4 Zoning & Planning Areas

Survey	Notes
	<p>Dynamic natural processes occur on the alluvial Blakiston Fan. Invasive plant control is a management priority. Location of northern leopard frog re-introduction. Contains known salamander migration areas. Contains fescue grassland ESS.</p>
Waterton Community	<p>Efforts to include natural areas and a natural aesthetic are important goals of the Community Plan. Need to maintain and monitor wildlife corridors in and around the community. Community planning involves working to reduce human-wildlife conflict. Dark sky compliance and upgrading is on-going work. There is an important archaeological site at Emerald Bay that likely extends into the yard of the superintendent.</p>
Blakiston Valley	<p>Winter road closure reduces disturbance of ungulates in their winter range. Prescribed fire is an important management tool.</p>
Belly River	<p>Park Management Plan outlines that no new trails will be developed in Belly River Area to maintain secure habitat and a wilderness experience for visitors. Grizzly Bear secure habitat thresholds are used as part of the Ecological Integrity indicators for WLNP. Human use (e.g., trailheads, trails) can move habitat from “secure” to “unsuitable due to human use”. (See figure of secure habitat). The highway is not actively maintained in winter which functions to reduce human use in this planning area.</p>
Cameron Valley	<p>Contains critical habitat for Bolander’s quillwort. Parking congestion along the parkway has resulted in people parking in ditches and non-hardened areas and the refurbishment of trailheads and Cameron Lake DUA is in progress. The First Oil Well National Historic Site and several cultural resources are adjacent to the Akamina Parkway (Zone I).</p>
Foothills	<p>Contains foothills rough fescue environmentally sensitive site. Includes wilderness and equestrian opportunities.</p>
*Park Waterbodies	<p>Public use of motorboats and trailer-launched boats is no longer permitted due to risk of aquatic invasive species. An educational self-inspection of human-powered watercraft is required.</p>

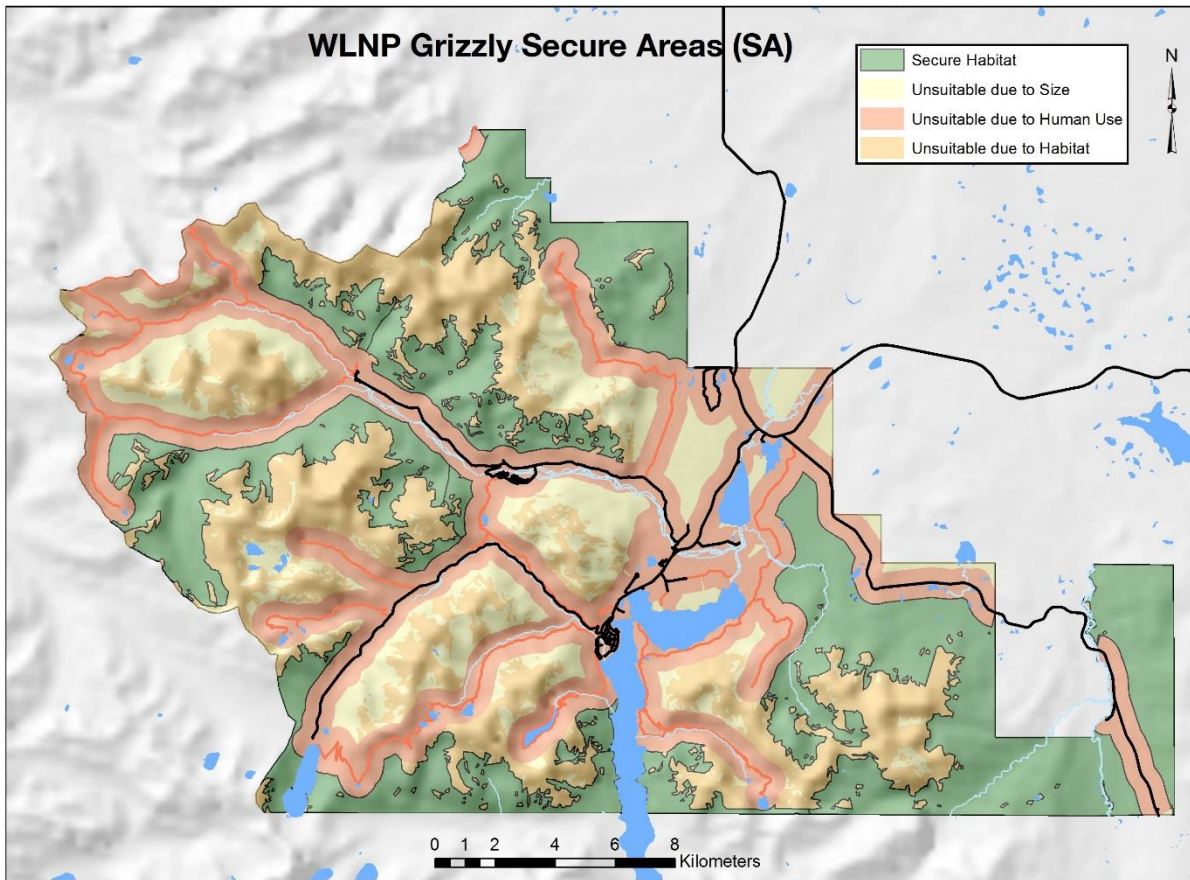


Figure 5 WLNP Grizzly Secure Areas