

Lower Kananaskis River – Barrier Lake Redevelopment Bow Valley Provincial Park



Where water recreation meets nature conservation

Final Plan

AUGUST 16, 2018

Alberta

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Lower Kananaskis River – Barrier Lake Redevelopment Final Plan
Alberta Parks, Kananaskis Region
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1.0 Introduction

Alberta Parks will redevelop several day use areas and a group campsite along the Lower Kananaskis River (LKR) to Barrier Lake. These upgrades will address concerns regarding user conflict, ecological impacts, traffic congestion, and increased accessibility to this important water-recreation destination. By planning at the landscape scale, the LKR-Barrier Project will also provide opportunities to address the diversity of uses in this area and work with stakeholders to ensure facilities meet user needs effectively. This plan has been created to represent the build-out of this area for the foreseeable future. Alberta Parks recognizes that given current ecological sensitivities and social carrying capacity, future facility development beyond this plan is not recommended.

In 2011, the *Lower Kananaskis River Redevelopment Plan* was presented to the Alberta public for consultation. Significant areas of controversy surrounded some of the components of that plan, particularly the installation of large campgrounds. This current plan went out for public consultation from August 27 to October 27 2017; First Nations consultation with all Treaty 7 Nations was conducted over a similar time frame. The final version of the LKR-Barrier plan presented here was influenced by the public consultation results in 2011 and 2017, and a detailed environmental review. A list of final facility changes described in this plan can be found in Section 1.1.5: Overall Project Decisions.

This plan applies a landscape scale approach to planning facilitates, addressing ecological values, and fostering water-based recreation values. This project plan includes Canoe Meadows day use and group camping area, Kananaskis Visitor Centre day use area, the Widowmaker day use area, the Barrier Lake day use areas. The Barrier Dam day use area was also considered during the planning process, but the extent of changes were not significantly different from the 2011 proposal. Barrier Dam day use area upgrades are contained in a separate project plan.

This planning document is extensive in scope and detail. Information is presented for the area on a whole and then for each site individually. Sections have been written to be integrated but also independent of each other; pertinent attachments are contained at the end of each section rather than the end of the document.

1.1 Project Area Vision and Planning Principles

Given the popularity of the LKR area and its ecological importance, Alberta Parks created an overall guiding vision that could help define a long-term management strategy and intent for the entire area from Canoe Meadows to Barrier Lake. The vision and planning principles define the management strategy and intent for the next 50 years; they were designed through conversations with representative Alberta Parks staff from visitor services, ecology, trails, conservation officers, education, permitting, and facilities management.

Project Area Vision

The Lower Kananaskis River – Barrier area in Bow Valley Provincial Park supports an important wildlife movement pathway, rare habitat types, and other important ecological values; it is a unique destination in the Alberta Parks system where visitors from around the world come to appreciate and enjoy world-class whitewater and lake-based recreation activities in a natural parks setting.

1.1.1 Mission Statement

Using science-based decision making, Alberta Parks will enhance visitor experience and protect the LKR-Barrier area to provide ecologically sustainable recreation for current and future generations.

1.1.2 Management Characteristics

The characteristics defined here are embodied by Alberta Parks staff and the stakeholders who manage or directly influence the visitor experience and ecological integrity of the LKR-Barrier project area. These characteristics guide our work in addressing the subsequent management principles and focus areas.

1. Equality of user groups

There are a variety of user groups interested in water-based recreation activities in the project area. All user groups should have equal access to their chosen recreational activity, and no user group will be considered a higher priority than another.

2. Critical thinking

The project area is complex from social, ecological, and economic perspectives. Finding ways to balance these needs is essential to meet project objectives. Planning and management decisions should be holistic and based on the best available social and ecological scientific information.

3. Collaboration and respect

With the diversity of user demands and ecological sensitivities of the project area, managers and stakeholders will practice good listening skills and show consideration of each other's perspectives and needs.

4. Flexible and adaptable

Water levels in Barrier Lake and the LKR are subject to large fluctuations due to flood and drought mitigation measures, climate change and other processes. In addition, ecological and social science data are continually evolving and changing our understanding of the landscape. Planners, managers, and stakeholders should be flexible and adaptable to these changing conditions in both the short and long term.

1.1.3 Planning and Management Principles

Planning and management principles provide a foundation for the overall recreation management strategy and bring a high degree of consistency to the decision-making process. Principles are designed to help achieve the vision and integrate recreation planning efforts with other management priorities throughout the project area. The below principles align with the existing Bow Valley Provincial Park management plan (Bow Valley Protected Areas Management Plan, 2002) and its direct reference to the LKR and Barrier area.

1. Enhancing ecological integrity

Local wildlife movement pathways provide north-south connectivity adjacent to Highway 40 and east-west connectivity from Mt. Baldy across the Widowmaker area to Bow Valley Wildland Provincial Park. These movement pathways connect important and rare habitat patches and serve as vital routes for multiple species. Planning and management of the LKR-Barrier area will prioritize the long-term sustainability and effectiveness of wildlife habitat and connectivity. All recreational activity planning will be considered within the context of the ecological sensitivities of this landscape.

2. Public safety on trails and in the water

Ensuring public safety in this area is paramount from both the visitor and Alberta Parks perspectives. Recreation planning and management will consider the specialized skill set required for recreation on the Lower Kananaskis River and the risks associated with cold-water recreation. Trails connecting sites will be planned to ensure user safety and enjoyment.

3. Sustainable recreational opportunities for diverse user groups

The current Bow Valley Provincial Park management plan states the need to integrate the recreational needs of commercial guiding and instructional groups, non-profit clubs, and educational groups with general public recreation needs. Incorporating the diversity

of recreational activities offered, reducing potential user conflict, and ensuring Albertans and commercial operators have adequate, sustainable access to their activity of choice is important.

4. Improved communication

Planning in the LKR-Barrier area will endeavor to reduce user conflict through signage and designating activities to specific areas. Communicating project plan outcomes (e.g., through signage, websites, or the Kananaskis Visitor Information Centre) will be integral to providing quality visitor experiences. The Kananaskis Visitor Information Centre day will act as an information hub for Kananaskis Country.

5. Working with stakeholders and First Nations

Alberta Parks is committed to working with TransAlta Utilities, concerned stakeholders (e.g., LKRUA, commercial operators), and First Nations to ensure that planning and management activities consider all interests in a fair, open, consultative decision-making process.

1.1.4 Strategic Objectives

Strategic area objectives contribute to meeting the area vision and are intended to provide management direction within the context of the planning and management principles for the entire project area.

Table 1: Project Planning and Management Principles and Associated Objectives

Planning and Management Principle	Objective
Enhancing ecological integrity	Ensure wildlife movement pathway effectiveness
	Work with Alberta Transportation to decrease wildlife-vehicle collisions by investigating speed reductions and/or installing deceleration lanes on Highway 40
	Maintain ecological integrity of habitat patches by ensuring impacts associated with recreational activities are kept to a minimum
	Reclaim the banks of the Lower Kananaskis River to reduce erosion; explore feasibility of reestablishing ground cover
	Ensure trails in the area avoid sensitive habitat and are planned to reduce recreational impacts to ecological resources

	Design facilities to have a minimal ecological footprint and retain the natural setting characteristic of provincial parks
Public safety on trails and in the water	Build trails to avoid cliffs or steep slopes that may present a risk to public safety
	Install better signage communicating the risks of cold water recreation and LKR water release schedule
Sustainable recreation opportunities for diverse user groups	Design and construct facilities that appeal to specific user groups in appropriate locations
	Plan facilities that reduce user conflict by separating users and allowing all groups to have their space
	Increase user friendliness by modernizing facilities and increasing parking capacity
	Provide change rooms and ample washroom facilities at day use sites
	Improve camping options and facilities at Canoe Meadows that are more appropriate for the paddling community and reduce potential user conflict
	Install bicycle-specific storage facilities at day use areas and work with Alberta Transportation to potentially provide a safe cycling route through the project area
Improved communications	Change signage and online materials to better reflect the diversity of recreational activities and where they are most appropriate
	Use the Kananaskis Visitor Information Centre and day use area as a hub for information pertaining to the project area
	Develop interpretive signage sharing watershed stewardship and conservation messaging at all sites
	Develop a sense of place for visitors to understand they are in the Kananaskis Country protected area system
	Market Barrier Lake as a non-motorized and motorized lake recreation site
Engaging with Stakeholders and First Nations	Continue working with Alberta Environment and TransAlta to ensure water levels in Barrier Lake and the LKR meet various objectives and commitments (e.g., water flow, stabilization of water levels)
	Involve stakeholders (e.g., LKRUA) in the planning and management processes
	Work with Treaty 7 First Nations to incorporate traditional uses, knowledge, and concerns in planning and management

1.2 Overall Project Objectives

This project area has reached a social carrying capacity associated with the diversity and number of users on the LKR and Barrier Lake. The ecological sensitivities of this area have been well documented in terms of wildlife movement and habitat use. The best way to effectively balance ecological and social needs in this area is to place limits on future development. **This plan represents the final development of this area from Canoe Meadows to Barrier Lake.**

The LKR is a recreation destination largely due to the constructed rock and cement structures in the river bed that channel water to create white-water features. These features have undergone extensive review by Water Act prior to construction and contribute to improving the overall recreation experience. The proliferation of these features has increased human use on the LKR and adjacent lands, which has led to increased impacts on the area's ecological attributes. This plan details significant changes to staging areas and river access points to help reduce ecological impact. To monitor the effectiveness of these changes and how they impact human use patterns of the LKR area, **Alberta Parks is implementing a moratorium on future development of river features for a period of 5 years.**



The final project plan presented here also contains several facility improvements:

1. Entire Project Area

- Improved signage that is consistent in messaging and appearance at all sites;
- “Share the Road” signage from Canoe Meadows to Barrier Lake to accommodate bikes;
- Zoning changes to better define facility and natural area zones. Facility zone boundaries will follow facility footprints once construction associated with the plan is complete. *

2. Canoe Meadows Day Use Area and Group Camp

- Expanded and formalized public parking area;
- Working with Alberta Transportation to investigate the installation of deceleration lanes on Highway 40;
- A new camping area with individually bookable walk-in tenting sites *;
- No comfort camping*.
- A training and meeting centre (private/public sector opportunity);
- Upgrades to the group campground, including a new group shelter and formalized tent pads;
- An accessible trail and river put-in;
- Formalized pedestrian access to the river that does not go through the group camp*;
- Installation of two open air change rooms – one in the main parking area and another in the camping area*;
- Installation of gear drying racks in the day use area.

3. Kananaskis Visitor Centre and Day Use Area

- Expanded parking and designated parking areas for carpoolers and visitor centre users;
- Conduct a hazard tree assessment. Use areas with extensive tree removal as guidelines for new parking area expansions;
- A river surfer staging area with small parking area, surf board rack, and picnic opportunities;
- No “surf zone” will be designated, but signage along the river will alert users to approaching standing waves. Signage along the river banks will detail etiquette for people using standing waves*;
- Installation of a heated change room at the surfer staging area.

4. Widowmaker Day Use Area

- Formalized public parking;
- Relocation of the trail kiosk;
- A new commercial operator put-in located upstream*.

5. Barrier Lake Day Use Area

- A new hand boat-launch and associated road access;
- A water sports equipment rental hut (private sector opportunity);
- Expanded parking;
- Tourism development opportunity (private sector opportunity);
- Decommissioning half of the access loop road, under used pull-out parking, and under-used trails;
- Construction of a *Connection Corner* trail;
- Barrier Lake’s name will not change, but the name of the day use areas will be amended*;

- Improved picnicking opportunities;
- Stairs for beach access to reduce bank erosion;
- Better delineation of wildlife habitat areas where human use is discouraged*.

* amended based on results of public and First Nations consultation.

All plan element details are subject to detailed design, technical investigations, and environmental review Level II.



2.0 Rationale

In 2011, the Alberta Government released the *Lower Kananaskis River Facility Redevelopment Proposal*. This redevelopment plan proposed the following changes:

- **Canoe Meadows** – upgrades to group camping facilities, better separation of day users and group camping, improvements to accommodate special events, parking expansion, trail improvements, and a new campground.
- **Kananaskis Visitor Centre** – construction of a campground on either side of visitor center with 75 new sites, and expansion of the day use parking lot.
- **Widowmaker** – construction of a new campground with 109 sites, 3 group use sites, a new staging area for water entry, and a new group use area with a campground.
- **Barrier Dam** – expanded parking, installation of a boat launch, and a disc golf course.

The subsequent comprehensive ecological review conducted by Alberta Parks raised significant concerns with the scope of the plan. Ecological concerns centered on the potential impacts to wildlife movement through the area, increased human-wildlife conflict associated with the proliferation of campgrounds, and the loss of rare habitats in the area. The results of the public consultation process in 2011 showed a high level of public support for facility upgrades and improvement but less unanimous support for the proposed extent of campgrounds and the disc golf course. Based on these factors, the following aspects are no longer contained in this redevelopment plan:

- Campgrounds and expansion of parking lot at Widowmaker
- Campgrounds at Kananaskis Visitor Centre
- Disc golf course at Barrier Dam

The reasons for developing the 2011 plan are largely still relevant. There is a need to improve the visitor experience through the expansion and modernization of recreational facilities in an environmentally sensitive manner. The area has already been recognized for its river-based recreational opportunities, but in past years has also become increasingly popular as a picnic and lake-side recreation destination. There is a growing diversity of users across the project area. User groups include white-water paddlers of all kinds, river surfers, flat water paddlers, beach goers, picnickers, stand-up paddle boarders, and various commercial operators offering all of the above.

Many of the facilities in this area were built in the 1980s when Alberta was home to a smaller population who engaged in different styles of recreation. With Alberta's growing population and improvements in outdoor recreation equipment, the number of visitors to the LKR-Barrier area has increased and their expectations regarding provided services have changed. Current

facilities and associated parking lots are frequently over-capacity and out of date, thus failing to meet the needs of changing demographics. Enhancing facilities to better meet user expectations will improve the visitor experience in the area. With these facility upgrades, there is an opportunity to increase the accessibility of the river and lake-based recreation for Albertans with reduced mobility. Facility upgrades can also enhance ecological integrity by focusing human use away from wildlife movement pathways and designating water access points to reduce bank erosion.

One of the key issues with this area is parking capacity. Current parking lots are not designed to effectively maximize existing space and are sometimes too small; this plan details parking lot expansions. Another key issue is growing user conflict, particularly at Canoe Meadows where group camp and day users are frequently attempting to use the same space at the same time. This is particularly challenging when a wedding or other special event has booked the group camp area and is

interrupted by day users. Separating overnight and day users at Canoe Meadows is a focus of this plan. There is a lack of camping capacity in Kananaskis Country and this plan explores additional camping opportunities in the LKR-Barrier Lake area.



Positioning the LKR as a world-class white water paddling destination requires productive partnerships with members of the Lower Kananaskis River User Association (LKRUA). LKRUA has been engaged throughout this planning process and their perspectives are incorporated throughout.

More current and extensive ecological data demonstrates the importance of this area for wildlife movement and habitat. Planning to increase the effectiveness of movement pathways and improve habitat security is an essential component to this plan. The LKR-Barrier project area represents an opportunity to increase ecological integrity and improve visitor experience.

3.0 Location and Existing Facilities

The project area spans 6 km in length from Canoe Meadows day use area to Barrier Lake day use areas. The day use sites of Canoe Meadows, Kananaskis Visitor Centre, and Widowmaker border the Lower Kananaskis River, which starts just below the Barrier Dam. The Barrier Lake day use areas are on the south-eastern shores of Barrier Lake, above the dam. The project area is bordered by the Lower Kananaskis River and Barrier Reservoir on the west side and Highway 40 on the east. While the project area is quite narrow, all developments were considered in the context of the surrounding landscape from an ecological and social perspective.

The legal area description of each day use area is (*Attachment 3.0.1: Project Area ATS Map*):

- Canoe Meadows – section 23-024-08 W5M
- Kananaskis Visitor Centre – section 14-024-08 W5M
- Widowmaker – section 15-024-08 W5M
- Barrier Lake (lower portion of day use area) – section 9-024-08 W5M
- Barrier Lake (upper portion of day use area) – section 5-024-08 W5M

The project area is located less than 5 km from the Stoney Nation Reserve on its northern end and is the first part of Kananaskis Country encountered when traveling south on Highway 40 from the TransCanada Highway (*Attachment 3.0.2: Regional Project Map*). These day use areas serve as gateways to the Kananaskis Country protected areas system from the north end because of their proximity to the TransCanada Highway. As such, these areas attract a variety of day users ranging from experienced white-water athletes to casual picnickers and everyone in between. The area is also one of the only places in Kananaskis Country with highly accessible and diverse water-based recreation opportunities. As a result of its location and recreational characteristics, the project area is very busy.

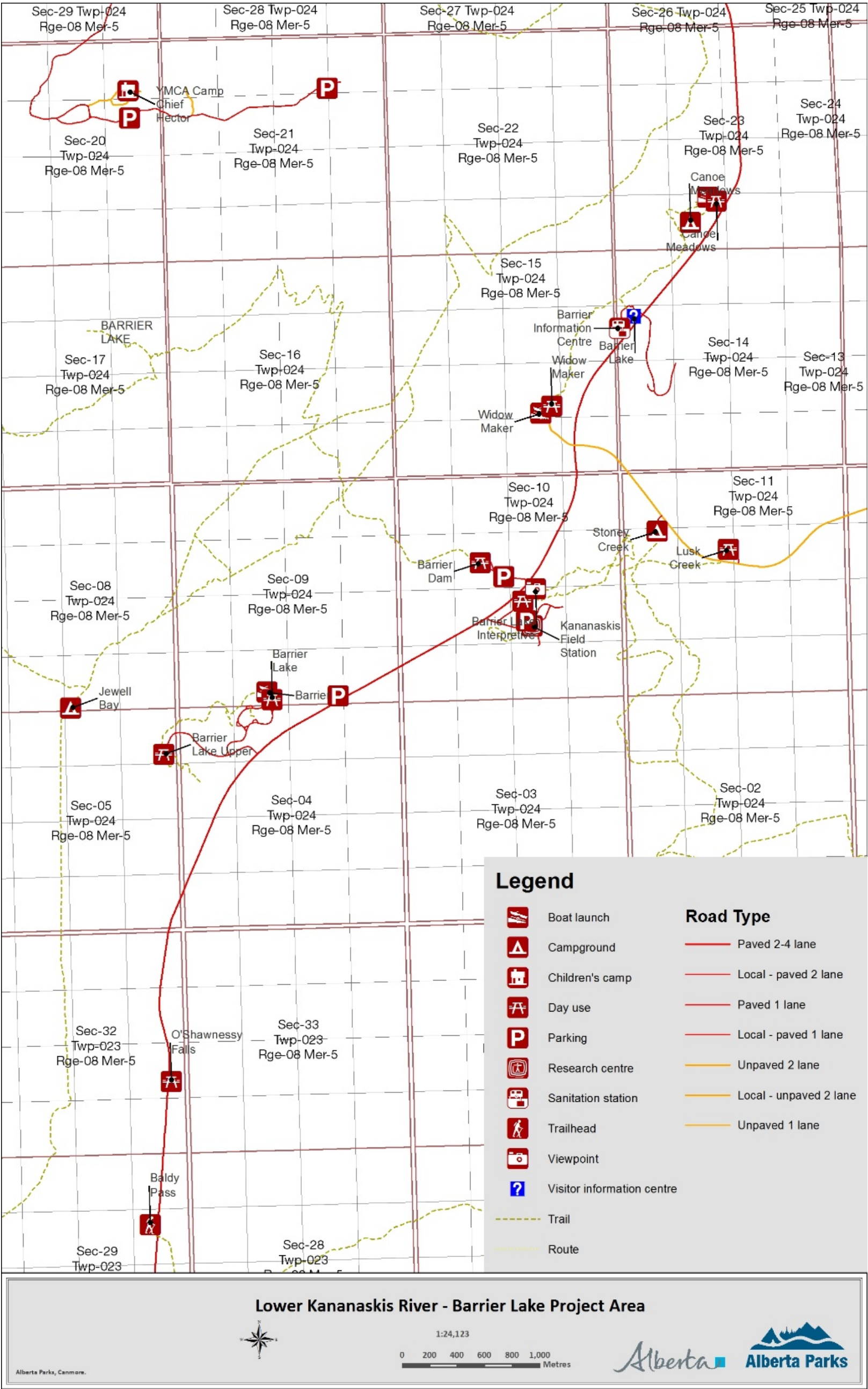
The length of Highway 40 from Nakiska ski area to Highway 1 acts as a wildlife movement pathway, particularly for grizzly and black bears. This wildlife movement pathway connects habitat in the Nakiska ski hill area to the Bow Valley Habitat Patch north west of Barrier Lake and adjacent to Canoe Meadows area. Throughout this project area are critical aspen forest habitat patches, which comprise only 3% of the landscape within Kananaskis Country protected areas and the Bow Valley. These aspen forests provide critical ungulate habitat, particularly in the winter, and songbird nesting habitat in the summer. Avoiding these critical habitats is important in design and site construction. There are several species at risk found in the project area, including harlequin ducks, grizzly bears, and rare plants. Ensuring their habitats are protected is essential to plan success.

There are several existing facilities throughout the project area:

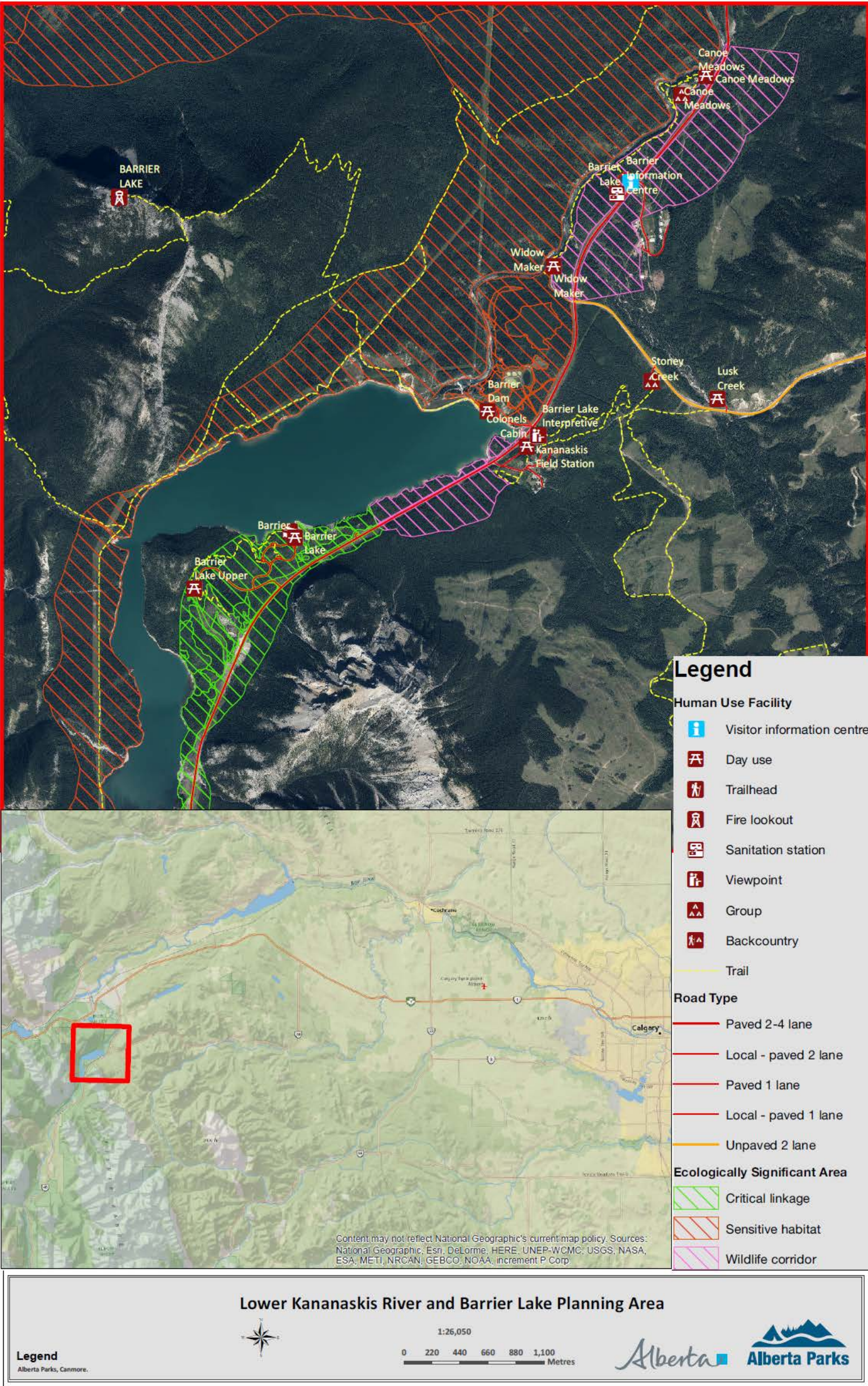
1. Canoe Meadows – day use, overnight use, special events
 - A day use parking area with vault toilet
 - Day use meadow with picnic tables
 - Trail surrounding site with access to the river
 - Group camp with shelter, fire pits, and picnic tables (managed by the Alberta Whitewater Association)
2. Kananaskis Visitor Centre – day use, information centre
 - Visitor centre parking lot with vault toilet
 - Outdoor kiosks with area information
 - Picnic tables in forest and open meadow
 - Smaller parking pullouts with forested picnic tables in the surrounds
 - Sani-dump station
3. Widowmaker – day use
 - Parking area with vault toilet
 - River access points above and below Widowmaker feature
4. Barrier Lake – upper and lower day use areas
 - a. Lower day use area
 - Motorized boat launch
 - Large parking area with vault toilet
 - Picnic tables and beach access
 - Trail linking to upper day use area
 - b. Upper day use area
 - Parking area
 - Picnic tables in the forest
 - Trail to upper viewpoint with interpretive signage

All of these sites have several associated commercial operating and guiding permits for paddling and water-based recreational activities. The river and reservoir denote the boundary from Bow Valley Provincial Park to Bow Valley Wildland Provincial Park where a few hiking and mountain biking trails are available. The east side of Highway 40 is on Alberta public lands.

Attachment 3.0.1: Project Area ATS



Attachment 3.0.2: Regional Project Map



4.0 Project Details

The following section provides recommendations at the project area scale; site-specific recommendations follow in sub-sections. Given the scope of this project, the site-specific sections have been written to be independent of each other in their own sections with conceptual lay-outs, recommendations, and attachments.

Several aspects of the proposed changes are required at all or several sites across the project area:

1. Improved signage

Alberta Parks will create a signage plan for this project area that will increase clarity and provide consistency regarding which activities are most suitable at each site. Signage will help create a sense of place for visitors to the LKR-Barrier area. Common signage will contain the project area tagline: *where water recreation meets nature conservation*.

Signage can be used to communicate the theme of this area before people even reach Canoe Meadows. A sign on the highway could detail all sites in the area and visually communicate the types of recreation they provide. This may help visitors to select the best day use area for the activities they are most interested in.

In addition to standard Alberta Parks wildlife and safety messaging, signage will focus on:

- Watershed stewardship
- Cold water recreation safety
- River class and implications for inexperienced paddlers
- Site-specific maps with designated trails and water access points
- Map of overall LKR-Barrier project area with areas of ecological importance

2. Install paddling specific storage at some day-use areas

With the focus on water-based recreation, Canoe Meadows and the Visitor Centre sites will contain a selection of drying racks near picnic areas. Surf board racks will be provided at the Kananaskis Visitor Centre surfing staging area and a boat rack will be provided at the Canoe Meadows group camp. The provision of these amenities will contribute to establishing this area as a water-based recreation destination through visual cues.

3. Improve bike related infrastructure and accessibility

Alberta Parks is committed to working with Alberta Transportation to explore the designation of a safe biking route from Canoe Meadows to Barrier Lake along Highway 40. This will provide safer access for the increasing numbers of road cyclists using Highway 40 and for paddlers shuttling between Canoe Meadows and Widowmaker. Signage along the highway should reflect that the shoulder is a shared route. This is discussed more in *Section 5.6: Transportation and Utilities*. Bike racks will be installed at several sites.

4. Zoning changes

Currently, Facility Zoning surrounds all day use areas, the area between Canoe Meadows and the Kananaskis Visitor Centre, and much of the Barrier Lake area peninsula. The remainder of the project area is zoned as Natural Area. The current management plan (2002) commits to refining these zones to better reflect the development footprint once this facility plan is finalized. The zoning changes will better reflect human use and current wildlife movement and habitat data. The Facility Zones at Canoe Meadows, Kananaskis Visitor Centre, and Barrier Lake will be restricted to the extent of development. All other areas will be zoned as Natural Area or Preservation (*Attachment 4.0.1: Proposed Area Zoning Changes*). Zoning changes will better compliment other existing zoning and contain future development.

4.1 Alternatives Considered

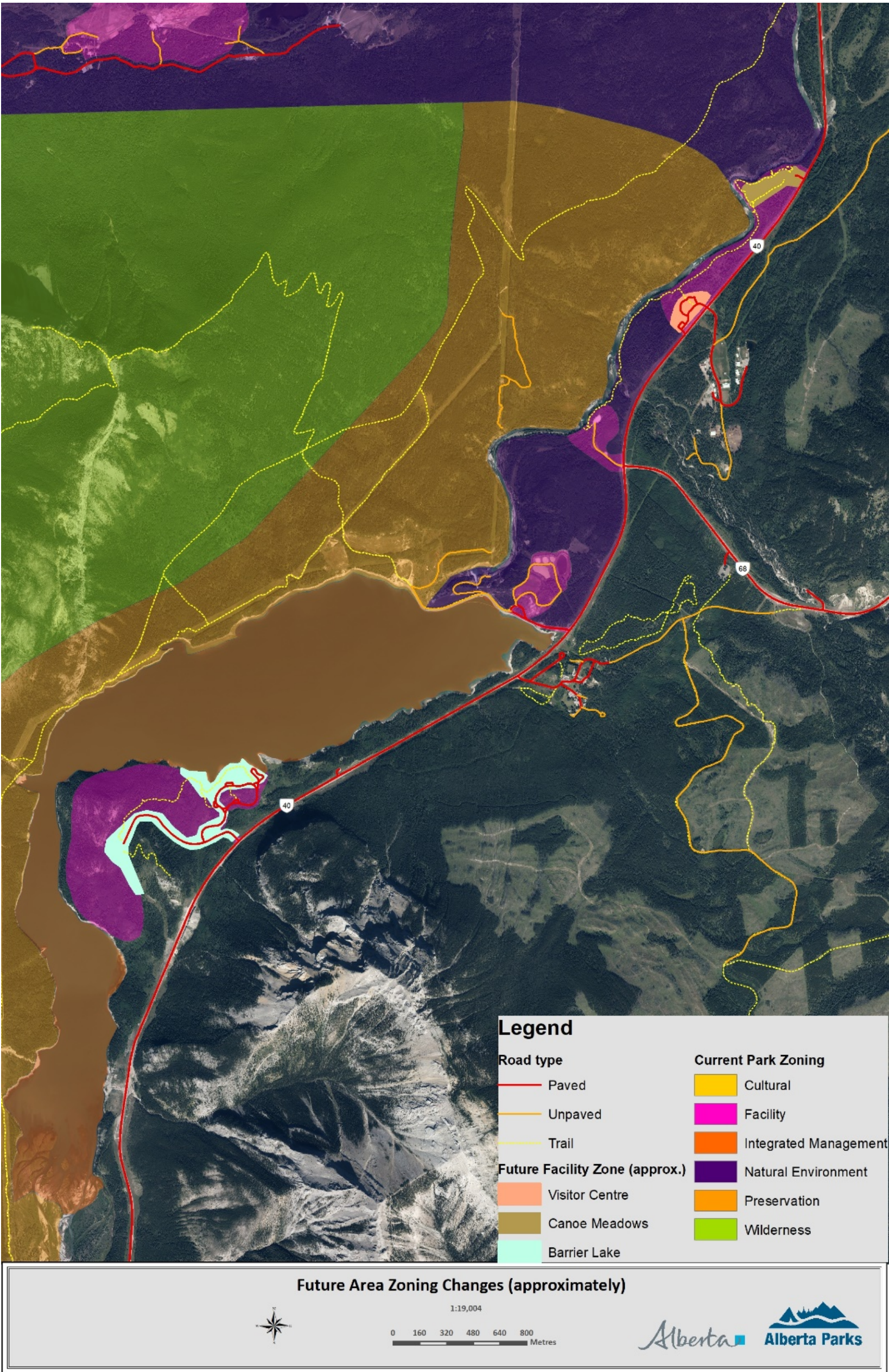
There are several alternatives for the overall project plan that were considered prior to defining the site-specific details (*Table 2: Alternatives Considered*). Site-specific project components, conceptual lay-outs, and alternatives considered follow in the subsequent sections.

Table 2: Alternatives Considered

Alternative	Description	Considerations
Maintain existing state	Leave all existing facilities at day use areas.	<ul style="list-style-type: none">• Does not address growing demand and lack of capacity.• Does not incorporate current ecological data in area use and facility planning.• The diversity of recreational uses could be better planned on a site-specific basis.• Current parking lots and facility design do not address vehicle and user congestion.

Option 1 – Upgrade	Upgrade existing facilities only	<ul style="list-style-type: none"> • Updates and modernizes existing facilities. • Does not account for increased human use patterns and new recreational use patterns.
Option 2 – Implement 2011 LKR Redevelopment plan	Implement the 2011 Lower Kananaskis River Redevelopment Plan as proposed	<ul style="list-style-type: none"> • Plan has already been the subject of extensive public and stakeholder consultation. • Extensive work was completed to create this draft plan and it is critical that these efforts are not duplicated. • Plan was created prior to an extensive environmental review. Current ecological and wildlife data should be used when planning at this scale; the 2011 plan contains components that are no longer considered ecologically appropriate. • New recreational uses have arisen since the creation of this plan (e.g., river surfing). • The extent of camping proposed in this plan is not appropriate to achieve ecological and public safety related objectives.
Option 3 – Current Plan Proposal	The current proposal: Lower Kananaskis River – Barrier Lake Redevelopment Plan	<ul style="list-style-type: none"> • Updates 2011 plan based on current ecological data. • Engaged with stakeholders throughout planning process. • Recommends planning measures for the larger landscape, including Barrier Lake. • Proposes more appropriate developments in the context of public safety and ecological issues. • Plan contains long-term, comprehensive recreation management strategies for the project area. • Addresses new forms of recreation and increases in use.

Attachment 4.0.1 Area Zoning Changes



4.2 Canoe Meadows Day Use Area and Group Camp

Canoe Meadows is a triangular shaped area bordered by the Lower Kananaskis River on two sides and Highway 40 on its eastern edge. This is the first day use area people encounter when arriving in Kananaskis Country and it is the most popular staging area for paddlers in the LKR-Barrier project area. It experiences very high use levels and requires substantial changes and upgrades. A significant contributor to its popularity is the proliferation of human constructed white water features in this portion of the LKR, including a white-water slalom course regularly used by athletes and for special events (e.g., races). The 5-year moratorium on river developments does not apply to maintenance of these existing features. The Canoe Meadows group camp, operated by the Alberta Whitewater Association (AWA), is currently used as a staging area for special events and group camping. With the significant changes being planned for this area, Alberta Parks will work with the AWA to revise their operating agreement for the campground and its components.

4.2.1 Current Situation and Changes

The AWA and the Alberta Slalom Canoe Kayak (ASCK) have constructed a gate system for a kayak slalom course on the LKR adjacent to Canoe Meadows. This course compliments the white water river features constructed by AWA between Widowmaker and Canoe Meadows over the past several decades. Together these features make the LKR and Canoe Meadows a destination of international significance for the white-water paddling community. This facility has hosted an array of regional, national, and international competitions and events. Canoe Meadows is considered the provincial training facility for the sport of kayaking.

The existing gravel parking lot can accommodate approximately 70 vehicles



with one vault toilet and garbage facilities. The group camp area is located next to the main parking area and currently shares the one vault toilet. The group area is not well defined or separated from the day use area; this can lead to conflict between day users and those who have paid to book the group use area.

The current Canoe Meadows parking lot does not have capacity to satisfy user demand. The group camp is outdated and delineation between it and the day use area is unclear. The opportunity to construct a training facility may help position this area as a world-class white-water destination.

Alberta Parks will implement the following changes to day use at Canoe Meadows:

- Provide a public/private sector opportunity to construct a white-water training facility
- Construct an accessible trail and accessible river put-in
- Expand and pave the parking lot to increase capacity and efficiency
- Install several drying racks in the day use area meadow
- Install a change room
- Designate a trail for pedestrian river access away from the group camp

Alberta Parks will implement the following changes to overnight use at Canoe Meadows:

- Install several tent pads along the edge of the meadow
- Replace and upgrade the existing group shelter
- Install a small parking lot with access to 10 individually bookable, walk-in tent sites
- Install additional vault toilets and a change room specific to the camping area
- Use signage to better delineate the separation between the group camp and day use areas
- Install gear drying racks and a canoe/kayak storage rack

In addition, Alberta Parks proposes to amend the Facility Zone to more closely surround the facilities associated with human use (e.g., buildings, parking lots). Everything outside of this Facility Zone will be designated as Natural Area or Preservation Zone because of this area's importance for wildlife connectivity. The Facility Zone is tightly bound to the existing facility footprint and does not include the River Walk trail and other trails accessing the river. Trails are permitted within Natural Area zones and will not be affected through this zoning. The zoning will, however, prevent any further facility development along the river shore line. The proposed Facility Zone boundary has been designed to maximize available habitat for wildlife movement along Highway 40.

Attachment 4.2.1: Canoe Meadows Proposed Changes details the changes to facilities and zoning at this site.

4.2.2 Specific Changes

This section describes the recommendations for the Canoe Meadows portion of the Project area. Additional considerations to support the following recommendations are provided in *Section 5.0: Background*.

Upgrades to facilities associated with day use

1. Parking Lot

The parking lot will be expanded and formalized to increase capacity for approximately 150 vehicles; this may require relocating the vault toilet. The turn-around at the west edge of the parking lot should be signed as “no parking”. Given the popularity of this day use area, Alberta Parks will consider having cameras installed to monitor this parking area.

Specifics:

- Total area = $3,826\text{m}^2 = 1,400\text{m}^2$ (expansion) + $2,426\text{m}^2$ (current)
- Pave and formalize lot with painted lines
- Minimum 6 pull-through spots
- Loading zone adjacent to day use meadow and in front of training centre

2. Change room

Stakeholders raised concerns regarding the lack of a facility to change in to their paddling gear. This is also an issue for other day users who may feel awkward when paddlers change in the parking lot. The change room will be designed to contribute to the area’s sense of place by including paddling specific elements (e.g., simple towel racks, chairs, and designs such as in the pictures below). Any accessories should be designed for easy maintenance and repair in the event they are vandalized.



Paddling themed change room design and details such as towel racks and hooks can help establish Canoe Meadows as a paddling focused area.

Specifics:

- Open air with two stalls
- Close to vault toilet
- Paddling theme and appearance
- Floor drains to prevent water accumulation

3. Gear racks and storage

Installing visual cues, such as paddling specific infrastructure design or signage, is a significant contributor to creating a sense of place. Gear storage racks can be useful to dry equipment before transporting it in a vehicle, while contributing to the area's sense of place. Examples of storage racks are provided in the pictures below. Picnic tables will also be placed around the edges of the meadow. With picnic tables and gear racks, this meadow will be positioned as a good gathering spot for paddlers. Alberta Parks' logos should be added to all storage and drying racks.



A simple paddle rack and multi-purpose drying rack can be used for pfds, wetsuits, and other equipment and can help establish a sense of place at Canoe Meadows.

Specifics:

- Install 3 in day use meadow near trail head
- Use generic multi-use pegs and hooks to accommodate a variety of paddling gear (e.g., PFDs, paddles, wetsuits)
- Low maintenance to withstand weather and potential vandals
- Be a simple structure, partially covered, with no walls

4. Private/Public sector opportunity – White-water training centre

The original redevelopment plan in 2011 recommended the construction of a year-round training and meeting centre to accommodate the growing demand for white-water training facilities. This training and meeting centre would provide a space for athletes to gather and serve as a central facility for special events. The size and scope of this facility are limited by the lack of power and running potable water at Canoe Meadows. The current plan designates an area of approximately 1,500 square feet for this facility, which will be the subject of a Non-profit Recreational Lease or a Facility Lease. Parks Division will invite the interested parties to submit a proposal for design, construction, and operations of this facility. The RFP will detail facility requirements and will focus on developing a facility that is economically feasible, meets the needs of paddlers, and fits within the context of Alberta Parks management objectives.

This facility, containing meeting and equipment storage space, will be located adjacent to the main parking lot turn around to ensure visibility and ease of access. The allotted area will include indoor and outdoor facilities, including covered and secured outdoor equipment storage, outdoor gear storage area, and an indoor meeting space. The facility may contain a small concession, however, it cannot contain a full kitchen due to the lack of available water licenses. The outdoor areas will not require heating, but may require lighting for the winter months. The meeting and classroom space will require electricity and heating, the mechanisms of which can be determined during the design phase. Alberta Parks will encourage potential proponents to designing a facility that meets LEED green building standards.

LEED Building Standards

Leadership in Energy and Environmental Design (LEED) is an internationally recognized environmental program. LEED building strategies are: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

There are four different levels of certification that a developer can attain for a building: certified, silver, gold, and platinum. The level of certification is dependent on the number of points accumulated in the design and construction phases of the project.

More information about LEED and the application process can be found at:

[The Canada Green Building Council](#)

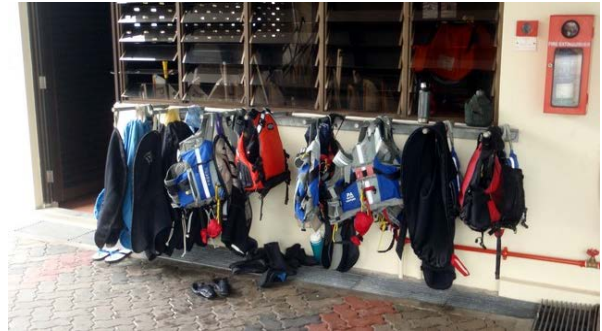
[LEED Canada Reference Guide for Green Building Design and Construction 2009](#)

Design of the training centre should also visually demonstrate the area's paddling and water recreation theme. This can be done through building design and architecture, providing they

follow the Kananaskis Improvement District Architectural Guidelines. Photos of other paddling centres below highlight some examples of how external storage, and design elements can be used to establish a sense of place and communicate to visitors that this is a paddling area.

Specifics:

- Approximate size 1,500 sq. ft.
- Contains 5 areas:
 - Covered and enclosed outdoor equipment storage space
 - Meeting/ classroom (approximately 600 sq. ft. for 30-50 people)
 - Office
 - Small concession
 - Indoor equipment storage room that resembles a garage



Storage of boats and PFDs can be simple racks and pegs and can be installed on either the exterior or interior of the building.

The training and meeting centre in Manitoba (below) includes a secured and open exterior boat storage.



With the addition of gear storage racks, signage, and a training facility, the atmosphere of Canoe Meadows will change from a general day use area to one of paddling focus. When visitors enter the Canoe Meadows Paddling Facility, it should be obvious that the primary form of recreation is water based. This will help to reduce user conflict because visitors who are not interested in paddling will seek other options (e.g., picnicking at Barrier Dam instead of Canoe Meadows).

5. Signage

The main reasons to improve signage at the Canoe Meadows day use area are to: 1) help position Canoe Meadows as a paddling destination within the context of the larger area water-based recreation landscape, 2) communicate cold-water recreation safety requirements, and 3) improve consistency in messaging and signage appearance.

Currently, several small signs at river access trailheads communicate that water levels in the LKR can change rapidly with a web link to the TransAlta dam release schedule. Sign appearance is not consistent, nor is cell reception or internet access.

A standard sign with the following information will be installed at all designated river access points and trailheads:

- Pictures of the river during high and low water levels;
- The link to the TransAlta dam schedule;
- A link to the Alberta Rivers: Data and Advisories Application, which has real time river flow rates;
- Etiquette messaging highlighting the need to share the river with many different user groups.

6. Trails and river access

There are several trails in the Canoe Meadows area requiring different levels of improvements. As such, Alberta Parks will create a trails plan for this site detailing trail improvements, and decommissioning or rerouting where required. The current trail that runs the length of the cliff bank overlooking the river at Canoe Meadows is well used, and multiple railings and viewpoints require upgrading to increase visitor safety. This project plan details four designated river access points; all others will be decommissioned and closed for rehabilitation.

This plan also proposes an accessible trail leading from the north end of the day use area to an accessible river put-in. This trail is already a common put-in and take-out for paddlers and would require minor upgrades to become accessible. The stairs will be removed and the trail contoured to follow the natural topography. Providing accessible access to the water would provide an inclusive experience for people with limited mobility. Alberta Parks will work to

determine what changes are required to install an accessible put-in at this location and whether one is feasible given the terrain.

User conflict at this site can be caused by day users walking through the group camp to access the southern river put-in. A new trail will be constructed from the parking lot to the upstream river access point that directs day users through the trees adjacent to the south side of the group camp rather than through the group camp itself.

Specifics:

- Create an overall area trails plan;
- Upgrade perimeter trail and viewpoints for safety;
- Formalize river access points;
- Upgrade an existing trail and put-in to be accessible;
- Create a new trail for day users from the parking area to the upstream river put-in.

Upgrades to overnight use

1. Overnight and day use separation

It is important to visually and operationally separate the group camp area from the day use area, which will be accomplished with the pedestrian access trail and gates to the group camp. Gates and signage will be used to clearly delineate boundaries between sites.

Specifics:

- Install a combination lock on the gate accessing the overnight camping area (combination will be provided to campers only);
- Install a swing pedestrian gate on the trail connecting the group camp to the main parking area;
- Install signage at gate entrances to clearly identify entrance to camping area and day use entrance to river.

2. Diversifying camping options

Stakeholders also recommended the installation of individually bookable campsites for those recreationists wishing to camp independently. Alberta Parks will install a walk-in tenting area, but the comfort camping stations proposed in the draft plan have been removed from the final plan based on the public consultation results.

The walk-in tent sites will be accessed via a road that goes through the group camp and turns north along the river's cliff edge. This road is currently used by AWA for access to the river for

feature construction and maintenance, and will require minor upgrades to accommodate family vehicles. Trailers will not be permitted at the walk-in tenting area.

Specifics:

- Construct small walk-in tenting area with:
 - Parking lot for 10 cars
 - 10 tent pads with picnic tables and fire pits
 - Remove existing ATCO trailer and clean up clearing
 - Install vault toilet
 - Install gear drying rack

3. Group camp upgrades

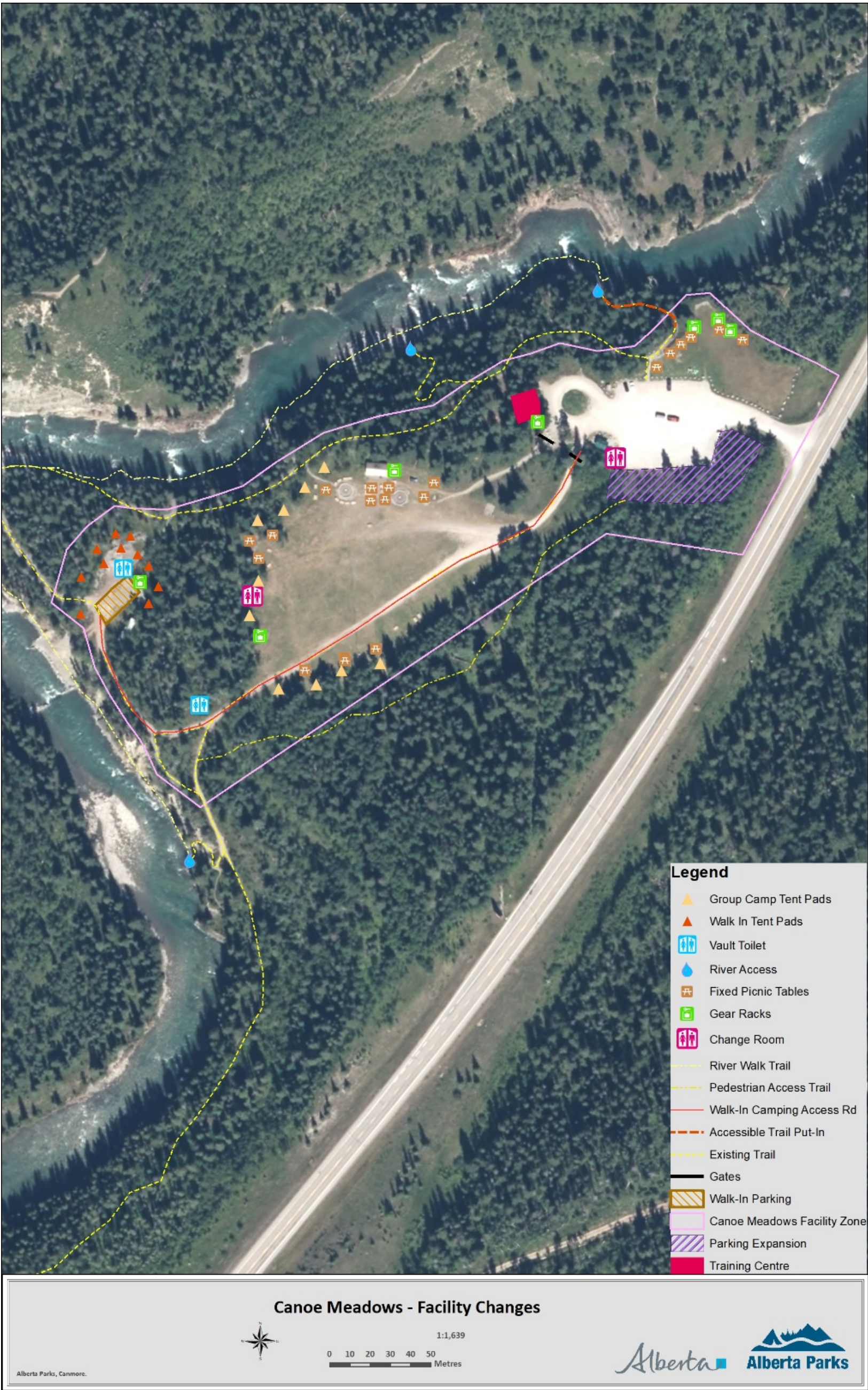
Several facility upgrades are required to modernize the group camping area. The existing group shelter is outdated and in fairly rough condition. The size and number of special events hosted at this area also require the group camp shelter to have power for fridges and improved facilities for large groups of paddlers. People tenting often put tents up in random locations in the forest; associated impact should be reduced by defined tent pads. Tent pads should aim to focus human use away from the wildlife movement pathway of Highway 40.

Specifics:

- Install a new group camp shelter with covered area for drying gear;
- Shelter should have 3-way RV style propane tanks on the exterior for power;
- Install a new vault toilet specifically for group campers at south end of meadow;
- Upgrade picnic tables and existing fire pits;
- Install a permanent boat rack;
- Even out the meadow to act as a better surface for tenting or playing games;
- Install 10 designated tent pads along edge of meadow.



New group camp shelters recently installed in the Ghost Provincial Recreation Areas can also be installed at Canoe Meadows. A larger covered deck and solar panels should be included in the shelter at Canoe Meadows.



4.3 Kananaskis Visitor Information Centre and Day Use Area

The Kananaskis Information Centre is the main visitor centre for Kananaskis Country and is the first major facility visitors see when heading south on Highway 40. On average, the visitor centre sees 15,000 visitors per month during July and August, 8,000 in June and September, and 3,000-5,000 during the winter months. Associated with the visitor centre is a day use area that is used by picnickers and river surfers, and a sani-dump station. A variety of people use the visitor centre with stays ranging from several minutes to all day.

4.3.1 Current Situation and Changes

The current parking lot is too small to accommodate the number of people who come to the visitor centre and picnic in the adjacent small meadow. Conversely, the day use area behind the main parking lot is underused and only open during the summer months, even though river surfers access the LKR throughout the year. River surfers currently stage from both Canoe Meadows and the Visitor Centre, but this plan positions the Visitor Centre as the main surfer staging area. As many trailhead parking lots down Highway 40 become too busy, the Visitor Centre is also becoming a popular parking area for carpoolers. The forest on the northern end of the parking lot contains several dead or dying trees, which present a potential safety hazard to picnickers and day users.

Alberta Parks will implement the following changes to the Kananaskis Visitor Centre and day use area:

- Parking lot expansions and formalized designation – one parking lot for Visitor Centre users, one for day users, and one for car poolers.
- A hazard tree assessment will be conducted. The new parking lot for carpoolers will be constructed in an area where hazard trees are removed for safety.
- Improvements to the day use area through the installation of a heated change room, surf board racks, and better picnic sites.
- Formalization of river access trails and surfer staging/viewing areas. This will involve a significant trail re-routing and river bank reclamation for safety and visitor experience.
- Using small signage on the river bank to alert river users of “standing waves” where recreationists are stationary on the river. Etiquette signage on the river banks will instruct standing wave users to yield to boats moving downstream.

Attachment 4a: Kananaskis Visitor Centre Proposed Changes details the changes to facilities at this site.

Similar to Canoe Meadows, Alberta Parks will amend the Facility Zone to more closely surround the human use area. The river surfer staging areas along the riverbank are not included in the Facility Zone and will be designated as Natural Area Zone. This is to prevent the river bank from becoming over developed in the future.

4.3.2 Specific Changes

This section details changes for the Kananaskis Visitor Centre portion of the Project.

1. Parking lots

The Project plan details three separate parking areas for specific purposes. The exact shapes and extent of these parking lots will be dependent on the results from the hazard tree assessment, geotech assessment, and detailed design. The first parking lot, to the north of the entrance to the visitor centre is the largest parking area and will be designated for carpoolers. A small extension of the Visitor Centre parking lot along the western edge will be constructed. This will be designated as 2-hour parking for people going to the Visitor Centre and picnicking. The third parking lot expansion is associated with the day use area behind the Visitor Centre. This parking lot expansion will connect the two small pull-out parking lots currently located at either end of the picnic area. Signage along the entrance road will clearly direct traffic to the appropriate parking lot for their needs.

Specifics:

- Carpooler parking area – area: 2,500m²; capacity: ~110 vehicles; 10 pull-through truck/trailer spots
- Visitor centre parking – expansion area: 1,600m²; additional capacity 50-60 vehicles; ~5 spots RV compatible
- Day use area behind visitor centre – expansion area: 450m²; capacity 20-25 vehicles

2. Day use area improvements

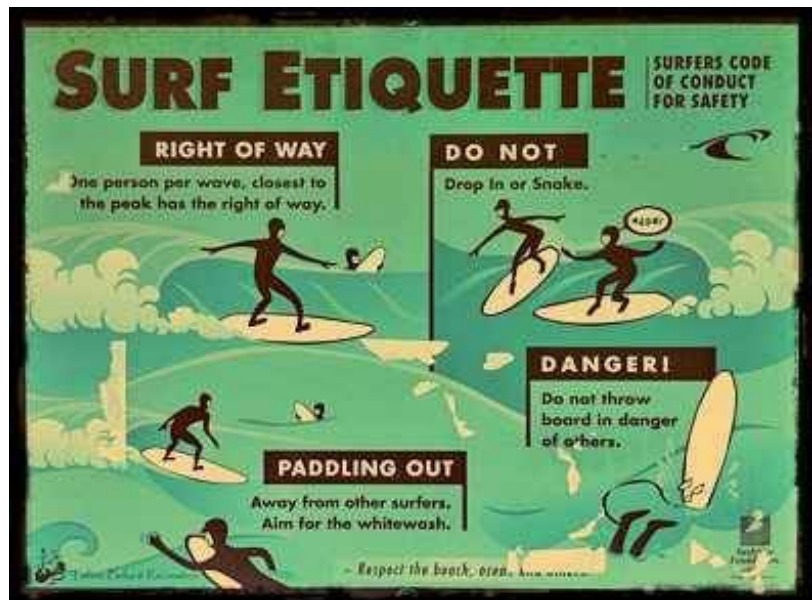
One of the principles of this plan is to ensure adequate, sustainable access to all of the area's activity choices without interfering with the needs of other users. This plan is designed to provide facilities specific to different user groups at each day use area; the day use area behind the Kananaskis Visitor Centre will be designed as the main staging area for river surfers. This will entail the installation of a heated change room and a surf board rack. This is the only site in the project area that will have a heated change room. This will reduce conflict associated with surfers changing in the Visitor Centre bathroom throughout the year.



Two types of surf board racks from Hawaii.

Providing an alternate location for people to gather, particularly one that is sunny may help disperse surfers to various areas and limit crowding at the river side staging area. The provision of amenities, such as picnic tables and a trail kiosk, in the day use area parking lot may make this area more attractive for gathering before and after a surf session. Two picnic tables will be added to the meadow upstream from the surf wave to provide an alternate location to picnic for non-surfers.

Alberta Parks will work to support development of a River Surfer's Etiquette Guidelines created by the Alberta River Users Association (example right). The objectives of these guidelines are 1) manage human use at the staging area, and 2) improve surfer safety and experience.



Specifics:

- Heated change room with heat-on-demand system and floor drainage. Open during visitor centre hours only;
- Surf board rack will be standing and have capacity for 5-7 surf boards. Pegs on the backside will provide additional hooks to hang gear to dry;
- Fixed individual and group picnic tables with short access trails;
- Install trail kiosk with surfing Code of Conduct, trail information, and LKR-Barrier project area information;
- Add two picnic tables to the river side meadow upstream from the visitor centre access.

3. Formalization of river access and trails

River surfing is increasing in popularity and on nice summer days, there can be dozens of people on the river bank spectating and surfing. Currently, there is one surfing wave constructed (the Mountain Wave) with a second one being planned. The increasing number of people gathering on the river bank has led to significant bank erosion and the destruction of undergrowth vegetation. The current staging area at the existing wave will be formalized but not expanded in to the forest; human use on land will be limited to the staging area and designated trail to access it.

Alberta Parks supports the construction of a second surf wave providing it modifies an existing river feature and uses an existing staging area. The current proposed location is at the south end of Canoe Meadows before the slalom course. The construction of this second wave will be the last significant feature construction on the LKR until the expiry of the 5-year moratorium.

Surfers access the Mountain Wave from the trail that connects the Visitor Centre to Canoe Meadows. To reduce environmental impacts and increase visitor safety, human use along the river needs to be formalized. There are three formal river access points identified in the Kananaskis Visitor Centre site map. All other river access will be reclaimed either actively through re-seeding of native plants, or passively with signage prohibiting human access for reclamation or using brush to impede human use.



Current surfing staging area at the Mountain Wave

The current designated trail from the Visitor Centre to Canoe Meadows needs to be rerouted to hazard trees. This portion of the trail also does not see as much use as the unofficial trail that follows the water's edge. The trail will be rerouted to follow the river, which will require the construction of boardwalks across wet areas, trail widening, and measures to reduce trail braiding.

Specifics:

- Upgrade “Mountain Wave” staging area to be a permanent structure without expanding the footprint
- Reclaim forest around staging area through replanting or closing part of the area
- Formalize three access points – one directly down from the visitor centre, another at the mountain wave, and the third at the upstream staging area of Canoe Meadows
- Reroute trail between visitor centre and Canoe Meadows to avoid hazard tree area and closely follow the river. Decommission approximately 250m of existing trail
- Construct a set of stairs at the first river access point down from the visitor centre



Current trail leading down to staging area at the Mountain Wave.



Attachment 4.3.1: Kananaskis Visitor Centre Facility Changes



4.4 Widowmaker Day Use Area

The Widowmaker day use area is the main put-in for white-water recreationists paddling to either Canoe Meadows or Seebe on the LKR. The Widowmaker day use area is used primarily for unloading boats and leaving vehicles while paddling. The current gravel parking lot contains a trail kiosk and a vault toilet. A wide trail leads from the parking lot to two main river access points, one access point is above the Widowmaker river feature and the other is below. At the access point below the feature, a set of stairs leads people to the water. Ecologically, the Widowmaker area provides important habitat for ungulates and serves as an important wildlife habitat linkage from Mt. Baldy to the west to the Bow Valley Habitat Patch to the east (see 5.4 Ecological Considerations). To maintain the integrity of this critical habitat and wildlife movement pathway, development changes here will be limited.

4.4.1 Current Situation and Changes

Rafting companies arrive at this day use area with multiple large vehicles with rafts and clients (e.g., at minimum a truck pulling a raft trailer and a school bus). With a predictable water release schedule, these operators typically arrive at the same time. This can lead to significant

congestion as up to 9 school buses and 9 trucks with trailers unload simultaneously on busy summer days. User conflict results when independent paddlers from the public have trouble accessing the river because they cannot find parking or get stuck behind commercial operators walking rafts to the river. The existing



parking area and put-in with the stairs are sufficient for public needs but too small for commercial rafters to use comfortably.

To address congestion and user conflict at this site, Alberta Parks will:

- Upgrade and formalize the existing parking lot;
- Upgrade and repair the public river access above and below the Widowmaker feature;
- Relocate the trail kiosk closer to the trail head, upgrade signage, and add bike racks;
- Construct a road and turn around with a formalized river access for commercial operators.

Attachment 4.4.1: Widowmaker day use area proposed changes details changes to this area.

4.4.2 Specific Changes

The main purpose of the recommendations for the Widowmaker day use area is to separate the commercial operators from other users to reduce congestion and user conflict.

1. Parking lot upgrades

The existing parking lot has the capacity to handle public river users aside from commercial operators, providing it is paved and formalized. A loading zone will be designated to improve visitor use of the parking lot. The trail kiosk will be relocated, signage upgraded, and a bike rack installed at the trail head. The parking lot will be designed to channel run-off away from the river.

Specifics:

- Pave the entire parking area
- Designate a loading zone at the trailhead
- Move the information kiosk to the trailhead and install a bike rack
- Install open air change room next to vault toilet
- Reclaim unused roadside pullout about half way down access road

2. River access upgrades

Currently, an old road serves as the trail to access the river put-in for the public from the parking lot. Just downstream from the Widowmaker feature is a set of stairs to the river. This staircase needs to be repaired for public use. Just above the Widowmaker feature is another public access point. This access needs to be formally designated and stairs added to prevent users from sliding down the river bank to the shore.

Specifics:

- Repair stairs at access below Widowmaker feature
- Formalize and install stairs at access above Widowmaker feature

3. Commercial operator put-in

This is the most substantial change to the Widowmaker day use area as it involves the creation of a new road, turn around loop, and river access point. The location of the turnaround has been selected to minimize the human footprint in the area while still providing a separate access for commercial operators upstream from the Widowmaker feature in the river. This new commercial access road will accommodate one-way traffic and exit left off the Widowmaker access road. The entrance part of the loop will be one lane wide, leading to a small loading zone at the end of the loop that accommodates 2-3 trucks and trailers. The exit part of the loop will be 2-lanes wide to accommodate one lane of traffic and one lane of parallel parking. Commercial trucks will enter the loop, unload their rafts in the loading zone, and then park along the right hand side of the exit loop. Operators will then walk back to their boats and clients to conduct safety checks. These parameters will be included in the operator permits. The exit portion of the loop will have nine parallel parking spots for trucks and trailers. These spots and the loop will be prioritized for the trucks pulling raft trailers; school buses with clients can park in the public parking area when the commercial loop is full. The loop road will be gated and locked to ensure it is used for commercial operators only. The river access from the loop road will be a widened trail with stairs. The trail should be wide enough for people to carry a raft comfortably (approximately 5m).

Specifics:

- Create new loop road and parking/loading zone for commercial operators only
 - Managed gate access with combination code
 - Prioritize loading for trucks and raft trailers
 - Entrance portion of loop is one lane; exit portion of loop is two lanes
 - Maximum of nine parallel parking spots on exit portion of road
- Construct trail from parking area to water access point
- Formalize access point with a trail and/or ramp

4.4.1: Widowmaker Facility Changes



4.5 Barrier Lake Day Use Areas

Upper and Lower Barrier Lake day use areas are located on a large outcropping of land at the southern end of Barrier Lake. The Lower day use area is accessed by a loop road and contains the only motorized boat launch in the project area. As with most day use areas in this plan, parking is an issue. The Upper day use area is underused and serves as a trailhead to a viewpoint over Barrier Lake. These day use areas are popular water recreation destinations as well as the southern end of the important wildlife movement pathway that goes up Highway 40.

The most commonly stated public concern was that this plan will result in over-developing Kananaskis. Overall, the most significant changes to the facility footprint will be at the Barrier Lake site. It is critical that all development conform to minimal disturbance design and construction principles. Educating users on the reasons for restricting human use in the wildlife movement pathway will also be important in the first few years of plan implementation. Alberta Parks is committed to demonstrating that people and wildlife can coexist at this site. It is possible to offset some environmental impact by actions designed to separate people and wildlife moving through the area, but this will require cooperation and compliance by recreationists.

4.5.1 Current Situation and Changes

This plan details significant changes to the Barrier Lake day use areas to improve the visitor experience and provide diverse opportunities, including some private sector development opportunities. As with other sites, parking is a significant issue and people often park along the access road, partially due to the ineffective current parking lot design. Environmental impact in the form of vegetation trampling and trail braiding has resulted from this roadside parking. The current access road also has several parking pullouts with picnic tables hidden in the forest along its length; these are rarely used as the majority of users are more interested in lakeshore recreation. As a result, the loop road is awkward and ineffective. The current management plan also speaks directly to creating a concession and overnight accommodations in this area, both of which are explored in this plan.

Alberta Parks is recommending a name change for both of these day use areas to reduce confusion by having three day-use areas with similar names (e.g., Barrier Dam, Barrier Lake Lower, and Barrier Lake Upper). Name changes for the Barrier Lake day use areas can improve marketing and communications and make it easier for users to identify where they are. One potential name for the lower day use area is Baldy Beach since the lake is at the foot of Mt. Baldy. One potential name for the upper day use area is Tokyapebi (or Nakoda) Lookout as Mt.

Baldy was used by scouts from the Stoney Nakoda Nation as a lookout when traveling through the area. Changing the names of these areas was not highly supported by the public. Therefore, further investigation and work with First Nations and stakeholders will take place before any name changes become official.



To address parking capacity and improve overall visitor experience, Alberta Parks will do the following:

1. Lower Barrier Lake Day Use Area:
 - a. Decommission half of the loop road and widen the remaining half to accommodate 2-way traffic, unused parking pullouts along the existing loop road will also be decommissioned
 - b. Connect two of the existing pull-outs to create a small parking lot. An access road from this lot will lead to a loading zone and a hand boat launch
 - c. Expand the current parking lot at the motorized boat launch; improve parking lot design to increase capacity.
 - d. Install several additional picnic locations associated with the hand-launch area
 - e. Add a staircase to access the beach from the picnic sites located next to the boat launch to reduce bank erosion
 - f. Decommission several unused trails
2. Upper Barrier Lake Day Use Area:
 - a. Construct a new loop trail that goes to the summit of the area
 - b. Install an accessible trail that leads to a “Connection Corner”
3. Private Sector Opportunities (go through Request for Proposals process):
 - a. An equipment rental hut associated with the hand-launch and beach area;
 - b. Small scale overnight accommodation with development potential at both the lower and upper lake facility areas.
4. Zoning changes

Currently, the entire peninsula area is a Facility Zone. As with the other day use areas in this plan, this is anticipated to be the last major build out for this area. The facility zone

boundary will be amended to better reflect the detailed tourism development nodes and the day use areas once construction is complete.

4.5.2 Specific Changes to Day Use

The Barrier Lake day use areas require significant changes to improve visitor flow and recreational opportunities for diverse user groups. There is tremendous potential in this area to provide an innovative, unique visitor experience while simultaneously improving the wildlife habitat security associated with the Highway 40 wildlife movement pathway. The Upper day use area, which is currently underused, can be designed to offer a unique experience as a quiet recreation area. This could attract a new user base and increase use of this area.

Attachment 4.5.1: Barrier Lake Facility Changes shows proposed changes to Barrier Lake day use areas.

Lower Barrier Lake day use changes

1. Loop road upgrades

The current loop access road to the boat launch offers several small pull-outs for people to have picnics in the forest. This design does not reflect current usage patterns and therefore these picnic spots are not used; pullouts and picnic areas along the loop road will be removed. Reclamation may entail the removal of asphalt and aerating, which can promote aspen tree growth. Half of the loop road will be decommissioned and the other half widened to facilitate improved access to the area. This will also effectively widen the wildlife movement pathway coming along Highway 40 by better separating people from wildlife moving through the area.

The two pullouts located on the north end of the current loop road will be joined to create a smaller, secondary parking lot for cars. People with trailers or larger vehicles will still park in the main parking lot.

From this secondary parking lot, a short one-way road will be built towards the smaller bay west of the motorized boat launch. This area will serve as a beach related loading zone for people with non-motorized boats or those picnicking. Development details will become clear during the concept and detailed design phases of this plan's implementation.

Specifics:

- Remove and reclaim unused pull-outs (on south and east side of existing loop) and associated picnic tables; decommission trails leading from these pull outs to the lake
- Decommission and potentially reclaim the south-eastern half of the existing loop road; widen the other half to allow for 2-way traffic

- Place concrete barriers or large rocks at either end of decommissioned road with closure signage
- Install signage along road requesting people not enter the wildlife movement pathway
- Install a small wildlife-permable fence (less than 1m high) along the edge of the access road and parking lot to reinforce the separation of people and the wildlife movement pathway
- Remove the single vault toilet at the top of the loop road
- Join two small pullouts closest to the lake to create a small secondary parking lot for cars and trucks only (no trailers or RV spaces). Parking area is 1,984m² and will accommodate 25-27 cars
- Construct a one-way loop road from the secondary parking lot to a beach loading zone on the lakeshore. The loading zone should be large enough to accommodate 4-5 accessible parking spaces as well as a loading area for people with hand-launch vessels.

2. Main parking lot

The main parking lot at Lower Barrier Lake day use area requires expansion and improved formalization of spots to achieve maximum capacity. The current parking lot contains 10 truck-trailer pull through parking spaces, which are often used inefficiently leading situations where people get “boxed-in”. The existing parking lot will be expanded and new lines painted to improve space delineation. The current parking lot turn around at the north end should remain as is. This parking area could be expanded during the detailed design, but this would not be ideal.

Specifics:

- Parking lot expansion: 1,781m² + 1,530m² (existing lot) = total area 3,311m²
- Parking capacity between 80-100 vehicles with 6-8 truck-trailer pull through spots
- Install a second vault toilet
- Install an open air change room

3. Install a hand-boat launch

At the base of the stairs and ramp leading from the loading zone parking area will be a modular, floating dock. A modular floating dock is made of high quality plastic blocks that piece together in whatever custom shape and size is required. As an example, Candock (www.candock.com) has constructed several similar docks for Parks Canada and for Alberta Parks at the Ghost Reservoir Provincial Recreation Area. Floating docks are made of high density polyethylene resin, which does not oxidize or deteriorate and is resistant to all weather patterns. These docks require no

maintenance, are easy to use and reliable. The docks contain no metal parts and are easily assembled.

One of the advantages of using this bay as a hand-launch area is its gentle slope, which may increase the feasibility of the modular floating dock and area being designed



to accessibility standards. This would require the construction of an accessible access to the dock from the loading zone. Options regarding accessibility will be detailed during the design process and consider the terrain.

The water levels of Barrier Reservoir are subject to large changes based on TransAlta's operation of Barrier Dam. TransAlta is committed to keeping water levels low during the spring and summer until a new spillway can be constructed, which is not likely to take place until or after 2022. The modular floating dock will be responsive to fluctuating water levels. As the water levels go down, the dock will go further out in to the lake. As the water levels rise, the dock will float closer to the shoreline.

Specifics:

- Install a modular floating dock (accessible if possible)
 - Anchored to the shore with a flexible anchor
 - Removable during the winter months
 - 10-14m long; 1.5-2m wide
 - If accessible: include edge protection to a maximum height of 10cm which should be broken up by one, clear continuous opening of at least 16cm every 30.5cm (Americans with Disabilities Act specifications).
- Construct a cement ramp, and possibly a set of stairs, from the loading zone to the high water mark on the beach for accessible access to the boat launch
- Include a boat slip for Alberta Parks Conservation Officers on the floating dock

4. Commercial recreation lease opportunity – Equipment rental hut

The Bow Valley Provincial Park Management Plan (2002) refers to the development of new day use components at the Barrier Lake day use area. This portion of the plan details day use area improvements to diversify the visitor experience and provide innovative, sustainable recreational opportunities in an inspiring setting.

A small hut with water-equipment rentals and snacks may also be located adjacent to the hand boat-launch loading zone described above. The construction, operation, and management of this water sport equipment rental hut would go through a Request for Proposal (RFP) process to solicit a private sector business opportunity; the successful proponent will enter into a commercial recreation lease with Alberta Parks. Land designated for the rental hut is a maximum of 500 sq. ft.

Upper Barrier Lake day use changes

The upper day use area at Barrier Lake is underused, but full of potential. Separate from the busy beach area, this area will be designed and marketed to provide a quieter, more relaxed experience where users are encouraged to appreciate and connect to the natural environment. An amazing view over Barrier Lake to the west is easily accessed from a parking lot with capacity for 30 vehicles. Two trails start at this parking lot: one goes down to the lower day use area and the other goes up steeply to a viewpoint. The trail to the viewpoint has interpretive signage along its length that is outdated and in need of replacement; the viewpoint at the top is ill defined and has no associated infrastructure. The current trail will remain intact and two others will be constructed.



1. Construct a new trail to the summit of the area

Alberta Parks will work to create a new loop trail that can be accessible from the upper day use area. This trail will loop across the summit of the area, provide multiple viewpoints over the lake, and increase the length and options of trails in the area. In all, the new trail will be approximately 1800m long.

2. Construct an accessible trail to a *Connection Corner*

Recent social research shows that visitors to parks and protected do not require infrastructure or constructed facilities to connect to parks in meaningful ways or to have a positive experience. Rather, visitors require quiet spaces to reflect in order to feel connected to a protected area. This is discussed more below in *Social Considerations*. Quiet areas to sit and reflect are relatively easy to find in the back country, but not in the front country where visitation is higher. Alberta Parks will construct a short, accessible trail to a viewpoint and designate a space designed to meet this need at the Barrier Lake Upper day use area. This trail will go through an area that is naturally fairly flat and open, providing easy access and great views with minimal elevation gain. The area is also on the edge of an aspen forest that is full of songbirds during the summer months. At the end of the trail will be 4-5 scattered single person chairs that people can use to reflect, meditate, sketch, or just sit and experience the immediate surroundings.

Alberta Parks will engage with local artists to build chairs out of natural and native materials, which will contribute to this new experience. Some examples of chairs by Alberta artists are provided in the images below. Working with local artist groups, Alberta Parks will support fundraising efforts to pay for the construction and installation of these chairs. Chairs will be robust in design to



Deep Forest Log Furniture – Qualicum beach, BC
<http://www.deepforestlogfurniture.com/tree-chair-pics.html>



Black Diamond Gallery – Black Diamond, AB
<http://www.blackdiamondgallery.com/teak-root-furniture.html>

withstand the elements and remain in good condition for 3-5 years; maintenance of the chairs will be the responsibility of the artist. Artists will be recognized for their talent on the Alberta Parks website and be encouraged to include a small description of their inspiration and contact information on the chair itself. Once a chair has outlived its lifespan, the opportunity for a new chair will be put to the artist community. A program such as this is new to Alberta Parks; fundraising for artist compensation and recognition will be detailed in consultation with the regional artist community. If this new artist chair program is not successful, Alberta Parks will install 5-6 standard chairs for one person, using benches, split logs, or rocks.



Wood You Believe and More – Calgary, AB
<http://woodyoubelieveandmore.com/teak-root-furniture.html>

This would be the first area of its kind in Alberta Parks and possibly in Canada. The trail will require marketing and clear communication as to its purpose as a quiet area for reflection and/or participation in creative pursuits (e.g., painting, sketching, writing). This trail will set Alberta Parks apart and could be used as a pilot project. If well received and successful, other *Connection Corners* could be constructed in other front country areas across the Parks system.

Specifics:

- Construct an accessible trail, approximately 270m long
- Install trailhead signage designating this as a “quiet trail” for reflection
- Create an artist-chair program that includes fundraising for chair construction and installation
- Install creative single person chairs
 - 5-6 chairs maximum scattered across grassy clearing
 - Built out of robust, long lasting, natural materials
 - Able to withstand changing weather over the seasons and vandalism
 - Chairs will be fixed to the ground
 - Chairs in place for 3-5 years (or the life of the chair), after which point another artist will have the opportunity to install a chair
 - Artists are responsible for chair maintenance

3. Day use area improvements

There is provision for the addition of overnight accommodation at the upper Barrier Lake day use area (detailed below). If the RFP associated with that development is not successful, then general day use features could be improved. Quiet picnic opportunities in the forest adjacent to the parking lot will be provided. This area could also be designed as a bookable day use area for activities that promote connection to the park, such as yoga or meditation classes. If Alberta Parks pursues this avenue, an amendment will be added to this plan detailing those changes.

4.5.3 Specific Changes to Overnight Use

The management plan speaks to the Barrier Lake day use area as appropriate for future overnight accommodation development as identified in the Kananaskis Recreation Development Policy (1999). Development could consist of fixed roof accommodation, camping, restaurants and day use components. An RFP for a commercial lease will detail this small scale tourism opportunity for diversified accommodation and product/service offerings. The RFP will also detail associated costs and constraints and the lease requirements. The opportunity could potentially include, but is not limited to, proposals for: small cabins, yurts, geo-domes, culinary tourism, yoga retreat lofts, small eco-lodge, and any other similar-scale project ideas brought forward by proponents. Two small areas are identified, one at the lower lake area (0.62ha or 66, 542 sq. ft.) and another at the upper lake area (0.67ha or 71, 870 sq. ft.). A proponent could choose to develop either or both of these areas based on their needs and service offerings. Once this area is developed, the Facility Zone will be amended to more accurately reflect development boundaries.

An RFP for an overnight accommodation development was released in 2007 but no responses were received. Upon further enquiry, Alberta Parks learned that prospective respondents thought the site had limited capabilities relative to development and profit generation because it is too isolated, there are no utilities, and no more water licenses are available meaning no potable or running water can be provided. The nearest power source is across the lake, which makes obtaining power costly and prohibitive. To increase interest from the commercial sector in this development potential, any development in this area should be designed to be self-sufficient. An eco-style development that uses innovative energy sources (e.g., solar or propane) and water sources (e.g., cisterns, hand-pumps) in design will provide a different visitor experience, which may attract new users to the area. The facility will need to conform to Kananaskis Improvement District architectural standards. This is a unique opportunity that may appeal to sustainable tourism development businesses. Alberta Parks will put construction, operation, and management of this development in the RFP.

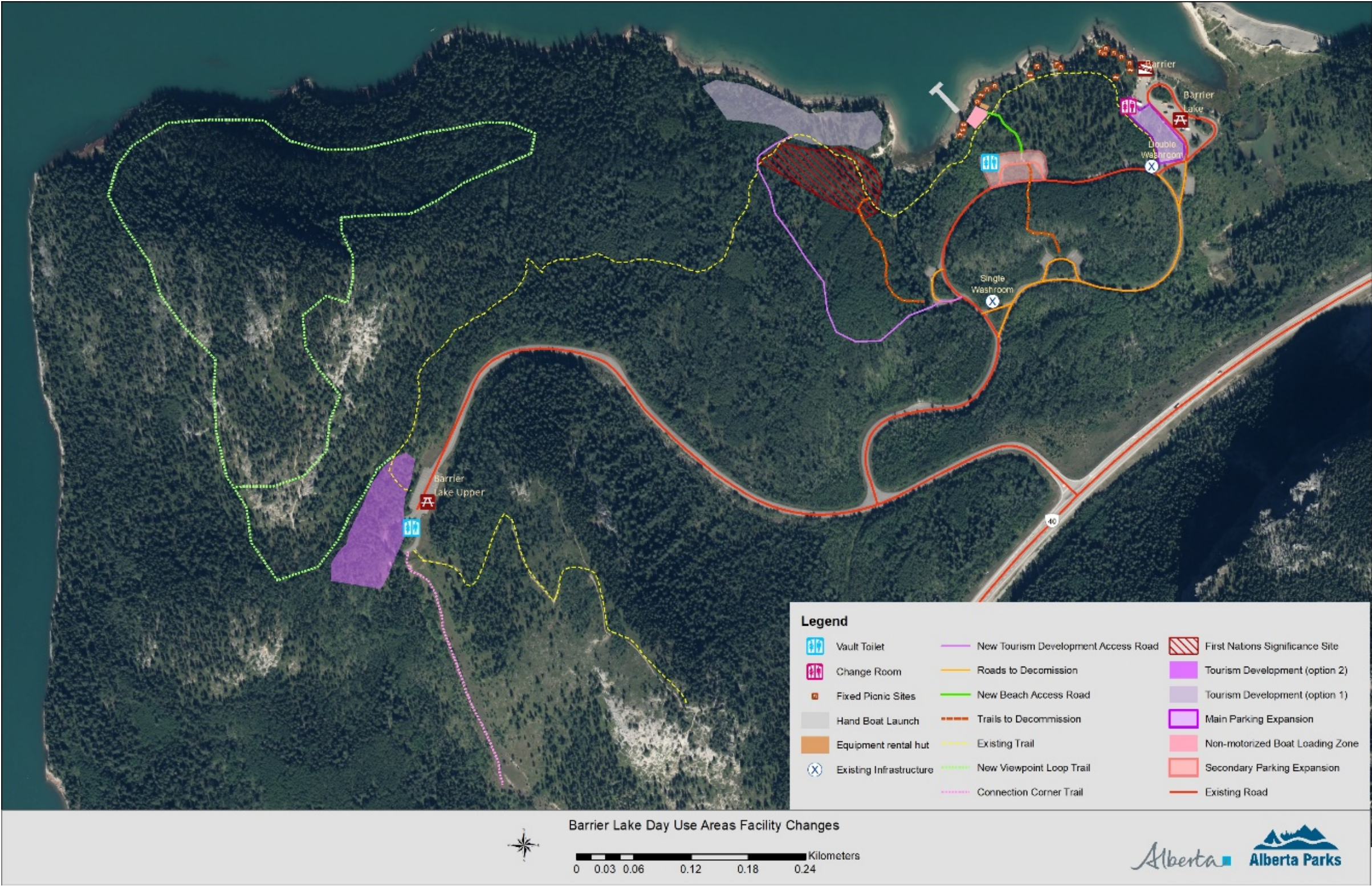
The two locations proposed for development offer different experiences and are compared in *Table 3: Tourism Development Options*. There is an opportunity to market the lower tourism development area as a lakeshore experience and the upper tourism development area as a quieter experience with more solitude. The proposed improvements to the Upper day use area in this plan will increase use of the area, but this area will always be away from the crowding and high use levels associated with the beach and lake. The upper Barrier Lake area also offers more trails for hiking and walking, including access to the newly constructed *Connection Corner*. As wildlife move along Highway 40, they navigate a pinch point along the road and Mt. Baldy. The upper location is location is away from that pinch point in elevation and away from important lakeside habitat. Remote cameras in this area, however, did find bear movement close to the proposed comfort camping development site. Construction of a gravel road to access the lower area will be provided by Alberta Parks; the upper area already has access and parking.

Table 3: Tourism Development Options Challenges and Opportunities

Option	Overall Description	Challenges	Opportunities
1 – Hand boat launch and bay	This development node is located west of the proposed hand-launch bay and rental hut on the other side of the bay. There is a relatively flat section of forest near the water. The proposed area is 0.62ha. Alberta Parks will construct a gravel road to access this commercial lease.	<ul style="list-style-type: none"> -The access road must navigate sensitive aspen habitat and a First Nations site of significance. -Does not have the opportunity for expansion due to topography and surrounding old aspen forest. -Undulating terrain and wet areas throughout the development area may prove challenging during design and construction. -Area is very close to a popular day use area, which may reduce privacy. -Power and water are not easily available. 	<ul style="list-style-type: none"> -Is located lake side and out of the wind. It is a beautiful spot. -Is away from the day use area, thus reducing user conflict. But is also close enough to the day use area to provide easy access to water recreation and associated facilities. -User conflict will be reduced with a separate access road. -Is located close to the trail connecting the two day-use areas. -Is away from the wildlife movement pathway and important bear habitat and just outside the aspen forest rare habitat patch characteristic of this area.

2 – Upper day use area	<p>This development node is located at the upper day use area parking lot on a relatively flat patch of conifer forest. The current proposed area is 0.67ha.</p>	<ul style="list-style-type: none"> -Is located away from the lakeshore, thus pumping water may be more difficult. -Is located next to the upper day use area, thus user conflict may result. -Has limited room for expansion due to topography. -Is located on the windy side of the area. Design would need to ensure tree breaks to reduce wind while also ensuring risk of tree blow-down is limited -The area is currently used several times a year by filming crews. User conflict may be an issue. -The area is located close to the Connection Corner, which may impact the available solitude of this trail. 	<ul style="list-style-type: none"> -Is located away from the main day use areas that are the busiest, so user conflict may not be as important an issue. -Is located at the base of several hiking options, including the Connection Corner. -It has great views of Barrier Lake that are easily accessible. -Is close to an existing parking lot and road access. -Is away from the main wildlife movement pathway and important habitat patches.
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Attachment 4.5.1: Barrier Lake Day Use Areas Facility Changes



4.6 Project Schedule

With several sites involved, this redevelopment will occur in phases. Alberta Parks will start redevelopment activities in 2018 continuing through to 2020.

2017	Draft Plan Public and First Nations Consultation
2018	Final Plan Conceptual and Detailed Design
2018- 2020*	Phased Construction and Regulatory Approvals <ol style="list-style-type: none">1) Canoe Meadows Day Use Area and Group Camp2) Request for Proposals for equipment rental hut and small scale tourism accommodation development released3) Widowmaker Day Use Area4) Barrier Lake Day Use Areas and RFPs5) Kananaskis Visitor Centre parking lot expansions and staging area construction

*time lines subject to change based on funding



5.0 Background

This section provides inter-disciplinary background information for consideration of the Project.

5.1 Legislation and Policy

Development and use within Alberta Parks is guided by a number of over-arching frameworks for decision-making including legislation, regulations, policy, strategy, and management plans.

Table 4: Legislation and Policy contains guiding direction pertinent to the Project.

Table 4: Legislation and Policy

Item	Considerations	Project
<i>Provincial Parks Act</i>	Under the Provincial Parks Act, parks are established and maintained to protect natural diversity and intact habitat for supporting biodiversity; and to support a range of recreation and tourism experiences.	As this project is being designed at the landscape scale, there are multiple objectives that fit within the Provincial Parks Act. Efforts to improve the effectiveness of the Highway 40 wildlife movement pathway, such as rezoning the Facility Zones and creating focused development nodes, support biodiversity. The diversity of water recreation facilities provides a range of recreation and tourism experiences. Expansion of parking lots addresses the need for increased capacity. The provision of a comfort camping area also diversifies the recreation and tourism offer in this area.
Bow Valley Protected Areas Management Plan	Recognizes the important elk habitat and movement pathways in the Kananaskis Valley and the significant paddling opportunities on the Lower Kananaskis River.	These characteristics form the area vision and planning and management principles.
	Management objectives in order of priority are: preservation, heritage appreciation, outdoor recreation, heritage tourism.	This plan prioritizes ecological preservation as a primary objective throughout. Locations of facilities and expansions have been selected to avoid sensitive or critical habitats and wildlife movement pathways based on current ecological data. Heritage

	<p>appreciation is being addressed through the possibility of interpretive signage, increasing accessibility to water recreation for people with limited mobility, and the creation of a <i>connection corner</i> at Barrier Lake. Outdoor recreation opportunities are being addressed through the expansion of parking areas and facilities focusing on a diversity of water-based recreation opportunities from professional athlete training facilities to casual beach-side picnickers. Heritage tourism is being addressed through the opportunity for a new rustic comfort camping station at Barrier Lake.</p>
<p>The facility zone at Barrier Day Use will allow future overnight accommodation and development. Development could consist of fixed rood, camping, restaurants and day use components. A new road may be constructed to access these new facilities.</p>	<p>The plan proposes the development of several new day use facilities at Barrier Lake, such as a hand-boat launch and better picnicking. The plan also details two private sector opportunities for a small scale tourism accommodation development and a concession/equipment rental hut. The plan provides for the construction of a new road segment to access these facilities.</p>
<p>Visitor information will be provided at the Barrier Lake Visitor Centre.</p>	<p>This plan recommends parking expansion at the Barrier Visitor Centre to accommodate increasing use. Segregation of parking lots based on user needs will improve the user experience and address potential congestion in the visitor centre parking lot.</p>
<p>Rafting, canoeing, and kayaking on the Kananaskis River will be addressed in consultation with the Lower Kananaskis River Users Group.</p>	<p>The LKRUA has been engaged throughout this planning process through workshops and one on one meetings.</p>

Plan for Parks	<p>The Plan for Parks (Tourism, Parks and Recreation, 2009) identifies desired outcomes whereby parks provide recreational opportunities while conserving Alberta's natural heritage and supporting long-term sustainability of park ecosystems.</p>	<p>Strategy #1: Involve Albertans</p> <p>Alberta Parks has committed to engaging with targeted stakeholders throughout development of this plan. A complete public consultation was launched and results used to influence the final plan. The draft plan was largely based on the outcomes of the 2011 public consultation process. This plan fits within other Government plans and policies that were the subject of comprehensive public consultation, including the SSRP.</p> <p>Strategy #2: Offer modern facilities and programs</p> <p>This plan involves the modernization of all day use sites within the project area to better reflect current usage patterns and needs. Expanding parking lots, providing better training facilities, and better day use facilities will improve the visitor experience.</p> <p>Strategy #3: Provide recreation opportunities</p> <p>All day use areas are being structured to provide an array of recreation opportunities that are dependent on the natural features available. By providing activity-specific infrastructure, Alberta Parks can help a diversity of users develop a sense of place.</p> <p>Strategy #4: Conserve landscapes</p> <p>This plan has prioritized sensitive habitats and wildlife movement pathways throughout. Ensuring increasing recreation demand does not affect ecological integrity</p>
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		is at the core of this plan's facility design and layout.
South Saskatchewan Regional Plan (SSRP)	Outcome: Biodiversity and ecosystem function are sustained through shared stewardship.	Through partnerships with the LKRUA, Alberta Parks is able to prioritize ecological integrity while providing for a high quality water recreation experience. This partnership is essential for shared stewardship of the LKR and the surrounding landscape.
	Outcome: The quality of life of residents is enhanced through increased opportunities for outdoor recreation and the preservation of the region's unique cultural and natural heritage.	This plan provides for the diversification of water-based recreation opportunities and an increase in the number of accessible options for people with limited mobility. Preservation of the area's natural and cultural resources is planned for through the creation of facilities associated with these recreation options as well as through partnerships with stakeholders.
AEP Business Plan	Outcome 1: Environment and ecosystem health and integrity	Development of modern park facilities that are in line with preserving ecological integrity of Parks is an essential component of this plan and part of the area's overall vision. Installing more bike friendly infrastructure (e.g., bike racks, share the road signage) encourages alternative forms of transportation and contributes to the reduction of CO2 emissions.
	Outcome 2: Sustainable economic diversification	One of the strategies with this outcome is to implement energy efficient initiatives and new private sector opportunities. Many facilities in this plan are designed to be solar powered and off the grid. Thus, this plan provides for optimal energy efficiency and supports Alberta's movement towards a green economy.

Outcome 3: Social well being	Continuing the commitment to provide modern facilities and high quality recreation experiences is a core component of this plan, as is enabling Albertans of all ages and abilities to appreciate water-based recreation opportunities associated with the LKR-Barrier Lake area.
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5.2 Dispositions and Adjacent Land Use

The project area runs along the east boundary of Bow Valley Provincial Park. The east side of Highway 40 is largely public land with a few small parcels of Provincial Park around the Stoney Group Campground and the Lusk Creek Provincial Recreation Area (along Highway 68). There are disposition holders in the area all of which are located on public lands on the east side of Highway 40.

The Tim Horton’s Children’s Camp, located across the highway from the Kananaskis Visitor Centre, opened in 1991. This children’s camp exposes participants to outdoor activities such as horseback riding, rock climbing, and white water rafting on the Lower Kananaskis River. The Tim Horton’s Children’s Camp is a member of the LKRUA and as such has been engaged throughout this planning process.

The University of Calgary has a research station located across Highway 40 near the Widowmaker day use area. Their operations do not interfere with the project area and this plan is not anticipated to impact the research station.

5.3 Socio-Economic Considerations

5.3.1 Visitor profile

The Alberta Rocky Mountain Region, which includes Kananaskis Country, receives over 4 million visits annually; approximately half of these are day visits. The vast majority (72%) of visitors to the region are from Alberta and nearly half of those are residents of Calgary (Alberta Tourism, 2016). Visitors to Alberta from other parts of Canada are more active than the average Canadian pleasure traveller; they are more likely to participate in educational, participatory activities. Visitors to Alberta are also more likely to engage in outdoor, nature-oriented activities while on trips, and are more likely to stay in wilderness settings. They prefer visits that provide physical challenge, intellectual stimulation, novelty, and learning opportunities (Lang Research Inc., 2008).

5.3.2 Connecting to parks

There is increasing interest in parks and protected areas in creating means for people to connect to nature and parks. People who feel more connected to nature tend to spend more time outdoors, exhibit ecologically aware attitudes and behaviours, and are happier. Some managers believe that fostering this connection to parks will increase support for parks on a larger scale and help create a culture of ecological conservation. There is debate, however, as to how to foster these meaningful connections to our protected areas. A recent report by the Canadian Parks and Wilderness Society, called *Building a Culture of Conservation*, explores this topic more thoroughly. Many park agencies have specific objectives to increase Park visitation through diversifying offered experiences and attracting more diverse cultural groups. This plan works to accomplish both of those objectives but also strives to ensure that visitors have the opportunity for a deep and meaningful experience in nature.

Some research suggests that wilderness, as opposed to developed or domesticated natural settings, is more strongly related to building a connection to nature. The longer people spend in nature the greater this connection becomes. It has been suggested that park visitation is based on the number and type of facilities offered, but research shows that the lack of facilities is not a constraint to park visits (Wright and Matthews, 2015). This burgeoning area of recreation research was the impetus behind the creation of the *Connection Corner* – an area with limited facilities where people can sit and enjoy the purity of nature in a front country setting. Placing the Connection Corner in a day use area designed for quiet activities may increase the effectiveness of this innovative idea.



5.3.3 Water recreation focus

This project is largely stemming from a social need to better address new forms of recreational activity and the increased interest in water-based recreation. There are no other areas in Kananaskis where a lake, a beach, and white-water river are easily accessible and in such close proximity to each other. This area also has great ecological significance and planning for human use in a way that will improve the visitor experience without negatively impacting ecological processes is important. To more effectively address connectivity for wildlife and for visitors, these day use areas have been combined in to one large plan. As many users move through the area on water, providing connectivity for people shuttling between sites is important. Integrating connectivity through providing bike related infrastructure at the sites is important for an overall visitor experience; it demonstrates to visitors that these sites are part of a larger landscape and offers an efficient way to move between sites while enjoying the area in a new way.

Canoe Meadows to Widowmaker provide access to the Lower Kananaskis River, which is becoming increasingly popular for all forms of white water including canoeing, rafting, kayaking, river surfing, and stand-up paddle boarding. People recreate on the LKR as athletes, recreational paddlers, members of groups or associations, or participants on a guided tour. As river flow levels are controlled by TransAlta's operation of the Barrier Dam, all user groups are using the river simultaneously during high flow times. This creates congestion, user conflict, and potentially unsafe situations. Alberta Parks is responsible for managing the land base alongside the river, which includes all staging and viewing areas. This plan creates properly designed staging areas on land and formal river access points to alleviate congestion, reduce ecological impact, and provide equitable access to water-based recreation.



Barrier Lake is popular for picnicking and enjoying the beach. This day use area has the only motorized boat launch in the area and is a destination for casual boating, paddle-boarding, and canoeing. The current motorized boat launch is very steep and difficult to use if hand launching a canoe or other non-motorized water craft. TransAlta Utilities currently maintains low water levels in Barrier Lake throughout the spring and summer. This makes it challenging to launch a boat when the water level is over 100m from the boat launch edge. Finding a more appropriate location for a hand-launch that will provide less steep access to the water will make it easier for non-motorized boat recreationists. The floating dock will be more responsive to fluctuating water levels.

5.3.4 Diversity of recreation

Several forms of water-based recreation have been addressed in this plan. Each is addressed below in turn.

White water paddling – This form of recreation has a long history on the Lower Kananaskis River. Amateur and professional athletes use the slalom course at Canoe Meadows to train for competitions and events. The provision of a training centre at Canoe Meadows will help these athletes grow and improve by providing a place on site to learn from training runs. A training centre also provides Alberta Parks an opportunity to partner in the construction of a meaningful paddling related facility that doesn't exist across the Alberta Protected Areas system. The proposed improvements to the Canoe Meadows group camp will provide an opportunity for users not associated with a group or an event to camp where they are recreating. Changes will also help address the user conflict that occurs between day and overnight users. Providing a separate commercial put-in at Widowmaker will address congestion and user conflict.

River surfing – River surfing is a relatively new sport on the LKR, but is quickly rising in popularity¹. The only specific facility in place for the river surfing community is a small staging area built by the Alberta River Surfing Association across from the Mountain Wave. This staging area addresses some of the shoreline erosion and vegetation degradation that has resulted from the influx people gathering this location. This plan further reduces this impact through trail maintenance, reclamation, and formalizing the staging area. This plan also allows for the creation of a second surf wave downstream from the Mountain Wave in an area with an existing staging and viewing area.

¹ Recent media articles show the recent rise in surfing the LKR: Calgary Herald (*Making waves: Calgary's river surfing ambition swells with new projects*, May 21, 2016), CBC News Calgary (*River surfers invade Alberta's Rocky Mountains*, November 10, 2015.), the Calgary Journal (*Bringing the seas to the fir trees: Surfing on Alberta's rivers*, August 7, 2014), and the Rocky Mountain Outlook (*Shredding the Kananaskis*, November 24, 2016).

Motorized boating – Barrier Lake day use area hosts the only motorized boat launch in Bow Valley Provincial Park and as such is a popular day use destination. With the low water levels of Barrier Reservoir in the past few years, it is often difficult launch a motorized boat prior to late August or September. The water levels of Barrier Reservoir will not change over the next 5 years until TransAlta Utilities builds a spillway for the Barrier Dam. As such, it is more appropriate to improve the other aspects of recreation at Barrier Lake, specifically the picnicking, hiking, and hand-launch activities.

Lake paddling – Both canoeing and stand-up paddle boarding are popular on Barrier Lake. Currently, these recreationists attempt to launch their boat from the designated boat launch, which is steep and often far from the water. Creating an equipment rental hut and hand boat launch in the bay to the east will improve the visitor experience by making this bay a destination point.

Hiking – The hiking trails in this area are relatively short; none take more than an hour to complete. These trails are great for people who want a short hike in a natural environment without the physical requirements for a long day hike. Trails connecting the day use sites can provide access to new areas and allow people to explore an interesting, diverse park landscape. The new viewpoint trail at Barrier Lake will provide users with a more pleasant experience and connect two day-use areas. The *Connection Corner* provides users with a quiet, accessible experience in the front country. This provides an opportunity for everyone to connect to Alberta Parks in a new and more meaningful way.

Biking – The interest in road cycling is on the rise in Alberta. Riding a bike is a relatively low-impact activity that can meet fitness goals and allow a user to explore a new area over many kilometers². As the number of cyclists increases, the risk for conflict between cyclists and vehicles on highway 40 increases. Alberta Parks will work with Alberta Transportation to investigate ways to increase cyclist safety through shoulder widening (where appropriate), share the road signage, and potentially speed limit reductions in areas of high use. Providing a bike route that connects Canoe Meadows to Widowmaker allows for paddlers to easily shuttle themselves between put-in/take-out points to pick up vehicles. Alberta Parks is committed to providing infrastructure for alternative modes of transportation. This could also allow people to explore this portion of the park in a different way. Providing bike racks at the day use areas will also appeal to park users who wish to engage in multiple activities, such as biking from Canoe Meadows to Barrier Lake for a swim, or biking from Barrier Dam to Canoe Meadows to watch a paddling event.

² *Exploring Alberta's Highways by Bike*. The Gauntlet, May 30, 2013

5.3.5 Special Events

Currently, the only significant special events in this area are associated with the white-water kayak slalom course at Canoe Meadows. Attendance to these events often uses the majority of the Canoe Meadows day use area and group camp. Retaining the meadow in the Canoe Meadows group camp is important to the success of these events as there is typically a large tent, stage for awards, speakers, and event food stations provided. Upgrades to the group shelter will also be useful and improve the visitor experience. Canoe Meadows hosts several training camps and competitions for provincial and national athletes each year, including Kanfest, which is a major weekend paddling festival. It is attended by several hundred paddlers and their families each year.

5.3.6 Tourism

There are an array of tourism connections and opportunities associated with this project. Planning for all of these day use areas together and marketing them as one landscape will help create a water-based recreation destination within Bow Valley Provincial Park and Kananaskis Country. Using consistent signage, messaging, and branding throughout the area will help create a sense of place for users in this area and is a fundamental component of this plan.

The training centre at Canoe Meadows, the equipment rental hut, and small scale tourism development at Barrier Lake provide a unique opportunity for businesses to offer a product in a natural park setting. These businesses may profit from being located in an area with a great, and already popular, beach or water recreation destination. The small scale tourism development at Barrier Lake offers a new opportunity for a business with innovative approaches to accommodations in parks. The unique experience offered would help set this business and Bow Valley Provincial Park apart from other protected areas in Alberta.

These development opportunities meet the following tourism criteria:

1. Access – access to all sites associated with new tourism developments is provided by a popular secondary Alberta highway (number 40) and site access roads. The areas are easily accessible from the city of Calgary and towns of Canmore and Banff in less than two hours by car.
2. Activities – various water and land based recreation activities are available at all sites, including paddling, biking, hiking, and camping. All sites with new developments have access to a variety of recreational activities providing several experiences for visitors at various skill levels.
3. Attractions – the area is characterized by the natural beauty of the Rocky Mountains. Additional water attractions (Barrier Lake and the Lower Kananaskis River) increase the

- tourism potential of this area. Bow Valley Provincial Park is known for its natural beauty and wilderness setting varying from beaches to alpine meadows.
4. Accommodation – this criteria is addressed through the new camping options at Canoe Meadows and a new small scale tourism development at Barrier Lake.
 5. Amenities – all sites include vault toilets, parking areas, and regularly maintained trails that connect day use areas to each other and to the broader landscape. While power and potable water are not available, there is capacity for alternative and innovative approaches to providing these for visitors.

There are currently several businesses with permits to operate in these day use areas; 17 different operators offer 10 different activities on Barrier Lake and the LKR. All of these permits offer water-based activities. The addition of bike infrastructure could attract more businesses to apply for operating permits.

5.3.7 Education and interpretation

The interpretive trail at the upper Barrier Lake day use area is in fair condition, but the interpretive signage is outdated and difficult to read due to fading. These interpretive signs should be replaced with modern signage sharing the message of watershed stewardship from First Nations traditional uses to modern uses. Signage on the Connection Corner trail should be simple and encourage users to look, listen, and connect to their surroundings rather than a traditional educational message.

The biggest opportunity for interpretive signage is in the signage associated with the day use area kiosks that carry the consistent branding and message regarding watershed stewardship and enjoyment. The Alberta Parks education team created the tagline of “The Lower Kananaskis River – Barrier Lake: where water recreation meets nature conservation”, which will be included on all kiosk signage. This tagline was selected because it conveys the balance between recreation and conservation that is so integral to this plan.

The Kananaskis Visitor Centre is clearly a hub for educational information dissemination. While this plan does not directly address any improvements to the visitor centre itself, making the area more amenable to extended parking and comfortable could lead to increased traffic in the Visitor Centre.



5.3.8 Inclusion

Each day use area in this plan has components associated with it that demonstrate Alberta Parks' commitment to inclusiveness. Alberta Parks will provide a trail and hand launch at Canoe Meadows and at Barrier Lake that are accessible within the constraints of the terrain. These water access features and the accessible trail to Connection Corner will provide people with limited mobility the opportunity to engage in various water-based recreation activities and connect to Bow Valley Provincial Park. The provision of a surfer specific staging area at the Barrier Visitor Centre demonstrates Alberta Parks' commitment to including all types of recreation in planning and management.

5.3.9 Level of Service

The level of service at these areas will be rustic, but will demonstrate an innovative approach in addressing visitor's needs without requiring power or running water. The buildings will be modern, infrastructure will be creative, and structures will be designed to meet specific needs of users. The general level of service will be standard front country services – vault toilets, picnic tables, and trail kiosks with information. The Canoe Meadows group camp will retain the water hand pump and one should be installed at Barrier Lake where the comfort camping station is constructed.



5.4 Environmental Considerations

Bow Valley Provincial Park is representative of the Montane Natural Region; at least fifteen Level 2 Natural History Themes are found in this park including Douglas Fir, aspen and other forest types mixed with open grasslands, ponds, and springs (Government of Alberta, 2002). Bow Valley Provincial Park contains provincially significant natural landscapes and features, including important elk habitat and wildlife movement pathways leading to the Bow and Kananaskis Valleys. The LKR is considered critical habitat for a variety of species because of its low elevation, longer growing season, long snow-free season, lower snow pack, and high percentage of aspen and mixed wood forest.

The presence of Barrier dam has dramatically and permanently altered the ecological characteristics of this project area, but the fact remains that Barrier Lake is in the middle of a larger area of ecological significance from the south end of Barrier Lake north to Highway 1. There are two main factors contributing to the ecological significance of this area: the presence of relatively rare aspen forest habitat and the presence of an important N-S wildlife movement pathway along Highway 40.

Wet areas mapping shows that there is a pattern of seepage in an east-west direction across Highway 40 towards the LKR. These wet areas definitely have the potential to impact trail design and facility construction; wet areas should be avoided if possible. There are some wet areas in the Barrier Lake day use areas, but they can be largely avoided during the implementation of this plan.

After the proposed Lower Kananaskis River Redevelopment plan was released in 2011, a comprehensive Environmental Review was conducted by Alberta Parks ecologists. Information from that review is discussed in the subsections below along with information gleaned from current data and the current Bow Valley Provincial Park management plan. Areas of ecological significance are shown in *Attachment 3.0.2: Regional Map*.

5.4.1 Soils and Landforms

Underlying bedrock is primarily Mississippian limestone and shale along with Devonian dolomite and sandstone. Bedrock exposures occur along the west end of the park and on the north and east shore of Barrier Lake. Around Barrier Dam, there are several areas of exposed bedrock; bedrock may present challenges to construction and should be avoided during the detailed design phase of this project. Soils north of Barrier reservoir along the LKR are dominated by Regosols with some Brunisols resulting from fluvial deposits.

5.4.2 Vegetation

Open forests mixed with grasslands characterize the montane natural region. Limber pine can be found on exposed outcrops in the south west corner of the park, such as those around the Barrier Lake day use areas. Aspen forests, commonly found on terraces throughout the project area, are relatively rare in the montane natural region of the Rocky Mountains covering only 3% of the landscape in protected areas in Kananaskis Country and the Bow Valley. The importance of the aspen community to wildlife is disproportional to its abundance. Aspen and aspen-mixed wood forest offer important habitat diversity for a wide array of species such as migratory birds and foraging ungulates. Disruption to this forest type should be minimized. The understory consists of grasses and forbs, with a shrub layer of rose and buffalo berry in drier areas, and mountain alder, willow and Labrador tea in wetter areas.



The ACIMS database has documented presence of several non-sensitive element occurrences at Barrier Lake, including Porsild's draba, several species of cliff break, limber pine, smooth woodsia, and moss. The Widowmaker area also has several species of moss, cliff break, and leather lichen that are classified as non-sensitive element occurrences. There is short-toothed hump moss at the intersection between the LKR and Lusk Creek, mosses and lichens around the Barrier Visitor Centre.

5.4.3 Connectivity

Due to significant natural and anthropogenic fragmentation of this area, animals moving on the east side of the Kananaskis Valley have limited space to move north and south between the Kananaskis and Bow valleys. The entire length of the project area essentially acts as a bottleneck where animal movement is constrained by steep slopes and human development. At the south end of the project area, a natural pinch point exists between the slopes of Mt. Baldy and the hill associated with the Barrier Lake day use areas. North of Barrier Lake, animal movement is constrained to the west side of Highway 40 by steep slopes to the LKR on the east. Yet, the area between Widowmaker and Canoe Meadows on the east side of the

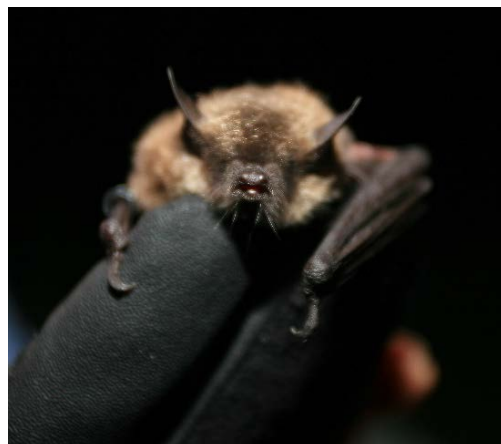
Kananaskis River is an important multi-species wildlife movement pathway. These constraints lead to a situation where animals must zig-zag from one side of the highway to the other to find the best way to move through the area while simultaneously avoiding people. This has resulted in a section of highway with relatively high levels of wildlife-vehicle collisions; reducing the speed limit for this section could reduce this risk substantially.

This movement pathway offers the only wildlife linkage on the east side of the Kananaskis River, connecting the Bow Valley with the Kananaskis and Sibbald Valleys. The only other local alternative for wildlife is to use the movement pathway on the west side of the Kananaskis River which requires animals to either cross Barrier Dam or the Kananaskis River south of Barrier Lake. Both of these are difficult options for wildlife and do not address movement needs between the Sibbald and Bow Valleys via the Kananaskis Valley. Depending on the scope of future development at the Barrier Dam, wildlife movement opportunities at and below the dam may be further reduced.

The main identified wildlife movement pathway extends from Highway 68 to just north of Canoe Meadows, is approximately 2200m in length, and 450m to 700m wide. Fragmentation within this movement pathway, however, reduces travel routes to as narrow as 75m in width in places. Sources of fragmentation include Highway 40, Canoe Meadows, Kananaskis Visitor Centre, Widowmaker driveway and parking lot, Tim Horton's Children's Ranch, and several trails. Research data shows that the movement pathway is used year-round by a wide variety of species including grizzly bear, black bear, coyote, red fox, cougar, lynx, bobcat, moose, elk, white-tailed deer and mule deer.

5.4.4 Wildlife

Big brown bats, long-eared bats, little brown bats and long-legged bats have all been documented in the general area surrounding the project area; one observation of a long-eared bat was documented in the Widowmaker area. Although other owl species may occur in this area, northern pygmy owl is the only recorded species of owl documented in the general area according to the FWIMS dataset. The observation occurred approximately 2 km southeast of the Widowmaker day use area, outside of the project area. An extensive series of beaver dams has been recorded off of the access loop road at Barrier Lake day use area;



decommissioning half of the loop road will increase habitat security for the beavers in this complex.

Within the project area, the largest area of relatively undisturbed habitat is between Widowmaker and Barrier Dam. This large mixed wood forest also serves as an east-west movement pathway connection from Mt. Baldy to the west side of the LKR. With its low levels of human use, abundance of aspen, and connectivity potential, this small habitat patch is integral to myriad species and should remain undisturbed. Everything from song birds to grizzly bears rely on the habitat provided in this area.

A series of remote cameras set up at Canoe Meadows, Kananaskis Visitor Centre and between Widowmaker and Barrier Dam photographed an array of animals moving through this area. The majority of camera captures were of white-tailed and mule deer, but black bears and coyotes were also captured at all camera sites. A black bear den was detected between the Kananaskis Visitor Centre and Canoe Meadows in the winter of 2010/11. Bobcats were the most common cat captured on remote cameras using both the Canoe Meadows and Widowmaker areas throughout the year. Cameras showed cougar use in all areas throughout the year. The results from these camera traps show the diversity of animals using the project area and the importance of the secure wildlife habitat between Barrier Lake and Widowmaker.

Grizzly bears use habitat throughout the project area. In particular, the thin strip of treed habitat between the Kananaskis Visitor Centre and Canoe Meadows acts as an essential, relatively secure wildlife movement route on the west side of Highway 40. This habitat use is reflected in the GPS and telemetry data. The grizzly bear telemetry and GPS data show that bears move along the Highway 40 movement pathway from south of Barrier Lake to Canoe Meadows. A cluster of points, showing potential habitat use, occur at Barrier Lake lower day use area. This cluster of points



may reflect bears moving away from the road as the topography widens and bears are able to travel along the lake shore. It is also likely reflective of bears foraging on the Shepherdia bushes along the lakeshore just north of the day use area and in the adjacent aspen forests. This habitat use was one reason for decommissioning half of the loop road and keeping human use to south

of the access road, leaving all areas to the north of the access road available for bears. According to the Resource Selection Function (RSF) models, much of the project area can be classified as Primary or Secondary sink habitat. These are habitats where mortality risk is high even though habitat quality may be high. This is largely due to the proximity to human use areas and roads. A patch of Primary Habitat, where habitat quality is high and human use levels low does exist between Widowmaker and Barrier Dam and on the south slopes of the area associated with the Barrier Lake day use areas. Ecologically, one of the objectives of this plan should be to retain primary habitat and to help recover sink habitat over the long term by reducing mortality risk.

Aversive conditioning data show that the majority of incidences were associated with Highway 40 and the shores of Barrier Lake from the lower day use area north. Eliminating human use in this area would reduce the number of incidences. A hot spot analysis conducted in ArcGIS showed that these aversive conditioning incidences were not related to each other; there is not a pattern in aversive conditioning where a particular area has more related incidences than another. This is a positive result because it means there is not a particular area where bears consistently getting into conflict with people. These results suggest that efforts to reduce attractants should be spread across the project area at all sites to have the greatest results in decreasing human-wildlife conflict.

With its extent of aspen forests, the project area provides important year-round habitat for ungulates. Elk were captured on remote cameras around the Widowmaker area throughout the year. The current Bow Valley Provincial Park Management Plan commits to the protection of elk and their habitat, including wintering range, important aspen/grassland forest, and general grasslands. Moose were also observed in the project area, largely during the spring and summer.

One of the most important ecological roles played by an aspen forest is habitat for migratory song birds; song bird diversity is high in this area. The removal of aspen forests should be avoided to reduce impact to important wintering elk habitat and song bird habitat.



5.4.5 Aquatics

The main water bodies in the project area are Barrier Lake and the Lower Kananaskis River, although there are several wet areas created by water seeping across the highway to the lake or river. The LKR is home to brook trout, brown trout, and mountain whitefish. Rainbow trout, cutthroat trout, lake trout, and bull trout may exist in smaller numbers. In general, fish species in the LKR occur at reduced levels than in the neighbouring Bow River as heavy flow regulation of this watercourse has decreased its habitat value for aquatic species. Barrier Lake contains the same fish species but a very high density of suckers. With the large water level fluctuations of Barrier Lake, there is limited production of food and cover for fish; ecologically pertinent aquatic values are low. Increasing human use on shore, however, can increase erosion and sedimentation and further impact aquatic habitat in this area. Formalizing water access points will help mitigate these impacts.

5.4.6 Environmental Review

The environmental review conducted in 2011 addressed many of the wildlife, aquatic, and vegetation issues referred to above. Another component it also addressed is wildlife-vehicle collisions and resulting wildlife mortality. From Canoe Meadows to Widowmaker, a 3.2km stretch of Highway 40, 32 animals died as the result of vehicle collisions from 1998 to 2010. This is likely an underestimate of animals killed since many deaths go unreported. With increasing use in this area, the risk of collisions has likely increase. For this reason and to improve visitor safety, Alberta Parks will work with Alberta Transportation to investigate installing decelerations lanes at Canoe Meadows and Barrier Dam, and the possibility of reducing the speed limit from Canoe Meadows to Barrier Lake to 70 km/h. Alberta Transportation will be upgrading the stretch of Highway 40 that goes through the project area in 2021; deceleration lanes may be part of this upgrade.

Another potential impact discussed in the environmental review is the risk of increasing wildlife conflict with increasing human use. It is not only the volume of people visiting an area that can lead to increased conflict, but how people visit an area. For example, an area going from day use to overnight use can have a large impact as animals less tolerant of human use adjust. Visitation to the project area has already increased over the past several years. The changes to the camping area at Canoe Meadows and the provision of comfort camping at Barrier Lake could increase the risk of human-wildlife conflict. Ensuring the detailed design of these overnight facilities helps reduce the risk of human-wildlife conflict is paramount to their success. The levels of human-wildlife conflict should be monitoring and if increases are observed operational management of these facilities should be adjusted.

There has not been an Environmental Review conducted for Barrier Lake day use areas and this area was not included in the ER for Canoe Meadows to Widowmaker conducted in 2011. A Level 1 Environmental Review for the Barrier Lake portion of the planning area is included in Appendix 2. Ecologically, the Barrier Lake day use areas closely resemble the other day use areas. Given the extent of the new environmental footprint being proposed for Barrier Lake day use area, however, a level 2 ER will be conducted.

Table 5 provides information on potential effects and mitigation measures identified in the Environmental Review.

Table 5: Potential Effects and Mitigations

Potential Effect	Mitigation
Reduction of biodiversity caused by reduction of aspen habitat	<ul style="list-style-type: none"> • Avoid removal of aspen trees during construction and design • Avoid extensive aspen habitats for development location during the design phase of the project
Reduced effectiveness of the Highway 40 wildlife movement pathway caused by increased human use and development	<ul style="list-style-type: none"> • Wildlife movement should be incorporated in the plan to ensure that movement pathways persist and wildlife are not funneled in to human use areas • Developments should not further fragment the movement pathway • Designate preservation zones outside of facility zones once areas have been built
Increased human-wildlife conflict risk	<ul style="list-style-type: none"> • Attempt to separate human use areas from wildlife movement pathways and habitat patches, particularly at Barrier Lake day use areas • Ensure all comfort camping stations are designed to reduce attractants and human-wildlife conflict risk
Road mortality	<ul style="list-style-type: none"> • Work with Alberta Transportation to add deceleration lanes on Highway 40 to Canoe Meadows and Barrier Dam • Investigate the possibility of reducing the speed limit on Highway 40 from Canoe Meadows to Barrier Lake

Habitat loss	<ul style="list-style-type: none"> • Avoid constructing any human use facilities between Widowmaker and Barrier Dam to leave this area as a patch of habitat without human influence • Minimize footprint of new infrastructure and buildings • Decommission half of the loop road to the Barrier Lake day use area • Leave aspen forests intact to avoid loss of migratory bird habitat
Hydrology and water quality	<ul style="list-style-type: none"> • Wet areas should be avoided during construction and planning • Facility design should not increase risk of erosion and sedimentation • Staging areas, particularly for river surfing, should be designed to reduce erosion and sedimentation caused by spectators
Soils, sedimentation, and erosion	<ul style="list-style-type: none"> • Human use should be limited to designated trails only • Signage should be used to direct people to designated trails • Trails should be designed to avoid wet areas and reduce environmental impact

5.5 Historical Resources

Ten archaeological investigations have been conducted across portions of the Barrier Lake planning area between 1972 and 2014. A historical resources assessment of lands from Canoe Meadows to Widowmaker day use area was conducted in conjunction with the 2011 planning process. Historical resources were identified throughout the area. Overall, 16 archaeological sites have been identified in the planning area and on lands adjacent. Barrier lake day use areas are not currently listed as containing historical resources. *Attachment 5.5.1: Historical and Archaeological Resources* show where these sites are located.

Although the studies have been biased by their limitation to proposed development footprints, the sites found to date have largely been observed near alluvial fans and on terrace and valley edges overlooking Lusk Creek and the Kananaskis River. They are represented by moderate to dense scatters of stone flakes and tools, fire broken rock and bone fragments that represent cultural occupations that have occurred in the region during the last 7500 years. In six cases, the sites were either found in disturbed contexts or were noted to have small assemblages of cultural material that limited their interpretive potential. For this reason, they have been assigned an HRV of “0” indicating that their lack of interpretive potential means that no further archaeological work is required for these sites.

The remaining 11 archaeological sites that are known in the planning area are HRV-4; these need to be protected from development impacts, or further archaeological investigations are required before *Historical Resources Act* approval will be granted. These sites tend to represent campsite locations that contain larger amounts and varieties of cultural materials, display evidence of previous and repeated occupation through time, or artifacts that diagnostically represent specific early time periods. All of the currently known HRV-4 sites in the planning area were identified as the result of baseline archaeological resource investigations commissioned by Alberta Parks (Permits 10-158, 11-154, 12-247) for the purpose of planning future development initiatives. *Table 6: Known archeological sites in the project area* displays the details associated with each site.

Table 6: Known archeological sites in the project area

Site	Period	Type	Permit	HRV	Description
EgPs-5	prehistoric	campsite	1972, 1973	0	Scatter of artifacts, butchered bison bone and fire broken rock.
EgPs-6	prehistoric; historic; contemporary	campsite, stone feature	1972, 1973, 10-158, 11-154, 12-247	4	Fire broken rock and butchered bison bone observed in a cleared right-of-way. Detailed excavation of the site revealed that at least one component at the site dates to the period 5500 to 6000 years ago.
EgPs-7	prehistoric; historic	campsite, settlement	1972, 1973 10-158, 11-154, 12-247	4	Fire broken rock, stone artifacts and butchered bison bone observed in a cleared right-of-way. Detailed excavation of the site indicates that it may contain evidence of multiple occupations from the last 3500 years.
EgPs-8	prehistoric	campsite	1972, 1973	0	Widely scattered butchered bison bone and fire broken rock observed in a cleared right-of-way.
EgPs-9	prehistoric	campsite	1972, 1973 10-158	4	Fire broken rock, bone fragments and stone artifacts scattered across a disturbed surface near a terrace edge.
EgPs-10	prehistoric	campsite, workshop	1972, 1972 10-158	4	Fire broken rock observed in a disturbed right-of-way.

EgPs-93	prehistoric	campsite	10-158	0	Fire broken rock and a single bison bone recovered from a shallowly buried, intact deposit.
EgPs-94	prehistoric	campsite	10-158	0	Fire broken rock and bone fragments recovered from a shallowly buried, intact context.
EgPs-95	prehistoric	campsite	10-158	4	Fire broken rock, stone tools and bone fragments recovered from a shallow buried, intact context.
EgPs-96	prehistoric	campsite	10-158	4	A site with multiple occupations represented by bone, fire broken rock and stone artifacts in a shallowly to moderately buried intact context.
EgPs-97	prehistoric	campsite, workshop	10-158	4	Fire broken rock and stone artifacts representing a single occupation recovered from a shallowly buried intact context.
EgPs-98	historic	settlement	10-158	4	Four depressions and the remains of a collapsed structure associated with fragments of glass bottles, metal containers, batteries, glass plates, leather and rubber boots and a corral. Some of the material has been disturbed by a trail.
EgPs-99	historic; contemporary	homestead	10-158	0	A depression associated with modern drinking cans; possibly not archaeological.

EgPs-100	prehistoric; historic	campsite	10-158	4	A site with multiple occupations represented by stone artifacts, bone and fire broken rock. Some materials were identified eroding from a trail; the remainder were from intact buried contexts. Historic or contemporary presence at the site was represented by the presence of a meat-drying rack.
EgPs-103	prehistoric; contemporary	campsite	10-158	4	A site with multiple occupations represented by bone, fire broken rock and stone artifacts, as well as historic period artifacts. The materials were recovered from a moderately buried intact context.
EgPs-105	prehistoric	campsite	10-158	0	Fire broken rock and bone recovered from a shallowly buried intact context.

Canoe Meadows contains the following sites: EgPs-6, EgPs-7, EgPs-94, and EgPs-95, which can easily be avoided during construction to meet conditions laid out by the Archaeological Research Permit 2010-158. In the Kananaskis Visitor Centre area sites EgPs-8 and EgPs-99 have been identified and require no further requirements. There were several sites between the Visitor Centre and Widowmaker recorded – EgPs-9, EgPs-10, EgPs-103, EgPs-100, EgPs-97, EgPs-105, and EgPs-104. These sites are classed as HRV 4 and are easily avoided as none of them are within the proposed development footprint.

Attachment 5.5.1: Historical and Archaeological Resources

