

Lake Louise Area Strategy – DRAFT – March, 2021

The Lake Louise area in Banff National Park is one of Parks Canada’s most popular visitor destinations. Situated along the Continental Divide in the heart of the Rocky Mountains, it is famous for its classic glacier-fed turquoise lakes and iconic mountain views (Figure 1). The area offers a variety of four season visitor activities including sightseeing at Lake Louise, Moraine Lake and the Lake Louise Ski Area, hiking, backpacking, rock climbing, mountaineering, cycling, Nordic skiing, skating, ice climbing, ski touring, downhill skiing, and snowshoeing. The Hamlet of Lake Louise, located at the confluence of the Bow and Pipestone rivers, provides support services and accommodations for tourists and residents.

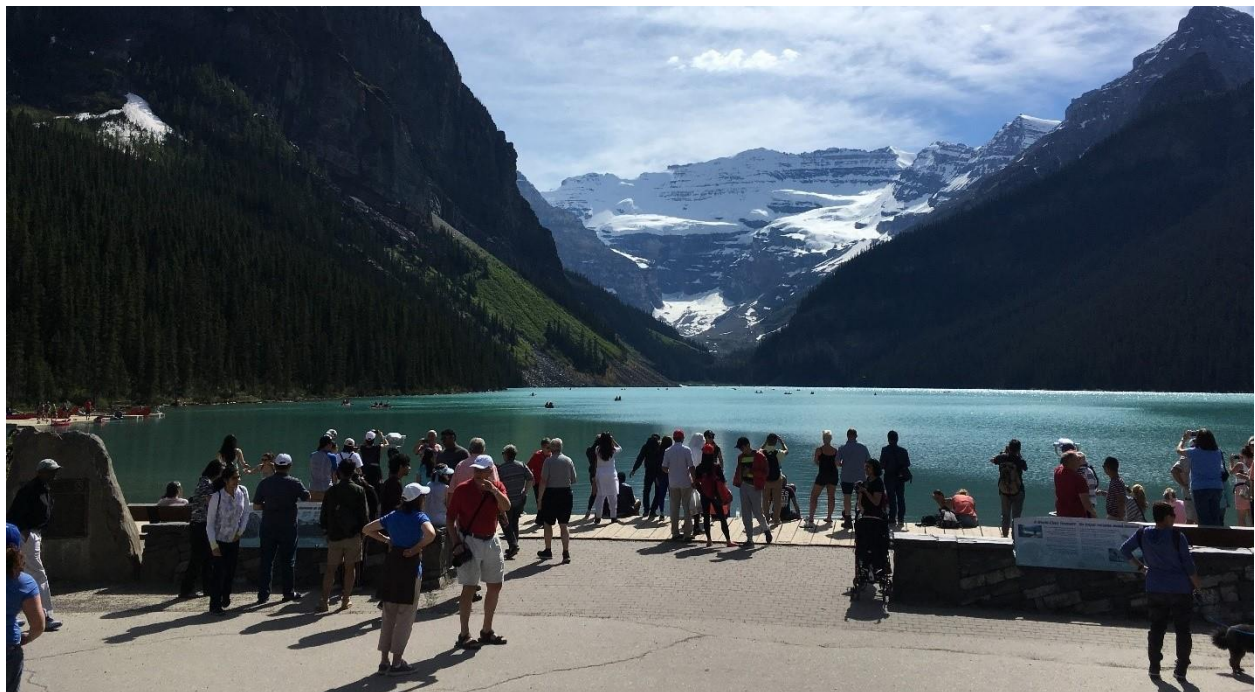


Figure 1. Visitors enjoying Lake Louise Lakeshore.

A number of complex management challenges exist in the Lake Louise area related to its high popularity and unique features. In addressing these challenges Parks Canada must consider the area’s important natural and cultural values, species at risk, high levels of visitation, multiple high-profile visitor experience opportunities, significant built infrastructure, increasing regional population, commercial leasehold operations, core highway and rail transportation routes, and notable public interest. Solutions may require significant time and resources, and success will require collaboration and partnerships between Parks Canada, stakeholders and the community.

This strategy focusses on addressing identified management challenges in a 220 km² area around Lake Louise (Figure 2). The area is constrained by the Banff-Yoho boundary in the west, and Boulder Pass in the east, and encompasses the popular destinations of Upper Lake Louise, Moraine Lake, the Lake Louise Ski Area, and the Hamlet of Lake Louise. The area is bisected by the upper Bow River, the Canadian Pacific Railway, the four-lane Trans-Canada Highway, and several secondary roads. Significant ecological features include two wildlife corridors that traverse the valley bottom and side-slopes parallel

to the Bow River – the Fairview Corridor on the west and the Whitethorn Corridor on the east. The Lake Louise area is also known to be part of a core reproductive range for Grizzly Bear, and contains important habitat supporting many species of native plants and animals including species at risk such as Whitebark Pine and Westslope Cutthroat Trout.

The majority of visitors to the area are day users arriving from elsewhere via the Trans-Canada Highway. There are also several accommodation options within the area including the Chateau Lake Louise, Moraine Lake Lodge, Deer Lodge, Paradise Lodge and Bungalows, Lake Louise Inn, Mountaineer Lodge, the Lake Louise Hostel, and Parks Canada’s Lake Louise Campground.

The Lake Louise Area Strategy has been prepared to elaborate the management direction for the area as described in the *Draft Banff National Park Management Plan (2021)*. The intent is to describe in greater detail Parks Canada’s approach to maintaining ecological integrity and enhancing visitor experience in the area. This is a strategic, guiding document that summarises area challenges and identifies objectives and actions that will be implemented to address those challenges. More detailed tactical plans will be developed where needed. The strategy will be reviewed and updated as required, using an adaptive management approach. Objectives and actions may change with evolving conditions, developments in technology or additional study.

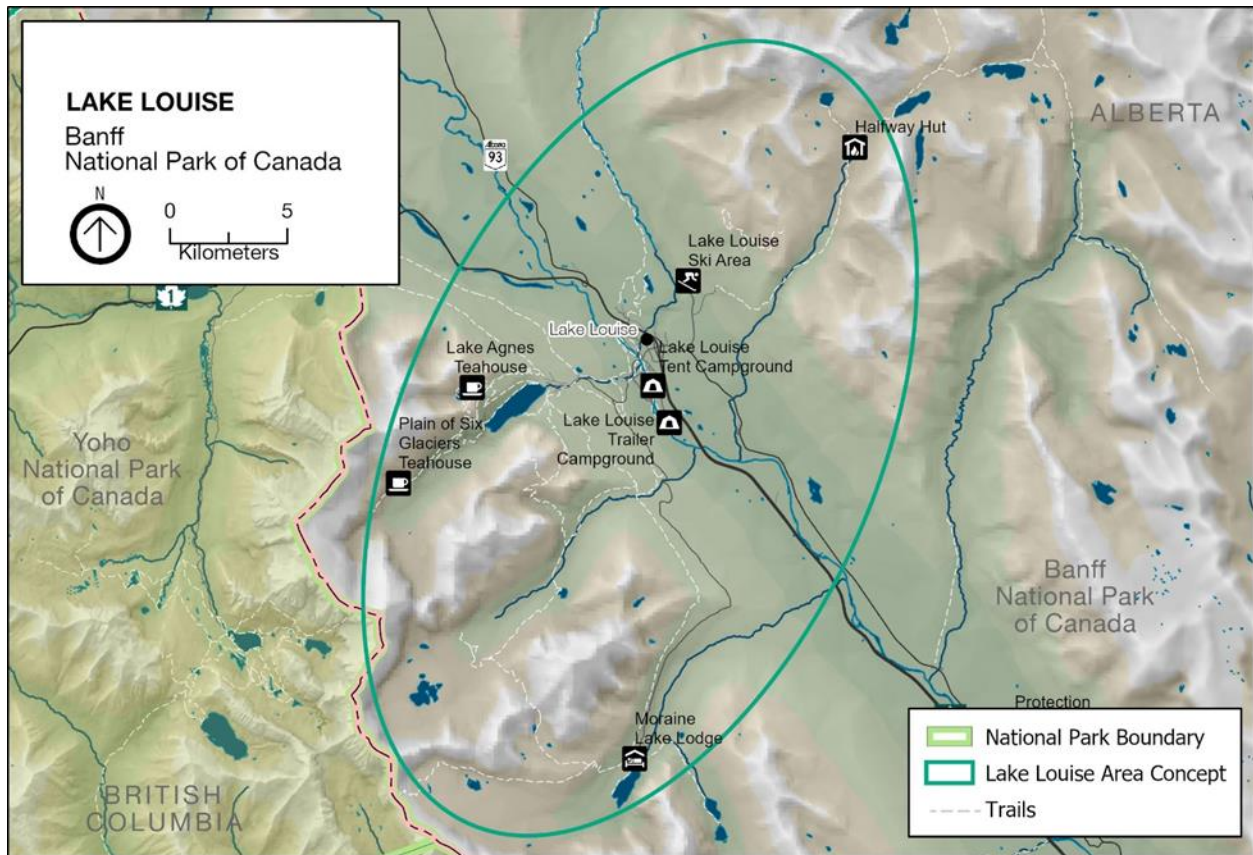


Figure 2. Map of the Lake Louise Area.

Background:

Parks Canada has successfully carried out many of the recommended actions in the Lake Louise Area Strategy contained in the 2010 *Banff National Park Management Plan*, designed to improve ecological integrity and visitor experience. Twinning of the Trans-Canada Highway was completed to the British Columbia border and beyond, including wildlife exclusion fencing and wildlife crossing structures that have reduced wildlife-vehicle collisions by more than 80%. Adjustments were made to backcountry areas including relocation of the Paradise Valley campground to an area less intrusive to grizzly bear habitat. Measures to reduce human-wildlife conflict were implemented, including “group of four” hiking requirements in the Moraine Lake area, improved sightlines on hiking trails, and temporary area closures when needed. The *Lake Louise Ski Area Site Guidelines for Development and Use* were approved in 2015 providing a road map to ensure decisions regarding use and development are consistent with Parks Canada’s mandate and the Parks Canada *Ski Area Management Guidelines*. The first Long Range Plan to guide the implementation of the Site Guidelines for the next 10-15 years was completed by the ski area and approved in 2019. Key visitor facilities were upgraded including washrooms, the Lake Louise Lakeshore promenade, Moraine Lake Rockpile trail and viewing area, and the Lake Louise Visitor Centre. Traffic management measures were implemented to alleviate congestion and a regional shuttle system was implemented serving 547,078 riders in 2019.

The most significant change in operational conditions since 2010 has been an unprecedented growth in visitation. In 2019-2020, a total of 4.1 million people visited Banff National Park, an increase of 29.8% from 2010-2011. The annual two-way traffic volume on Lake Louise Drive was 2.1 million vehicles in 2019, up from 1.2 million vehicles in 2010, a 75% increase. Parks Canada staff at the Lake Louise Visitor Centre and new lakeshore booth provided 197,466 service interactions in 2019, versus 58,855 at the Visitor Centre in 2010, a 235% increase. Summer visitor use of four popular hiking trails increased by 156%, and a fall increase in trail use of 400% was observed in Larch Valley (Figure 3). While summer continues to be the busiest period in the Lake Louise Area, the shoulder seasons of late spring, early fall and winter holidays have all seen a surge in visitation requiring Parks Canada to manage traffic in the area on a year-round basis.

	2010 Trail Users	2019 Trail Users	% Change
June to September			
Lake Louise Lakeshore (Back of the Lake)	130,817	223,132	70.6
Mirror Lake	104,956	269,274	156.6
Lake Agnes Trailhead	98,669	358,328	263.2
Larch Valley	25,987	74,213	185.6
Total	360,429	924,947	156.6
September to October			
Larch Valley	8,611	43,043	399.9

Figure 3. Trail counter data and percent increases for select trails in the Lake Louise Area 2010 to 2019.



Figure 4. Visitors waiting for a return shuttle at Upper Lake Louise, 2018.

Current Challenges:

In the Lake Louise area, the most challenging aspect of increased visitation is managing the high volume of private vehicles. Throughout the summer months, roads and lakeshore parking infrastructure have insufficient capacity to accommodate current traffic volumes. Traffic congestion on Lake Louise Drive often extends past the Moraine Lake intersection (1.8 km) and occasionally as far as the Hamlet of Lake Louise, a distance of about four kilometres. The Great Divide trailhead and Fairview picnic area are often unavailable for the intended use as the parking is filled opportunistically by those willing to walk from there to the lake. The access roads terminate at the main destinations, meaning all in-bound traffic has to return by the same route. The resulting traffic congestion, together with illegal parking along road shoulders, forms a barrier to wildlife movement across the road. Despite signage indicating parking is at capacity, many visitors still travel up Lake Louise Drive, some repeatedly, in the hopes of finding lakeshore parking. Steadily redirecting these vehicles from the Moraine Lake Road intersection and through the Lake Louise parking lot slows traffic flow, frustrates visitors, and affects staff moral.

Wildlife use and movement through the Lake Louise area is constrained by the concentration of built infrastructure, and disturbance caused by high traffic volumes and human use. The Fairview wildlife corridor runs along the west side of the Bow River. It is bisected by Lake Louise Drive and encompasses the Lake Louise town site. The Whitehorn wildlife corridor runs along the east side of the Bow River. It is bisected by Whitehorn Road and encompasses a portion of the Lake Louise Ski Area. High traffic volumes on Lake Louise Drive and Whitehorn Road may cause wary species to avoid using the area or crossing the roadway during busy periods. Visitors arriving earlier in the morning, or later in the day to avoid crowds, means the duration of these busy times is increasing. In the Fairview corridor there are also multiple trails that weave through the area creating a wide footprint of human activity. In the valley bottom wildlife mortality has been reduced significantly on the Trans Canada Highway but is still a concern on the Canadian Pacific Railway. The high level of human use and infrastructure development may decrease corridor effectiveness for wildlife and increase the potential for human wildlife conflict and habituation. Illegal parking along roadways blocks sight lines and also increases the potential for human-wildlife conflict when visitors encounter bears feeding on road-side vegetation.

In 2019 the public shuttle transportation provided by Parks Canada eliminated an estimated 195,000 vehicles from Lake Louise Drive and Moraine Lake Road. However, there are still several challenges to

overcome to improve the transportation system. The capacity of the current Park & Ride is 450 to 500 vehicles which is insufficient to meet the current and predicted future demand. Visitors arriving between 11am and 2pm have difficulty finding parking and must wait in long line ups before boarding a shuttle. The current Park & Ride location, with minimal facilities, does not provide the level of service desired to support quality visitor experiences. There are only four pit toilets. There is no shelter from weather, no seating, and no drinking water. There are no utility lines to support the provision of services such as flush toilets or potable water. Visitors and shuttle bus access to the current Park & Ride requires speed reductions on the Trans-Canada Highway to facilitate safe turning. High traffic volumes on the Trans-Canada Highway can make it difficult for shuttles to consistently complete their routes on time.



Figure 5. Visitors park outside of designated stalls at the Fairview day use area, 2018.

Area Strategy Overview:

The Lake Louise Area Strategy will focus on two key objectives: improving ecological integrity, and enhancing the quality of visitor experiences.

The maintenance and restoration of ecological integrity in the Lake Louise area will focus on maintaining habitat connectivity, reducing human wildlife conflict, and improving habitat diversity to benefit wildlife. Traffic management efforts will aim to reduce vehicle volumes on Lake Louise Drive and ensure there are seasonal and daily periods of low traffic volume in both the Fairview and Whitehorn corridors. This will provide intervals of low disturbance to maintain or enhance wildlife movement through these corridors. Investments in road mitigations will serve to protect wildlife and prevent wildlife-vehicle collisions. Parks Canada will continue to co-operate with Canadian Pacific on finding ways to reduce wildlife mortality associated with the railway. Opportunities to adjust trail alignments to better support corridor effectiveness will be evaluated. Education and interpretation will promote responsible visitor behaviours and park stewardship. Wildfire risk reduction programs and targeted habitat enhancement will be designed to augment travel routes for wildlife and create quality habitat away from the core Lake Louise visitor use area, while protecting the community from wildfire. Wildlife attractants such as

dandelions will be removed from key locations to reduce the potential for human-wildlife encounters. Ongoing monitoring and research will enhance Parks Canada’s ability to make informed decisions and improve tactics as implementation of the strategy progresses.

Visitor experience in the Lake Louise area will be enhanced by developing an integrated public transportation system, and by enhancing accessible and inclusive visitor facilities and services. Public transportation will be promoted as the preferred method of getting around the Lake Louise area. Essential facilities will be provided at key visitor hubs, and may include public washrooms, potable water, internet connectivity, park orientation information, and park staff presence. The Park & Ride location will provide sufficient parking to serve the expected volume of transit users. Traffic flow and roadways will be managed to keep shuttles on time and to prevent impediments to emergency access and egress. To prevent barriers and ensure that all visitors have the opportunity to enjoy Canada’s natural and cultural heritage, accessibility will be a key consideration when enhancing facilities and services. Communications and outreach will help to set appropriate visitor expectations and support advance planning and reservations prior to visiting. Wayfinding will be improved to help visitors better navigate roads and trails.



Figure 6. Overflow parking lot, 2018.

1. Maintaining Ecological Integrity

Park Management Plan Objective: To maintain and protect ecological integrity in the Lake Louise area and ensure wildlife can safely use and move through the Whitehorn and Fairview wildlife corridors.

Management challenges affecting the ecological integrity of the Lake Louise area include high levels of visitor use within important wildlife habitat, a concentration of built infrastructure especially in the valley bottom, busy transportation corridors, and a historically suppressed fire cycle. To address these challenges, park management efforts will work to prevent further habitat fragmentation and barriers to movement through the key Fairview and Whitehorn wildlife corridors. Human use within key habitat areas will be managed to reduce the potential for displacement of wary species, or the likelihood of animals becoming habituated to human presence. Special attention will be given to Grizzly Bears, a species of special concern, that utilize the area as part of their core reproductive range.

The high level of visitation between the Hamlet of Lake Louise and the popular day use areas at Upper Lake Louise and Moraine Lake result in significant disturbance within the Fairview Wildlife Corridor. The main factors affecting wildlife use and movement through the corridor are Lake Louise Drive, Moraine Lake Road, the Great Divide Trail (Old 1-A Highway), the trails linking the hamlet and the lakes, the busy lakeside day-use areas, and the substantial built infrastructure in the area. At the height of summer, vehicle numbers exceed the capacity of lakeshore and hamlet parking and can reach capacity at the Park & Ride location. This results in traffic congestion on access roads and in parking lots. This heavy traffic reduces the quality of visitor experiences and may create a barrier to wildlife movement in the Fairview Corridor. Vehicle use on Moraine Lake Road is only restricted once the parking lots are at capacity, while there are no restrictions on vehicle use of Lake Louise Drive. Mountain biking is permitted on the Great Divide Trail (paved) and on the Tramline, Bow River, Ross Lake and Moraine Lake Highline trails.

On the opposite side of the valley, the Whitehorn Wildlife Corridor extends from the Trans-Canada Highway to the mid-elevations of Mount Whitehorn. The main factors affecting wildlife use and movement through this area are Whitehorn Road, the Bow Valley Parkway, the Lake Louise Ski Area, Fish Creek Road, Temple Road, and the Pipestone trail network. Electric fencing is erected around the base of the ski area in the summer to exclude Grizzly Bears and minimise potential human-wildlife conflict. Motor vehicle use of Temple Road is restricted to operational traffic by the ski area, it's contractors, and Parks Canada. The Pipestone trail network is popular for Nordic skiing in winter but receives relatively low use during the summer months. Mountain bikes and horses are permitted on the main Pipestone Trail and on Temple Road.

The Canadian Pacific Railway is a source of human-caused mortality for wildlife in Banff National Park. In 2017, 23 large mammal mortalities were recorded along the CP railway in the park. Between 2010 and 2017 Parks Canada and Canadian Pacific co-operated on a joint research initiative that examined the factors that contribute to railway mortality of Grizzly Bears and identified possible solutions. Recommendations from this work and ongoing research will be implemented as part of the Lake Louise Area Strategy.

To address these concerns, Parks Canada will develop traffic management and public transportation systems that improve ecological conditions by reducing traffic congestion during key periods, conduct targeted habitat enhancement to improve wildlife habitat and connectivity outside of high human use areas (while reducing wildfire risk to the park and community), and ensure visitor services remain within the established growth limits for Lake Louise. Implementation will focus on achieving the following objectives:

Objective 1.1: Maintain or improve the effectiveness of the Fairview wildlife corridor.

Actions:

- Reduce private vehicles on Lake Louise Drive by guiding visitors directly to the Park & Ride when the Upper Lake Louise lot is at capacity, and by enforcing roadside parking prohibitions.
- Use shuttle scheduling and traffic restrictions to maintain low-disturbance periods on Moraine Lake Road during dawn and dusk to allow wildlife to use and move through the corridor.
- Implement additional temporal and/or seasonal vehicle access restrictions on Lake Louise Drive and Moraine Lake Road as required to reduce disturbance for wildlife during sensitive periods.
- Review use of the Fairview picnic site and consider alternate uses for this area.
- Evaluate trails within the Fairview corridor, and reconfigure the trail network where prospects exist to improve corridor effectiveness while maintaining appropriate visitor opportunities.

Objective 1.2: Maintain or improve the effectiveness of the Whitethorn wildlife corridor.

Actions:

- Use variable speed limit signs to reduce speed during evening hours or other periods of poor visibility.
- Work with the Lake Louise Ski Area to design and build a wildlife underpass on Whitehorn Road, as per the conditions in the Lake Louise Ski Area Site Guidelines for Development and Use and the ski area Long Range Plan. Siting of the underpass will be aided by data collected as part of ongoing wildlife monitoring in the corridor.
- Use shuttle scheduling and traffic restrictions to maintain low-disturbance periods on Whitehorn Drive during dawn and dusk, and spring and fall, to allow wildlife to move through the corridor.
- Install selective wildlife fencing to enhance effectiveness of crossing structures where warranted.

Objective 1.3: Continue work to reduce wildlife mortality along the Canadian Pacific Railway.

Actions:

- Develop and improve wildlife travel routes and trails adjacent to key areas that have a high risk for Grizzly Bear-train collisions, and monitor their use and effectiveness at reducing collisions.
- Undertake vegetation management to decrease attractants and open escape paths adjacent to the railway in confined areas.
- Continue to implement prescribed fire and selective forest thinning to improve Grizzly Bear habitat away from the rail corridor, which will also benefit other wildlife species.
- Investigate the application of new knowledge and technology as developed through research to reduce the potential for rail-related wildlife mortality.

Objective 1.4: Maintain or improve grizzly bear habitat security and reduce human wildlife conflict.

Actions:

- Restore previously disturbed sites near high human-use areas to remove non-native vegetation that is an unnatural food source for wildlife.
- Where non-native species such as dandelion persist, conduct an annual program of vegetation control to reduce bear-attractants at key locations in the Lake Louise area.
- Consider the selective removal of other bear foods, such as buffalo berry, in high human-use areas.

- In conjunction with work to reduce wildfire risk to the area, conduct vegetation management that enhances productive wildlife habitat and movement pathways away from busy human use areas.

Objective 1.5: Reduce wildfire risk to the community of Lake Louise and surrounding infrastructure.

Actions:

- Carry out wildfire risk reduction work using FireSmart techniques to reduce forest fuel buildup and provide increased community protection in the event of a wildfire.
- Use a combination of vegetation management techniques and/or prescribed fire to establish a community-level fuel break north and northwest of Lake Louise that reduces wildfire risk and creates productive Grizzly Bear habitat away from the town site.
- Assess additional strategic fuel breaks to protect infrastructure in the Lake Louise area and Bow Valley.
- Establish a wildfire evacuation plan for Moraine Lake and Upper Lake Louise.

Objective 1.6: Protect water quality and aquatic native species, and prevent the spread of aquatic invasive species.

Actions:

- Prevent the spread of aquatic invasive species through education and mandatory cleaning requirements for personal water craft and equipment.
- Carefully manage water based activities and access to waterways to reduce the risk of introducing aquatic invasive species.
- Maintain seasonal closure of in-stream commercial recreational activity on the Bow River from Lake Louise to Castle Junction to protect breeding harlequin ducks.

Objective 1.7: Reduce carbon emissions produced in the Lake Louise area.

Actions:

- Reduce carbon emissions from private vehicles by promoting transit use and providing anti-idling messaging at public parking areas.
- Incorporate energy efficient design and technologies in new or upgraded park infrastructure, including housing, operational spaces and visitor facilities.
- Provide public EV charging stations¹ at Upper Lake Louise and other destinations in the area.
- Evaluate the potential of electric transit and fleet vehicles and supporting EV charging stations.

2. Improving Visitor Experience

Park Management Plan Objective: Visitor experience throughout the Lake Louise area is enhanced through the development of an integrated public transportation system, and the provision of accessible, inclusive facilities and services.

¹ According to the Canadian Energy Regulator (2020), 91% of Alberta electricity is generated from fossil fuels, so EV stations will not have a significant effect on reducing C emissions in the short term. However, if Alberta begins to develop more renewable energy, then the use of EV charging stations in Lake Louise could contribute to future reductions in C emissions.

Increased visitation in the Lake Louise area has made it difficult to deliver the quality of experience Parks Canada strives to offer. Access to popular destinations is not guaranteed as full parking lots, traffic congestion and shuttle queues create delays and frustration for visitors. Periods of congestion continue to grow as visitors arrive earlier and come later in the day to access popular locations. Parks Canada offers a series of shuttle and traffic management services in Lake Louise. These services continue to evolve in an effort to alleviate traffic problems and provide visitors with predictable access to safe and enjoyable experiences. This program has improved the situation but does not address all the challenges. There continues to be traffic congestion on Lake Louise Drive and Moraine Lake Road. The current Park-and-Ride does not meet Parks Canada's expected level of service, nor does it have sufficient capacity. Visitors interested in learning more about Lake Louise experiences may have difficulty accessing the main visitor centre. Visitor facilities such as washrooms, picnic sites and rest areas have insufficient capacity to meet the high demand. While these challenges occur mainly during the summer, congestion and parking shortages have also been reported at Upper Lake Louise during off-season holidays and weekend events.

On the opposite side of the valley, the winter season is the busiest with the focus on downhill skiing at the Lake Louise Ski Area, and Nordic skiing on the Pipestone trail network. The summer sightseeing program at the Lake Louise Gondola attracts less than 1,000 visitors per day, with peak days reaching more than 2,000 visitors only five times. The operators envision an increase on peak summer days to approximately 3,000 visitors with the development of projects in the Long Range Plan. Planned parking lot improvements will eventually accommodate up to 3,000 private vehicles and 50 tour buses. Less than 500 spaces are required to support the ski area's summer program (LLSA, LRP, 2019). The potential for these lots to play a role in alleviating some of the traffic challenges in Lake Louise will be investigated.

To improve visitor experiences Parks Canada will invest in public transportation systems, enhance communications, improve accessibility, and provide more opportunities to learn about the natural and cultural heritage of the area. Implementation will focus on achieving the following objectives:

Objective 2.1: Ensure that pre-trip communication enables visitors to plan their experiences, be prepared and arrive with appropriate expectations.

Actions:

- Work with regional destination marketing organizations to provide comprehensive pre-trip planning resources, including reservations, information on traffic management, and realistic descriptions of the Lake Louise experience.
- Use recent and accurate images to depict the busy character of Lake Louise in Parks Canada promotional material.
- Use online, mobile and/or virtual experiences to provide planning information and reservation services that connect with Canadians beyond park boundaries.

Objective 2.2: Provide a safe and reliable integrated parking, shuttle and traffic management system that encourages use of public transportation and reduces private vehicle traffic congestion.

Actions:

- Evaluate the feasibility of relocating the Lake Louise Park & Ride to the Lake Louise Ski Area to provide sufficient parking capacity and better meet visitor service requirements, including availability of washrooms, potable water, food, and shelter.
- Establish a visitor monitoring program to understand patterns of visitor use, including installations of Bluetooth traffic counters to capture data on vehicle use, and length-of-stay at Lake Louise and Moraine Lake, and pedestrian counts along Lake Louise day use area trails.
- Gather data to understand commercial vehicle use in the Lake Louise area, and investigate opportunities to reduce impacts on physical infrastructure and visitor experience.
- Implement a reservation system for public transportation to Lake Louise and Moraine Lake during busy seasons.
- Consider the use of parking reservations to provide visitors the ability to plan ahead and to provide Parks Canada the ability to clearly communicate on parking availability at busy parking areas.
- Incorporate the Paradise Valley trailhead into the shuttle system or future transit plans.
- Consider the use of paid parking at Moraine Lake as an incentive for visitors to use the Parks Canada shuttle system or other alternative forms of transportation.
- Integrate Lake Louise area transit more seamlessly with regional transit systems by continuing to build partnerships with the Bow Valley Regional Transit Services Commission and other local carriers.
- Consider using the Lake Louise Park & Ride as a base for a potential transit offer to Yoho National Park or other national park destinations.

Objective 2.3: Develop traffic management infrastructure to alleviate congestion, and improve safety and visitor experience.

Actions:

- Install variable speed-limit signs on the Trans-Canada Highway to slow traffic approach at times of high congestion.
- Make improvements to the Lake Louise and Moraine Lake parking lots to improve the sense of arrival and provide transit infrastructure, accessible parking, bicycle parking and way-finding signs.
- Establish evacuation plans to facilitate egress of visitors in the event of an emergency.
- Use roundabouts and/or barrier gates to improve traffic flow at various locations including: the start of Lake Louise Drive, Moraine Lake Road intersection, and at the Upper Lake Louise parking lot.

Objective 2.4: Invest in infrastructure to eliminate accessibility barriers and maintain high quality facilities that support ecological and visitor experience objectives.

Actions:

- Identify barriers to access for visitors and work to eliminate them by providing integrated, accessible and inclusive facilities and services.
- Support active transportation for visitors and residents by improving pedestrian and cycling infrastructure in the Lake Louise community.
- Improve wayfinding signage to enhance the ability of visitors to locate trails and connect with nature.
- Rehabilitate and upgrade popular short strolling trails and viewing areas to accommodate concentrated visitation and minimise impacts on vegetation and terrain.

Objective 2.5: Deliver education and interpretive programs to promote a better understanding of ecological issues, local natural and cultural history, and park stewardship .

Actions:

- Provide clear and consistent educational information at every location where visitors are waiting, travelling and arriving at their destinations, that focuses on connecting with nature and sharing the responsibilities of preservation and stewardship.
- Encourage safe and ethical wildlife viewing experiences.
- Educate hikers about the importance of using designated trails to reduce impacts on wildlife and vegetation.
- Develop digital and non-personal interpretive media to support interpretive engagement.