



Visitation Review & Capacity Assessment

**An Update and Supplement to the
2018 Bright Angel Park Management Plan**

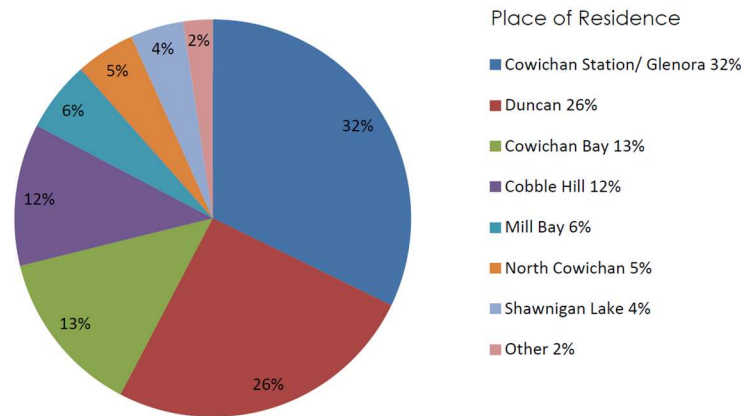


Contents

1. INTRODUCTION	1
2. VISITATION ANALYSIS.....	2
2.1. Visitor Use and Impacts Data.....	2
2.2. Annual Visitation Counts.....	2
2.3. Peak Visitation	4
2.4. Park Use Bookings - Special Events, Picnic Shelter Reservations and Group Camping	6
3. DISCUSSION	9
3.1. Visitor Capacity.....	9
3.2. Key Issues	10
4. RECOMMENDATIONS.....	17
4.1. Strategies for Reducing Visitation Pressures	17
4.2. Resilient Site Design Strategies.....	19
4.3. Operational Strategies	20
4.4. Visitor Education and Stewardship Strategies.....	21
4.5. Monitoring and Evaluation Strategies.....	23
5. IMPLEMENTATION	24
5.1 Proposed Implementation Timeline and Budget Implications	25
APPENDIX A	26
Management Plan Actions Update	26
ENDNOTES.....	34

1. INTRODUCTION

Bright Angel Park is the Cowichan Valley Regional District's only sub-regional park, funded by annual contributions from five electoral areas (A, B, C, D and E). Survey results conducted in 2009, 2011 and 2012 indicate that visitors travel to enjoy this unique park from all over the region and beyond (see Figure 1).



*based on completed visitor surveys in 2009,2011,2012

Figure 1 - Park Visitors' Place of Residence (From the 2018 Management Plan, based on surveys in 2009, 2011, 2012. No recent visitor-use surveys have been completed to indicate a more current breakdown of where visitors reside)

The CVRD manages Bright Angel Park under a long-term lease with the Province of BC for the Crown-owned portions of the park. It is one of the busiest parks managed by the CVRD, offering diverse outdoor recreation opportunities within a 25-hectare natural riverfront setting. Since 2012, the number of visits to the park have been tracked using trail and vehicle counters. The counters demonstrate significant annual visitation increases in recent years, almost doubling in five years (2017-2021) and tripling in seven years (2015-2021).

In 2018, a Park Management Plan for Bright Angel Park (“Management Plan”) was completed due to early signs of rapidly increasing visitation. Goals in the Management Plan include the growing observations of increased visitation, and the park’s capacity to accommodate those visitors without degrading the natural environment, infrastructure and user experience. The Management Plan goals include:

- Balancing park visitation and taxpayer funding with infrastructure development and operational maintenance.
- Balancing opportunities for outdoor recreation with sustaining the park’s natural features.
- Promoting outdoor recreational programming that is suitable and sustainable with the built infrastructure.
- Increasing participation in programs, events and activities, while balancing capacity of the park.

In recognition of the necessity for balance, one of the objectives of the Management Plan is to better comprehend the park's outdoor recreational use trends, and the associated capacity impacts to the park's infrastructure and natural values. To respond to that objective, the Parks & Trails Division initiated work on this Visitation Review and Capacity Assessment study in 2019 and continued the work through to 2023.

This comprehensive study provides an update and overview on visitation trends, including the additional influence of the Covid-19 pandemic on park use, and assessment of the impacts of the increased park use visitation. The study concludes with recommendations for management strategies and proposed implementation measures.

2. VISITATION ANALYSIS

2.1. Visitor Use and Impacts Data

The available data sources on park use patterns and impacts include:

- three visitor counters (one pedestrian and two vehicle counters);
- observations by park caretakers, Parks & Trails Division personnel and maintenance contractors;
- park user survey data from 2009, 2012 and 2013;
- third party trail applications' "heat maps";
- park bookings records (picnic shelter reservations, special events and group camping);
- complaints and park bylaw enforcement records; and
- park maintenance and operations records.

Some of the proposed actions identified in the Management Plan have not yet been completed due to resource and funding limitations; however, this data would also assist to inform capacity assessment of the park. These items include:

- updated Ecological Inventory and Assessment;
- park satisfaction surveys;
- public engagement on dog management in the park;
- continued community engagement regarding possible enhancements and replacements;
- asset management strategy/plan (underway); and
- emergency plan/protocol and access review.

This Visitation Review and Capacity Assessment study is based on data available at this time.

2.2. Annual Visitation Counts

Bright Angel Park is not unique in its growing popularity, as increasing park visitation is a general trend throughout parks and trails systems in the CVRD, and beyond. However, Bright Angel Park is now one of the busiest parks managed by the CVRD (exceeded only by the Kinsol Trestle), with visitation growing an average of 19% per year between 2015 and 2021. In 2015, Bright Angel Park had an annual visitation of approximately 52,500 users. In 2019, annual visitation was over 100,000, nearly doubling park annual visitation in four years. In 2020, annual visitation grew an

additional 30.4% to approximately 130,000. In 2021, the annual visitation count grew another 17.1% to 152,624, more than three times the visitation rate seven years prior. The 2022 data details the first visitation decrease, in contrast to the previous year, since record keeping began in 2012, dropping 7.8% compared to 2021. However, the 2022 visitation still shows an increase of 38.8% since 2019 (i.e. prior to the influence of the Covid-19 pandemic). Figure 2 displays the annual park visitation growth at Bright Angel Park.

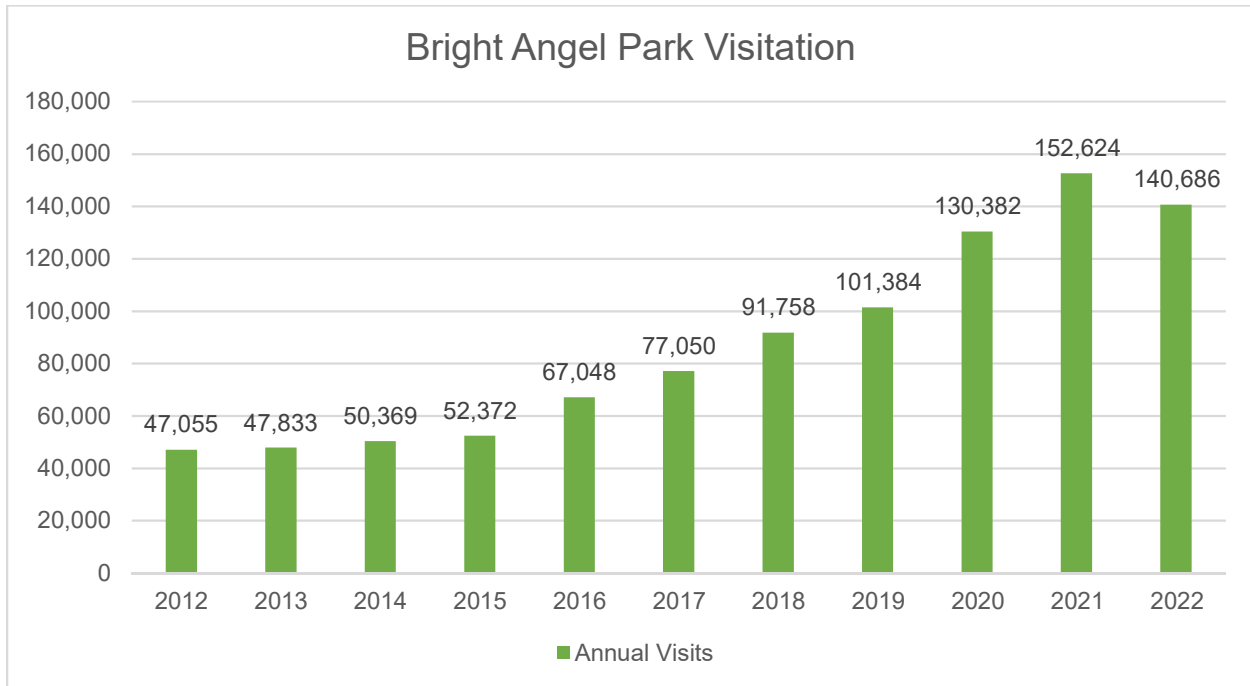


Figure 2 - Annual Total Visits 2012-2022

The actual park visitation numbers for Bright Angel Park are projected to be higher, particularly in summer months, as the current visitor count summary does not include park users arriving via the seasonal overflow parking area. Park users who park vehicles along the adjacent public roads next to the park (i.e. Riverfield Road) are also not recorded, nor are those who arrive at the park on foot or bicycle. Additionally, visitation counts are calculated using a standard multiplier per vehicle. Larger passenger vehicles, such as school buses, will be under-counted as a result. Due to these factors, it can be reasonably presumed that annual visitation counts at Bright Angel Park may be undercounted by as much as 10-15%.

The increasing popularity of Bright Angel Park is likely not attributed to a single factor, but is the result of multiple cultural shifts and local influences. These factors include the use of social media platforms to promote outdoor places and experiences, growing school outdoor education programs, as well as a greater focus on physical and mental health and wellness. Other contributing factors likely include updated amenities drawing locals to the park, the proximity to urban and village residential areas within the south/central Cowichan region and increasing community development/population growth. As a result of the Covid-19 pandemic, the CVRD and other communities saw an increase in park system use by the public, likely due to limited recreational opportunities available, financial uncertainty and for stress-relief, exercise and safer socializing. The increased park use seen during the height of the Covid-19 pandemic has

remained, to date, now that restrictions have lifted, perhaps due to an increased discovery and appreciation of park spaces, and the associated benefits.

A 2019 studyⁱ projected a 28% population growth throughout the CVRD by 2050. Visitation pressures at Bright Angel Park are anticipated to continue with this projected population growth, supplemented by the increased appreciation of community outdoor recreation and nature.

2.3. Peak Visitation

While annual visitation counts provide an overview of visitation growth, it is apparent that peak visitation events provide many of the experiential and operational impacts. Although the visitor counter data over the years is incomplete, the following table (Figure 3) provides a general perspective on growing peak visitation days.

	2012-2015	2017	2019	2021
Over 500 visits per day	Probably <5 per year	20	22	103
Over 800 visits per day	0	1	0	14
Over 1,000 visits per day	0	0	0	4

Figure 3 – Peak Visitation Days (2022 data is incomplete and not included due to partial year hardware failure of the primary vehicle counter)

Peak visitation days can occur due to a number of factors, the most common being weekends/statutory holidays (see Figure 4), as a result of park events (see Figure 7) and in relation to warmer weather. While the influence of weather is not formally tracked, the record-breaking spike in visitation seen during the June 2021 “heat dome” event (see Figure 5) may demonstrate the growing public demand for cooling environments and swimming access during extreme heat events, which are predicted to become more frequentⁱⁱ.

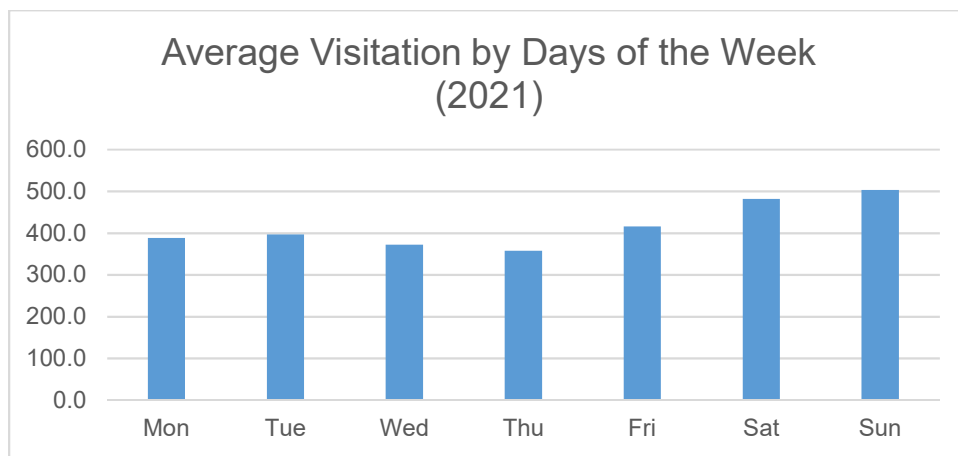


Figure 4 - Average Visitation Counts by Days of the Week

The park growth can also be tracked seasonally, with the summer months displaying the highest visitation numbers. The following chart (Figure 5) details the growth in average visits per day through the summer season.

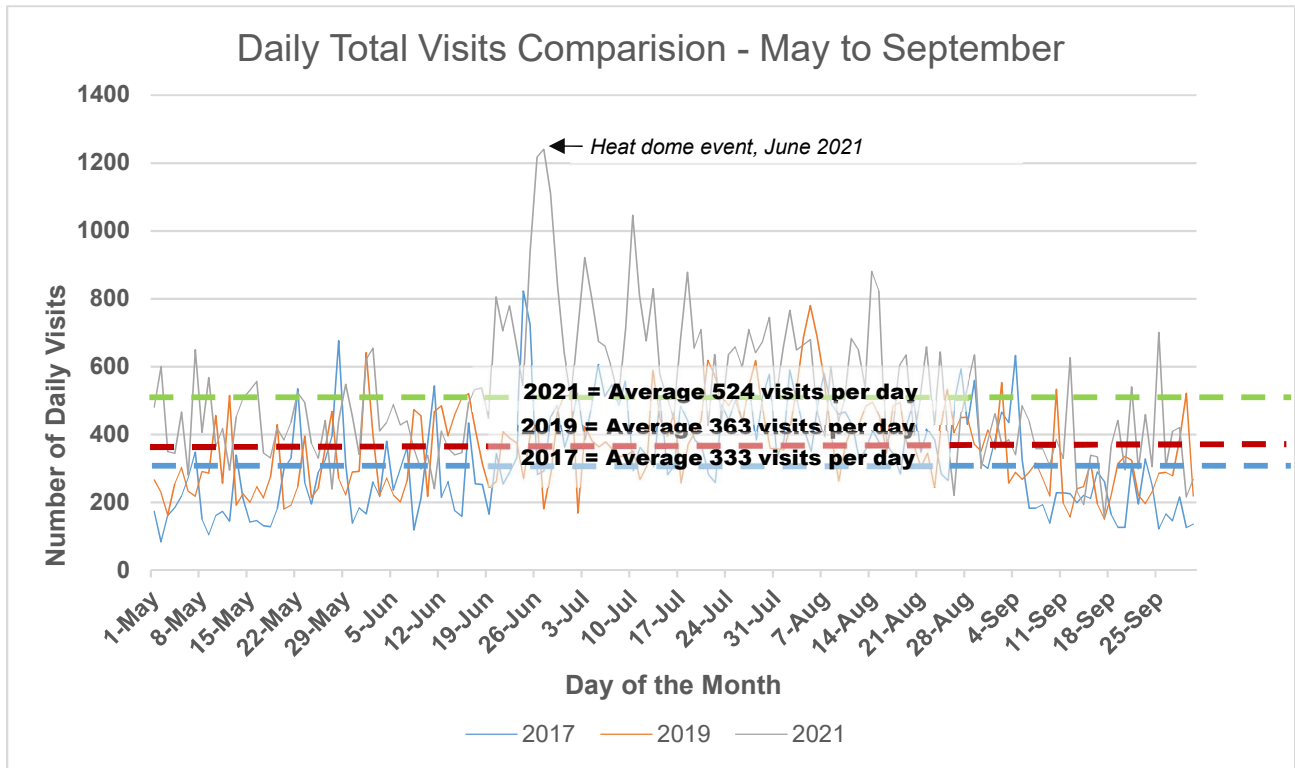


Figure 5 - Summer Season Visits Per Day (2017, 2019, 2021)

In viewing the distribution of visitation throughout the period of the day (Figure 6), the daily visitation use pattern for the June-July period comparison between 2017 and 2021 remains generally consistent, with the peak hours being between noon and 5:00 p.m.

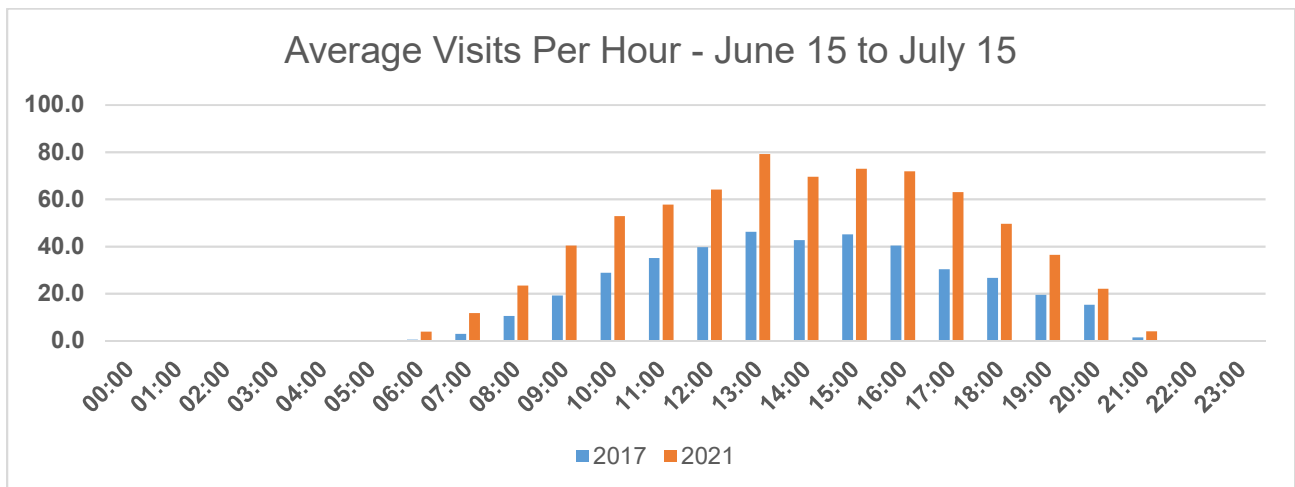


Figure 6 - Average Visits Per Hour Comparison (June/July period 2017 versus 2021)

2.4. Park Use Bookings - Special Events, Picnic Shelter Reservations and Group Camping

Park use reservations, notifications and permits are utilized for organized group use in the park, in order to:

- provide for exclusive use reservations (picnic shelter reservations only);
- prepare facilities (cleaning, supplies and reservation signage);
- confirm insurance, where required;
- share information, such as facility closures or construction;
- manage the number of large groups in the park at any one time; and
- provide for tracking of these uses with respect to overall park capacity.

Specific types of bookings at Bright Angel Park include picnic shelter reservations (such as family or organization gatherings), school field trips, recreation or volunteer programs (CVRD or other), research or restoration permits and special events (such as wedding ceremonies).

A special event is one that is open to the public, held by an organization/society/club, requires special set-up or involves activities that are outside of normal park use. Special events require permits approved by the CVRD, but have no associated fee. For private events under 40 people (for example, a children's birthday party or small wedding ceremony), with no picnic shelter reservation or set-up, the CVRD promotes the use of the park group use notification process to advise the Regional District of the planned use. This allows the CVRD to review for and advise of potential conflicts with other park uses/events or scheduled maintenance work.

For private events with over 40 people, a special event permit application is required (with the exception of regular picnic shelter reservations, which can include up to 60 people). The majority of picnic shelter reservations request one or both picnic shelters, at a rate of \$10-20/hour each (determined by group size), with a 2-hour minimum. The upper field area was available for reservation (exclusive use for a fee) until 2019. Specific booking of the upper field area has since been discontinued due to a lack of supporting amenities and other changes to support general park use; however, the space can still be used by large groups when requested through a special event permit application.

The tracking process for bookings has evolved over the years, with limited data prior to September 2018, and with Covid-19 restrictions influencing the data in 2020-2021. However, the available data and observations by the Parks & Trails Division indicate that the number of bookings has increased over time. Booking statistics for 2019 and 2022 are shown in Figure 7 below.

Bright Angel Park Bookings Statistics (2019 and 2022)

	2019	2022
Total bookings	111	184
Total picnic shelter reservations	71	166
Total guests for picnic shelter reservations	2,585	4,390
Camping bookings	13	N/A

	2019	2022
Special event permits	26	24
Bookings less than 4 hours	27	104
Bookings over 40 people	18	15
Bookings over 80 people	3	2
Total camping revenue	\$1,360	N/A
Total picnic shelters rental revenue	\$6,122	\$7,558
Field rentals	2	N/A

Figure 7 – 2019 and 2022 Bright Angel Park Bookings Statistics

Special events at Bright Angel Park, which can coincide with warmer weather and weekends, are noted with contributing to peak visitation days (see Figure 8). With an influx of special event attendees at one time, the park can experience increased crowding at amenities such as the playground, picnic shelters, parking areas and/or the washroom facility.

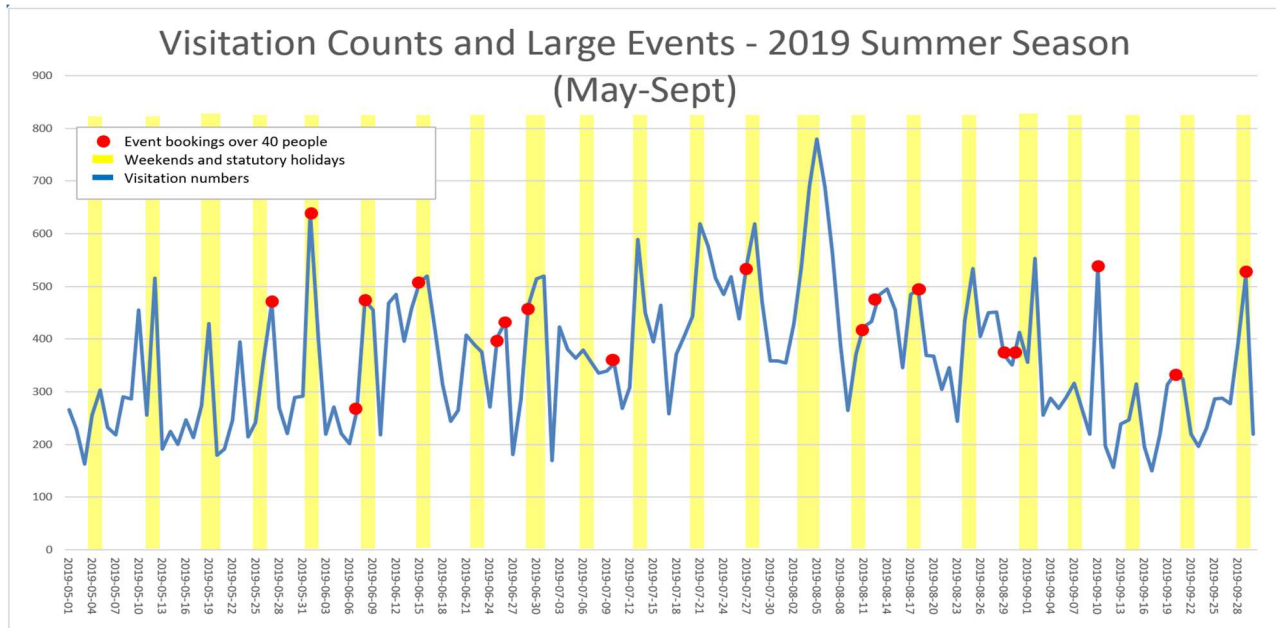


Figure 8 - 2019 Visitation Counts and Large Events (May – Sept 2019). (Special Events utilizing large passenger vehicles (i.e. school buses) may not be accurately captured by the vehicle counter data shown.)

Larger special events at park sites, in general, can increase the risk of wear on park infrastructure, require additional resources to meet safety and maintenance standards, and require more contractor/caretaker time with respect to site management. These events also require additional time by the Parks & Trails Division for review and approval of the event permit.

In 2020–2021, due to the Covid-19 pandemic restrictions on gatherings, park special event permit applications, picnic shelter reservations and group camping bookings were suspended at Bright Angel and other CVRD parks. This suspension offered an opportunity to observe the park’s parking capacity, without the longer-term visits (2+ hours) associated with special events and group bookings. Visitation data indicates that typical vehicle parking duration for day-use visits is 1-2 hours, whereas the average special event or picnic shelter booking is 4-5 hours. The average

group camping booking for years prior to 2020 were typically 23-47 hours (one or two nights) in duration. Without the larger group booking events occurring in 2020, the capacity of the upper and lower parking lots in the park was otherwise available for day-use visitors to the park. Use of the designated overflow parking area, and informal parking on neighbouring streets adjacent to the park, did not occur at the frequency of previous years, despite increased numbers of visitors. This highlights the impact that in-park special events and larger park bookings can have on parking availability and the experience of a typical day-use visitor at Bright Angel Park.

In late June 2021, the CVRD's park bookings and special event applications program resumed, following easing of pandemic restrictions on public gatherings, although bookings for group camping at Bright Angel Park remained suspended. Bookings in 2022 for Bright Angel Park, including picnic shelter reservations, showed a dramatic increase in comparison to 2019 (see Figure 7). Of note, with the return of picnic shelter reservations, the number of overflow parking demand days increased again.

2.4.1. Group Camping

Group camping in Bright Angel Park was a carryover use from when the park was formerly operated by the Bright Angel Park Society, who managed the park up until the late 1990s under an agreement with the Province of BC. Until group camping was suspended due to the Covid-19 pandemic in 2020, the upper picnic shelter area was available for tent-only group camping bookings, with approximately 8-10 group bookings taking place per year, for a duration of typically 1 to 3 nights. As a unique carryover limited-use activity within the CVRD's parks and trails system, it was apparent that administration and operational resource time requirements for group camping were comparatively high, in contrast to day-use shelter bookings and in-park special events. In addition to staff time to manage bookings, the park caretakers provided check-in and check-out services, and monitored groups for adherence to CVRD's bylaws.

Other management issues with group camping included frequent special requests, such as:

- access and use of the group camping area by recreational vehicles;
- connection to hydro power outlets and use of portable generators (which are not permitted for use in CVRD parks); and
- special accommodation requests, such as removal of locked bollards to transport camping gear the short distance from the parking lot to the group site.

User survey comments also indicated experiential impacts to day-users of Bright Angel Park due to group camping activities in the park. The feedback included:

- competition for parking (group camping occurred in the field area adjacent the main parking lot utilized by day-use visitors);
- multi-day shelter rentals for camping groups, limiting availability for day-use;
- the presence of non-typical activities/features in a day-use park environment (such as tents, sleeping-wear and personal grooming/washing);
- noise and activities taking place after regular park hours, which was also a source of complaints from park neighbours.

Park caretakers also noted issues with unattended campfires and the increased need for clean-up around the upper picnic shelter following group camping use. Some of the camping

groups also noted issues with the lack of camping-related amenities typical of campgrounds that cater to groups, such as no designated parking area and the lack of showers, power connection(s) or a potable water source for larger containers.

3. DISCUSSION

3.1. Visitor Capacity

The growing pressures of increasing visitation at Bright Angel Park pose challenges to maintaining a sustainable balance between park values, and were noted in the Management Plan as requiring further study to address. As reflected in park user surveys undertaken over the years, Bright Angel Park is highly valued for its ecology and habitat, as well as for the outdoor recreation it offers (i.e. trail network, playgrounds, picnic shelters and swimming). As the park visitation increases to experience and enjoy these park values, the impacts risk degradation of the very experiences and values for which the park was established. Park management research refers to this as approaching the *carrying capacity* or *visitor capacity* of a parkⁱⁱⁱ. That is, there is a limit to the types of uses and amount of users a park area can reasonably accommodate while still maintaining the desired resource conditions and visitor experiences, and within the available management resources. Carrying capacity can be further considered as:

- *Experiential capacity* - how many people can utilize the park before their experiences are impacted (e.g. crowding, noise, lines or increased user group conflicts).
- *Environmental capacity* - the resiliency of the park ecosystems to visitor use impacts, in consideration of acceptable limits of change.
- *Operational capacity* - the personnel requirements, financial resources, and types and size of facilities available to support the Management Plan's vision and goals.

Rather than considering carrying capacity as a defined number of visitors a park can accommodate, it is instead an interplay between these three aspects of capacity and associated variables. It requires an analysis of how much and what types of use that can be accommodated while still meeting a park management plan's vision, goals, objectives, desired conditions and standards. If increased visitor use is beginning to affect what a park management plan sets out to achieve, then some variables can be considered for adjustment through management interventions to address and/or mitigate the impact.

When use is beginning to exceed carrying capacity, there are different types of capacity management strategies that can be considered, inclusive of:

- *Strategies for controlling visitation* – such measures can include parking time limits, shuttle buses, seasonal parking fees, communications (i.e. social media posts that indicate a park's parking area is full), bookings policies or day passes. Busier park systems, such as BC Parks (particularly around the lower mainland), Metro Vancouver and Capital Regional District Regional Parks, have been increasingly utilizing combinations of such measures. Strategies can also include capping the types of programming that draw people to the park, or even removing or not replacing built park amenities at the end of their service life.

However, it also needs to be acknowledged that some of these types of strategies can be perceived as controversial, and require careful consideration of the implications for equitable access, public health and well-being, spontaneous park use, administrative/operational resources and more.

- *Site design strategies* – design measures can make a park site more resilient to increasing use, such as fencing sensitive areas, paving parking lots or increasing infrastructure design standards (e.g. larger cisterns or septic fields, or surfaced trails) to address impacts of increased park visitation use.
- *Operational strategies* – operational measures can include increased resources for parks bylaw compliance & enforcement, operations, consumable supplies, traffic control management, increased maintenance schedules and shorter capital replacement periods.
- *Visitor education and stewardship strategies* – education and stewardship measures can include educational signage, volunteer programs, social media campaigns, or educational messaging or programs to encourage stewardship-minded behaviors (e.g. “stay on the trail”, “leave no trace” or public educational events).
- *Monitoring and evaluation strategies* – in some cases, while there may already be signs of use impacts, conditions may not yet justify management, programming or site changes. However, it may be prudent to establish monitoring programs to track growth of key issues so that actions are taken at the appropriate time.

At Bright Angel Park, there are signs the park may be approaching or past its carrying capacity in some respects, as indicated by infrastructure assessments, public survey comments, operational issues, neighbour complaints and signs of environmental impacts. The key issues are discussed further in Section 3.2. Capacity management strategies are recommended (see Section 4) in order to maintain the sustainable stewardship vision established in the Management Plan, where recreation and natural values are balanced.

3.2. Key Issues

Through engagement with park users, as well as feedback from park caretakers, the parks maintenance contractor and observations of Parks & Trails Division personnel, five key issue areas have been identified through this assessment regarding park use and the capacity at Bright Angel Park:

1. Environmental Impacts (3.2.1)
2. Parking and Park Access Issues (3.2.2)
3. Congestion and Visitor Experience (3.2.3)
4. Operational and Capital Replacement Resources and Funding (3.2.4)
5. Limited Washroom Infrastructure (3.2.5).

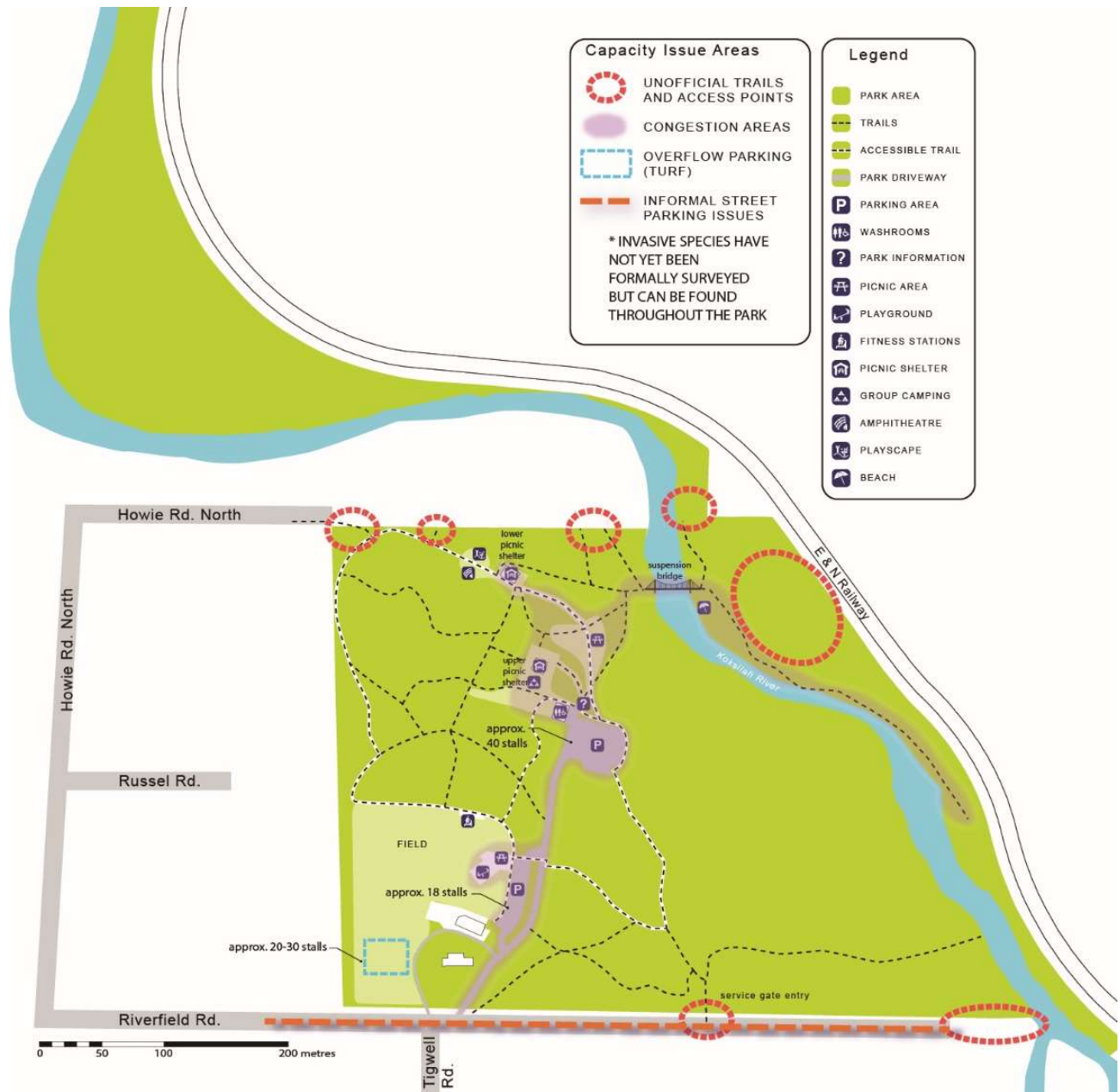


Figure 9 - Park Capacity Issue Areas

3.2.1. Environmental Impacts

In 2012, a Baseline Ecological Assessment for Bright Angel Park was completed by Madrone Environmental Services. The report notes multiple areas of mapped sensitive ecosystems along the river, including mature riparian forest and active treed floodplain. The Koksilah River is also noted as fish habitat. The undeveloped areas of the park are noted as providing moderate to high habitat suitability for numerous red, blue and yellow listed high-profile wildlife species. Public user survey comments also point to the high public value placed on the habitats and ecological services in the park.

One of the Management Plan's three management principles is to ensure ecological integrity is preserved through park management. While an updated Ecological Assessment study has not yet been undertaken for the park (an action identified in the Management Plan to monitor use impacts), informal observations have noted areas of the park's forest ecosystem are experiencing pressure from increased visitation. The impacts noted include informal access paths and off-trail use, trail widening and soil compaction, resulting in some habitat loss and fragmentation. The demand for river access and beach gathering areas has led to informal trail creation, vegetation loss and compacted and eroding soils within valuable riparian habitat. These impacts can also compound natural processes like erosion, storm damage and the spread of invasive plants, further deteriorating habitat conditions.



Figure 8 - Trail and gathering areas widening, soil compaction and loss of understory vegetation near the river

Environmental Degradation – Visitor Use Impacts & Considerations Summary

- Trail and gathering area widening.
- Vegetation trampling, exposed soil, exposed tree roots, and soil compaction leading to deteriorating vegetation health, increasing risk of disease, insect damage, and danger trees, as well as decreased resilience to climate change impacts.
- Unofficial access paths fracturing habitat.
- Unleashed dogs can disturb wildlife and lead to more frequent uncollected feces and subsequent environmental damage from introduced nutrients and pathogens^{iv}.
- Increased spread of invasive species.
- Increased exposed soil erosion and sediment reaching the river.
- Decreased areas of wildlife refuge due to proximity of park users and pets.
- Increased operational costs maintaining and patrolling expanding use areas, and restoring habitat.

Part of the challenge of minimizing visitor use impacts along the Koksilah River riparian zone is that the area is a dynamic natural environment. Previous efforts to limit informal trail creation and widening gathering areas, through installation of split rail fencing and restoration planting, have washed away or been damaged during extreme river flow flood events.



Figure 10 - Root exposure and damaged fencing after November 2021 flooding

3.2.2. Parking and Park Access Issues

There are approximately 58 gravel parking stalls at Bright Angel Park, with 18 in the upper lot and 40 in the lower lot. The current level of park visitor vehicle traffic requires regrading of the gravel access road and parking areas at least twice per year to address potholes, washboards and associated minor drainage issues. Dust abatement is also, ideally, applied twice per year. An area of the upper grass field with access off Riverfield Road is also designated for overflow parking, as required, with space for 20-30 cars. Typically, the overflow parking area is utilized 6-8 times per summer to accommodate park visitation demand on busy days. However, when the gravel parking lots are full, visitors also tend to park along the main park gravel access road, or outside of the park along Riverfield Road, and walk into the park through official and unofficial access points. This informal parking can create unsafe traffic conditions within the park and

damage vegetation. Additionally, when visitors experience or expect full parking lots, they may more frequently park along the public roads beside the park, leading to neighbour complaints, in addition to the creation of informal trail access into the park.



Figure 11 - Full parking lots and parking along access road

Parking and Park Access – Visitor Use Issues & Considerations Summary

- Long-term parking associated with special events and camping reduces availability for short-term visits.
- Full parking lots during peak visitation hours can lead to park visitor frustration when arriving at the park.
- Informal parking on neighbouring roads by park visitors can create safety concerns and neighbour complaints.
- Informal street parking is occasionally utilized for after-hours park access out of sight of the caretakers.
- Uncontrolled park access points facilitate the creation of informal trails, which bypass counters, caretaker oversight and regulatory signage.
- Informal parking along shoulder areas of the park entrance road can require landscape repairs to mitigate damage from vehicles.
- Traffic level use on the park parking lots and entrance road have resulted in increased repairs and maintenance of these gravel surfaces.
- Increased demand on park caretakers, including management of overflow parking area.
- Regional District resources to address increased park bylaw inquiries and neighbour complaints.
- The informal summer overflow parking area is showing signs of turf wear which is visible year-round (Figure 12).



3.2.3. Congestion and Visitor Experience

Bright Angel Park user surveys (conducted in 2009, 2012 and 2013) have provided feedback on the types of experiences that are valued in the park. Comments indicate that park visitors value both the existing nature-based recreation opportunities (such as walking and swimming) and the built facilities (picnic shelters and playgrounds), as well as protection and restoration of the environment. Comments also included concerns about the impact of group camping, over-developing the park, parking issues and the environmental impacts of use, as well as support for maintaining the natural experience.

Congestion and Visitor Experience – Visitor Use Issues & Considerations Summary

- Changing/decreasing quality of desired visitor experiences, especially solitude in nature.
- Crowding and lines in the park around upper picnic shelter, washroom building, lower parking lot and the single-track suspension bridge.
- Increased user interaction throughout the park.
- Increased user conflicts, including increased pet-related conflicts in the park.
- In-park special events, school group use and group camping, along with normal peak use, can result in a

concentration of the majority of park users in the central, core areas in the park.

- Two picnic shelters, accommodating up to 60 people at each location, are reserved for long durations, especially for group camping, limiting informal shelter use, and causing congestion of the parking and facilities.
- Limited safe and official water access points and gathering / blanket areas at the river.



Figure 13 – Washroom lines

- Increased daily maintenance demands on park caretakers and contractors.
- Increased parks bylaw infraction complaints.
- Survey feedback questioning the continuation of group camping due to the size and duration of activity during the busiest park use times of the year (i.e. summer weekends).
- Group camping use conflicts with day-users and after-hours conflicts with neighbours (i.e. noise).



Figure 14 - Crowded trails

3.2.4. Operational and Capital Replacement Resources & Funding

Bright Angel Park is the CVRD's only sub-regional park, funded through annual taxation within the designated area supporting the service, inclusive of Electoral Areas A, B, C, D and E (as provided through CVRD's Budget Function 281 – Bright Angel Park).

While visitation has increased an average of 19% annually, and is more than three times what it was in 2015, the core operating budget allocation for the park has only increased approximately 2-3% annually. Additionally, the costs of consumables (i.e. toilet paper) and contracted services have increased at a much higher inflation rate, in recent years as much as 30-40%.

As visitation numbers have grown, it has been necessary to adjust the scope of services provided between the park caretakers and the parks maintenance services contractor in response to the increased use of washrooms, shelter booking/reservation preparations, overflow parking management and nightly park closures.

High visitation is also increasing the wear on facilities, reducing lifespans before capital repair/replacement is typically required. Climate change is further amplifying this progression; storm and flooding clean-up and repair requirements are noted to be increasing over the years. However, within the scope of the existing annual operating budget for Bright Angel Park and current lack of established capital reserves for this function, there is limited capability to accumulate reserve funds for capital replacements or storm recovery. In particular, projects completed in recent years have primarily relied on external grants and operating reserves.

Picnic shelter reservations and event bookings have also increased, requiring additional effort by the Parks & Trails Division for review and processing, along with additional time for park caretaker site preparations and maintenance. Bookings made for less than four hours still require a similar amount of effort by the Parks & Trails Division and the park caretaker to administer as for bookings that are for a longer duration (and at less revenue). It has been noted that some groups may also arrive earlier and stay later than the allotted time booked.

At the same time, public expectations remain high, with feedback received regarding maintenance and management issues. Increasing visitation demands and impacts, combined with increasing costs (but with limited increases to the operating budget), are placing pressure on the sustainability of the current operational level of the park.

Operations – Visitor Use Issues & Considerations Summary

- Maintenance and replacement cost increases are placing pressure on the operating budget.
- Aging park infrastructure upgrades, and/or replacement through asset management, requires funding consideration which is otherwise not factored into current annual budgets for Bright Angel Park.
- Growth in park visitation is increasing wear and tear with shortened asset repair and replacement lifecycles.
- There is currently a lack of budget capacity for responding to unforeseen storm/flooding clean-up and repair.
- Increases in online reservations and special event applications are correspondingly impacting on time to process by the Parks & Trails Division.

3.2.5. Limited Washroom Infrastructure Capacity

The public washroom facility has limited well water and septic capacity. The existing septic system was constructed in 2014 to a design standard of 100 people/day at 4 gal./person. While the facility uses low-flow fixtures with likely much smaller volume use per visit, the current annual visitation is now three times what it was at the time of design. Events and school group visits in particular can cause spikes in use patterns. The septic system was designed with a timer to cope with peak use events, to distribute the flow from holding tanks to the field over a 24-hour period. While there have been no obvious signs that current user demands on the system are exceeding the design capacity, the maintenance program had to increase tank pump-outs to an annual basis in recent years.

In the past, water was drawn from the Koksilah River to provide for a limited supply in the park (primarily for irrigation as potable water). Currently, the water is provided by well collection. There are two wells onsite. One provides ~5 US gal./ minute, and the other has been abandoned due to lack of flow. The working well supplies the public restrooms, the caretaker residence and limited irrigation (the lower picnic area lawn and the trees at the playground). Due to the limited flow available, the water system includes 3,000 US gal. of cistern storage to collect enough volume for peak use hours. Increasing peak use due to high visitation and increasing group events often corresponds with the warm, dry summer months. To date, the supply has not run dry; however, it is unknown how much water is actually being utilized, or if further supply or storage volume may be needed in the future, especially in light of climate change.

4. RECOMMENDATIONS

The following are proposed management action recommendations to mitigate the key issues in a cost-effective manner and with the least amount of negative impacts. Actions are recommended under each of the five general strategy approaches for addressing capacity issues:

1. Strategies for Reducing Visitation Pressures (4.1.);
2. Resilient Site Design Strategies (4.2);
3. Operational Strategies (4.3);
4. Visitor Education and Stewardship Strategies (4.4); and
5. Monitoring and Evaluation Strategies (4.5).

4.1. Strategies for Reducing Visitation Pressures

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 2 – Pets
- Objective 7 – Enhancing and Updating Park Amenities

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 2 – Pets
- Objective 7 – Enhancing and Updating Park Amenities

4.1.1. Cap the Types of Visitor Attractions

Capacity issues are representative of the appreciation and success of this unique park. Its diverse programming options include high quality and accessible nature-based recreation, as well as built amenities. Many of the built amenities were expanded or upgraded in 2014-2015, likely a contributing factor in the subsequent rapid increases in park visitation. However, given the growing impacts from high visitation, it is now recommended to cap the types of programming and facilities, in order not to attract new user groups to the park that would add to increasing visitation pressures.

4.1.2. Rescind Further Exploration of an Off-Leash Dog Park at Bright Angel Park

The Management Plan acknowledges that Bright Angel Park is popular for dog walkers, who are currently required to have their dogs on-leash at all times. Creating designated off-leash dog areas or a beach is a common request in visitor use surveys, but with mixed public support. The Management Plan's actions call for monitoring dog use, and more exploration of adding off-leash areas, including further public engagement. Given capacity issues, the Capacity Assessment recommends that no further attractions be added to the park, including off-leash dog areas. Based on other established dog off-leash areas within the CVRD, creation of a designated, fenced dog off-leash area at Bright Angel Park is estimated in the order of \$75,000 - \$100,000. Dog use will

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 7 – Enhancing and Updating Park Amenities
- Objective 10 – Fires and Urban Interface
- Objective 11 – Emergency Planning

continue to be monitored, and further management actions may be required at a later date to address associated issues.

4.1.3. Manage Bookings and Special Events to Reduce Peak Visitation Numbers

The following is recommended for implementation to address group use capacity issues at Bright Angel Park:

- Limit group picnic shelter reservations to the upper shelter only, allowing the lower shelter to be open for informal day-use by smaller groups and families.
- Renovate the lower shelter to better accommodate use by multiple smaller groups / families (a mid-range action, undertaken when shelter asset renewal is required).
- Implement group size limits for picnic shelter reservations and special events based on shelter capacity and parking availability within the park (e.g. up to 30% of parking capacity to establish group size limit for special events if not otherwise used to site as with school group use).

4.1.4. Discontinue Group Camping Bookings

Camping has been suspended since the onset of the Covid-19 public health measures in March 2020. While other bookings were reinstated mid-2021, group camping at Bright Angel Park has remained suspended. Due to the operational requirements and issues, impacts on parking availability, and other day-user conflicts that contribute to peak visitation spikes, it is recommended in this Capacity Assessment that group camping at Bright Angel Park be formally discontinued.

In support of this recommendation, there have been relatively few camping inquiries since group camping was suspended in 2020 in response to Covid-19, and no formal complaints have been received regarding the ongoing suspension of group camping since general Covid-19 restrictions were lifted last year.

Discontinuing group camping allows for other groups to continue to utilize the picnic shelters on weekends (when group camping was typically booked), and effectively establishes Bright Angel Park as a day-use park only.

Financial Implications:

Revenue received from group camping in 2019 was \$1,370; however, administration and operational resource

requirements and costs to support overnight group camping were significantly higher.

4.2. Resilient Site Design Strategies

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 5 - Accessibility
- Objective 7 – Enhancing and Updating Park Amenities
- Objective 9 – Maintenance

4.2.1. Assess Resurfacing the Park Access Road & Parking Lots

It is recommended to evaluate the cost-benefit of installing more durable surfacing on the park access road and main travel lane within the parking lots. Increasing traffic levels on the existing gravel road surfaces require high operational costs for bi-annual pothole management and dust abatement. Resurfacing with asphalt requires upfront capital costs, but reduces annual operational costs. The assessment should also consider park character/aesthetics, green stormwater management for improved water quality run-off treatment, better defined/increased parking stalls, accessibility and air quality. Partial asphalt surfacing of only the parking area access road is an option as well, leaving the parking stalls as gravel.

Financial Implications:

Unknown at this time, as further work would need to be completed to determine the feasibility and associated costs/benefits to proceeding with a partial or complete paving of the park entry road and/or parking stalls within the upper and lower parking areas.

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 7 – Enhancing and Updating Park Amenities
- Objective 9 – Maintenance

4.2.2. Construct a Formal Overflow Parking Area

Given that the informal overflow parking area in the upper field is frequently opened for busy summer days, it is recommended to formalize this area as a seasonal overflow parking lot for 20-30 vehicles as a near-term action. This will significantly reduce park caretaker efforts with overflow traffic area delineation and management on busy days. Installation of gravel surfacing will address impacted turf areas and provide a more resilient summer season surface. Wheel stops would more clearly delineate parking stalls. The project would also incorporate construction of a gravel-surfaced trail linking to the main trail.

Financial Implications:

An initial capital budget in the range of \$40,000 would be required to establish a formal overflow parking area. A connector trail is estimated at \$10,000 to construct. Annual

maintenance costs, thereafter, would be in the order of \$3,000 - \$5,000.

Related Management Plan Objectives

- Objective 3 – Habitat Degradation
- Objective 5 – Accessibility
- Objective 7 – Enhancing and Updating Park Amenities
- Objective 8 - Maintenance

4.2.3. Define and Restore Expanding Use Areas

Increases in the general operating budget would support the ongoing need to address informal widening and braiding issues with existing trails, as well as close informal trails, using restoration planting, woody debris, split-rail fencing, surfacing materials and other strategies. This would also include upgraded trail surfacing, where required, and an extension of the gravel trail around the upper field.

Financial Implications:

An increase of \$5,000 per annum to the annual operating budget is recommended to fund ongoing restoration and management of impacts associated with braiding and informal creation of trails, and intrusion into park natural areas.

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation

4.2.4. Assess Options for Management of Riverfield Road Parking and Access

The park service gate access off of Riverfield Road to the east of the main park entry is used infrequently for access to complete habitat restoration work within the park and other operational activities. However, it does provide for an uncontrolled pedestrian access point into the park, particularly in conjunction with informal parking along Riverfield Road, which is a source of neighbour complaints. The action will be to continue to explore options with the Ministry of Transportation and Infrastructure and the RCMP to limit informal public parking along Riverfield Road or, alternatively, assess if this access point can be closed and restored with minimal impact to park operations.

4.3. Operational Strategies

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 7 – Enhancing and Updating Park Amenities
- Objective 8 - Maintenance

4.3.1. Septic and Well Assessments

It is recommended to add a flow meter on the washroom to better measure water use, the impacts of peak use and events, and how much flow is entering the septic fields. This will assist in indicating if either the water or septic systems are approaching capacity issues. If the public washroom's septic system is determined to be operating beyond design levels, it is recommended commissioning a field condition assessment

to include consideration of increasing climate change impacts and options for future management measures.

Financial Implications:

The estimated costs for installing a flow meter and septic field assessment, if required, is \$10,000.

4.4. Visitor Education and Stewardship Strategies

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 3 – Habitat Degradation
- Objective 6 – Stewardship and Volunteering
- Objective 8 - Maintenance

4.4.1. Increase Invasive Species Management and Restoration Program Capacity

Reassessment of the annual invasive species management budget allocated to Bright Angel Park is recommended to match the need, along with increased leverage of the partnerships/volunteer interest in contributing to the efforts and upkeep in this park. An updated invasive inventory is planned for 2023-2024, which will inform a recommended annual budget. Expansion of the relationship with the knotweed removal team of volunteers who have been working diligently for the past decade on specific sites within the park to eradicate the spread of knotweed is also forthcoming. Additional plans include increasing the number of volunteer restoration planting events in the park to build on the current relationship with various school groups, as well as increased habitat restoration and invasive plant management funding (which was also an action recommended by the Management Plan).

Financial Implications:

An annual invasive species management budget estimate will be informed by the 2023-2024 invasive species inventory; however, it is anticipated the updated invasive species inventory project could identify a scope of restoration work in the order of \$5,000-10,000 per year, inclusive of efforts through use of volunteers to address the current increasing spread of invasive plant species within the park. This would be further evaluated after 5 years with a reassessment.

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation

4.4.2. Increased Park Ranger Presence

Increased visitation has equated to an increase in user issues, such as conflicts between user groups, park bylaw infractions and complaints. The response to date has included an increased Park Ranger presence at Bright Angel Park, particularly during busy times, such as summer weekends. The Park Ranger uses a range of strategies, from education

to enforcement. Increased 'campaign' efforts are also planned for 2023 to address particular issues through education/enforcement in time-targeted and repeat visits and, where appropriate, may include accompaniment by the RCMP. Campaigns may also be supported by educational elements, such as signage and dog etiquette.

Financial Implications:

Increased deployment of the Park Ranger to Bright Angel Park is otherwise covered through the overall program budget funded through Function 279 – Parks & Trails.

Related Management Plan Objectives

- Objective 8 – Communications

4.4.3. Update Park Signage

The popularity and accessibility of Bright Angel Park is an opportunity to promote broader environmental stewardship and cultural awareness through interpretive signage, as well as more targeted messaging on minimizing use impacts. The current kiosk and other interpretive signage within the park are outdated. Regulatory signage should be consolidated and wayfinding signage expanded upon. The Management Plan proposes upgrades to the signage program that have not yet been funded as of yet. A full signage assessment is recommended for 2024 to establish a plan and to determine a schedule and funding requirements for signage updates, additions and/or removals.

Financial Implications:

The anticipated capital cost for an updated park signage program is \$10,000, which could be implemented over multiple years. Thereafter, an amount in the order of \$1,000 per year would be required for maintenance and ongoing replacement in response to wear/tear, vandalism, etc.

Related Management Plan Objectives

- Objective 3 – Habitat Degradation
- Objective 6 – Stewardship and Volunteering

4.4.4. Grow Partnerships and Volunteer Initiatives

The CVRD Parks and Trails Volunteer Program and stewardship-focused partnerships are excellent opportunities to promote environmental stewardship within the community, while also providing valuable contributions to support Bright Angel Park management. Existing partnerships and volunteer projects include the pollinator meadow pilot project, cedar (Xpey') planting by Quw'utsun Elders and Cultural Connections, workshops and events, the knotweed removal team and various school groups. Growing partnership relationships through groups, such as the Cowichan Stewardship Roundtable, provide opportunities to expand the

stewardship promotion potential of this park, while contributing to its ecosystem health, ecological monitoring and the sustainable outdoor recreation opportunities it offers. Partnership offers that would support the Management Plan's goals should be encouraged, where feasible, in addition to Regional District resources that can also be leveraged to support such initiatives.

Financial Implications:

This program is currently supported/funded through Budget Function 279 – Parks & Trails, with costs only associated with materials (i.e. provision of native plants), as required, funded through Function 281 – Bright Angel Park.

4.5. Monitoring and Evaluation Strategies

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation
- Objective 3 – Habitat Degradation

4.5.1. Undertake an Ecological Assessment Update

A Baseline Ecological Assessment was undertaken in 2012 in advance of park upgrades and the Management Plan process. The report assessed the ecosystems onsite, wildlife habitat and observations, and provided management recommendations for the park improvements planned at the time. The Management Plan recommended an action item for an updated Ecological Assessment, which will be planned for in 2024. An updated assessment will focus on the ecological impacts of increasing visitation, and provide conservation-based management recommendations, including feasible measures for ongoing ecological monitoring.

Financial Implications:

To undertake an updated Ecological Assessment for Bright Angel Park, it is estimated at \$10,500.

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation

4.5.2. Refine the Visitor Experience Monitoring Program

Visitor use surveys in 2009, 2012 and 2013 provided data on public values and desired conditions for the park, that demonstrated early indications of capacity issues. An updated visitor use survey is recommended for 2023 or 2024. This would be designed to supplement previous data and to be repeated in future years, to track changes in user satisfaction and better illustrate when management actions should be taken.

Other tools staff continue to refine in order to monitor user experience include: tracking systems for visitation data, bylaw infractions, safety incidents, complaints, number of times overflow parking is implemented, bookings data and more. The Parks & Trails Division is developing additional and improving existing tracking systems for data collected by the Park Ranger (such as complaints or tickets), to better understand trends and to inform future management actions.

Financial Implications:

There are no financial implications of note (the above are already provided through existing resources of the Parks & Trails Division, funded through Function 279 – Parks & Trails).

Related Management Plan Objectives

- Objective 1 – Conservation and Recreation

4.5.3. Add a Seasonal Vehicle Counter at Overflow Parking Lot Gate

Formalizing the overflow parking area should be paired with the addition of a vehicle visit counter, to more accurately estimate visitation. A counter would be relocated from another part of the park where data collection is under-utilized.

Financial Implications:

The costs to redeploy an existing vehicle counter within the park would be covered under existing annual operational costs.

5. IMPLEMENTATION

The proposed timeline and budget funding requirements summary provided under Section 5.1 below highlights the recommendations outlined in the Bright Angel Park Visitation Review and Capacity Assessment. The budget funds noted would be additional to the annual core funds under Budget Function 281 to operate Bright Angel Park and funding required, as determined through CVRD’s asset management program, to provide for upgrades/replacement of park assets at Bright Angel Park in future years.

5.1 Proposed Implementation Timeline and Budget Implications

			Proposed Implementation Timeline								
	Recommendation	Budget	2023	2024	2025	2026	2027	2028	2029	Ongoing	
Strategies for Reducing Visitation Pressures											
4.1.1	Cap the types of visitor attractions	N/A	Action	**	**	**	**	**	**	**	
4.1.2	Rescind further dog park consideration	N/A	Action	**	**	**	**	**	**	**	
4.1.3	Manage bookings and special events to reduce peak use	N/A	Action	**	**	**	**	**	**	**	
4.1.4	Discontinue group camping bookings	N/A	Action	**	**	**	**	**	**	**	
Resilient Site Design Strategies											
4.2.1	Assess Resurfacing Park Access Road & Parking Lots	TBD		Assess							
4.2.2	Construct overflow parking area	\$40,000/ \$3,000				\$40,000	\$3,000	\$3,000	\$3,000	\$3,000	
4.2.3	Restore trail braiding/informal use impacts	\$5,000		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$3,000	
4.2.4	Assess options parking on public roads	N/A		**							
Operational Strategies											
4.3.1	Septic and well assessments	\$10,000					\$10,000				
Visitor Education and Stewardship Strategies											
4.4.1	Increase invasive species management/habitat restoration	\$5,000/ year			\$5,000	\$5,000	\$6,500	\$7,000	\$7,500	\$7,500	
4.4.2	Increased Park Ranger presence	N/A	Ongoing	**	**	**	**	**	**	**	
4.4.3	Update park signage	\$10,000/ \$1,000		\$5,000	\$5,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
4.4.4	Grow partnerships and volunteer initiatives	N/A	Ongoing	**	**	**	**	**	**	**	
Monitoring and Evaluating Strategies											
4.5.1	Undertake an ecological assessment update	\$10,500			\$10,500						
4.5.2	Refine visitor experience monitoring program	N/A	Ongoing	**	**	**	**	**	**	**	
4.5.3	Add seasonal vehicle counter at overflow parking gate	N/A		Ongoing	**	**	**	**	**	**	
Proposed Annual Budget Implications					\$10,000	\$25,500	\$51,000	\$25,500	\$16,000	\$16,500	\$14,500

APPENDIX A

Management Plan Actions Update

The following table provides a status update on the objectives and actions identified in the 2018 Bright Angel Park Management Plan, and includes the additional actions identified in the Visitation Review and Capacity Assessment, as a summary of actions to be implemented.

Management Plan Objective 1 – Conservation and Recreation To better comprehend the recreational use trends occurring in the park and the associated capacity impacts to infrastructure and natural park values to better plan and manage the park.		
Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Collect seasonal in park satisfaction surveys. 	<ul style="list-style-type: none"> A visitor use survey is proposed for 2024. 	<ul style="list-style-type: none"> Cap the types of visitor attractions (Action 4.1.1). Manage bookings and special events to reduce peak visitation (Action 4.1.3). Discontinue group camping bookings (Action 4.1.4). Septic and well assessments (Action 4.3.1) Undertake Ecological Assessment Update (Action 4.5.1). Refine the visitor experience monitoring program (Action 4.5.2). Add seasonal vehicle counter at overflow parking lot gate (Action 4.5.3).
<ul style="list-style-type: none"> Collect seasonal park use observations and analysis. 	<ul style="list-style-type: none"> Visitor counter data is collected and analyzed twice per year. Informal observations are noted by the Parks & Trails Division during scheduled visits throughout the year. 	
<ul style="list-style-type: none"> Conduct an Ecological Inventory and Assessment. 	<ul style="list-style-type: none"> An updated Ecological Inventory and Assessment has not yet been funded. 	
<ul style="list-style-type: none"> Assess opportunities for additional lands for park expansion. 	<ul style="list-style-type: none"> Park expansion through acquisition is addressed on an opportunistic basis. 	
Management Plan Objective 2 – Pets To monitor existing use of the park of visitors with pets. Explore ideas and concepts to accommodate off-leash opportunities in the park.		
Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Monitor dog use in the park through observations and provide analysis to commission. 	<ul style="list-style-type: none"> General observations of park visitor use, inclusive of visitors with pets, is part of ongoing scheduled visits to 	<ul style="list-style-type: none"> Rescind further exploration of an off-leash dog park at Bright Angel Park (Action 4.1.2).

	the park by the Parks & Trails Division throughout the year, inclusive of Park Ranger program activities.	<ul style="list-style-type: none"> Increased Park Ranger presence (Action 4.4.2).
<ul style="list-style-type: none"> Utilize Park Use Zone Map to identify possible areas for future dog off-leash area. 	<ul style="list-style-type: none"> The 2023 Park Visitation Review and Capacity Assessment recommends not proceeding with establishment of a future dog off-leash area at Bright Angel Park. 	
<ul style="list-style-type: none"> Determine what type of dog off-leash area may be appropriate for Bright Angel Park 	<ul style="list-style-type: none"> The 2023 Park Visitation Review and Capacity Assessment recommends not proceeding with establishment of a future dog off-leash area at Bright Angel Park. 	

Management Plan Objective 3 – Habitat Degradation

To inventory, assess and analyze the ecological health at Bright Angel Park to determine opportunities for ecological restoration, education and volunteer opportunities.

Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Obtain an Ecological Inventory and Assessment. 	<ul style="list-style-type: none"> Completion of an ecological assessment update is recommended for 2024, pending funding. 	<ul style="list-style-type: none"> Define and restore expanding use areas (Action 4.2.3). Increase invasive species management and restoration program capacity (Action 4.4.1). Update park signage (Action 4.4.3). Grow partnerships and volunteer initiatives (Action 4.4.4). Undertake Ecological Assessment Update (Action 4.5.1).
<ul style="list-style-type: none"> Initiate interpretive signage program. 	<ul style="list-style-type: none"> Interpretive signage is available on the park kiosk, and has been installed in conjunction with recent year restoration projects. Update the main kiosk sign in 2024. A more comprehensive interpretive and wayfinding signage program is recommended for consideration in future years, pending funding. 	
<ul style="list-style-type: none"> Initiate a heritage tree inventory / forest health assessment. 	<ul style="list-style-type: none"> A forest health assessment is recommended for inclusion as part of the Ecological Assessment 	

	proposed for 2024, pending funding.	
<ul style="list-style-type: none"> Support water quality monitoring within the park. 	<ul style="list-style-type: none"> Water quality sampling of the Koksilah River is done by the Parks & Trails Division bi-weekly during the summer months through the Vancouver Island Health Public Beach Sampling Program. 	
<ul style="list-style-type: none"> Plant within existing restoration areas. 	<ul style="list-style-type: none"> Restoration work has been done as part of the CVRD's ongoing Invasive Species Management Program. Planting and fencing to restore riparian areas east of the bridge has been challenging to establish due to river flooding events. Recent restoration areas include the main riparian meadow (2022), and upper meadow pollinator project (2019). 	
<ul style="list-style-type: none"> Expand in park recycling opportunities in the park. 	<ul style="list-style-type: none"> This has not yet been implemented. 	
<p>Management Plan Objective 4 – Invasive Species To inventory, annually treat and monitor invasive plants in Bright Angel Park.</p>		
Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Initiate an Invasive Plant Inventory for Bright Angel Park. 	<ul style="list-style-type: none"> Park Operations, the parks volunteer program and partnership groups continue to document, monitor and undertake removal control of invasive species within the park (inclusive of Japanese Knotweed and Policemen's Helmet) 	<ul style="list-style-type: none"> Define and restore expanding use areas (Action 4.2.3). Increase invasive species management and restoration program capacity (Action 4.4.1). Update park signage (Action 4.4.3).
<ul style="list-style-type: none"> Initiate a funded habitat restoration program that supports the treatment of invasive plants. 	<ul style="list-style-type: none"> The Bright Angel Park annual operations budget includes funds to remove invasive species and undertake associated habitat restoration work. A review of the invasive 	<ul style="list-style-type: none"> Grow partnerships and volunteer initiatives (Action 4.4.4). Undertake Ecological Assessment Update (Action 4.5.1) .

	species work completed annually in recent years will be completed in 2023 to determine ongoing program requirements and funding support for future years.	
<p>Management Plan Objective 5 – Accessibility To conduct an accessibility assessment to identify opportunities for creating greater accessibility in the park.</p>		
Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Conduct accessibility assessment of all park amenities. 	<ul style="list-style-type: none"> A 2019 accessibility assessment was completed by the Rick Hanson Foundation which certified Bright Angel Park as accessible. Recommendations for further accessibility improvements were included in the report which are considered annually with park upgrades and minor improvements, as funding permits. 	No additional actions.
<ul style="list-style-type: none"> Develop priority list of achievable accessible trail and amenity upgrades. 	<ul style="list-style-type: none"> The Rick Hanson Foundation assessment included recommendations for further accessibility improvements which are considered with park upgrades and minor improvements as annual funding permits. 	
<p>Management Plan Objective 6 – Stewardship and Volunteering To engage the community to support expanded volunteer opportunities at Bright Angel Park through the 2018 CVRD Volunteer Policy</p>		
Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Engage the community to comprehend interests for volunteering and stewardship at Bright Angel Park (Friends of Bright Angel Park). 	<ul style="list-style-type: none"> Multiple volunteer activities have taken place in Bright Angel Park in recent years through the Parks and Trails Volunteer Program and 	<ul style="list-style-type: none"> Define and restore expanding use areas (Action 4.2.3).

	<p>have been well-attended. The CVRD continues to receive requests from community organizations and school groups for opportunities to participate in stewardship and volunteer activities in the park, which are accommodated through the program.</p>	<ul style="list-style-type: none"> • Increase invasive species management and restoration program capacity (Action 4.4.1). • Update park signage (Action 4.4.3). • Grow partnerships and volunteer initiatives (Action 4.4.4).
<ul style="list-style-type: none"> • Identify volunteer opportunities at Bright Angel Park. 	<ul style="list-style-type: none"> • Some existing restoration areas in Bright Angel Park have experienced limited success due to issues with flooding and heavy use. Additional restoration sites have been recently activated including a pollinator meadow project in the upland area of the park near the playground, and a new riparian restoration area in the lower riparian zone in the south east area of the park. Volunteers have been heavily involved in the establishment of these sites and restoration activities. 	
<ul style="list-style-type: none"> • Initiate Bright Angel Park Appreciation Day. 	<ul style="list-style-type: none"> • A special event day continues to be considered within the annual workplan developed annually through the Parks Volunteer Program. 	

Management Plan Objective 7 – Enhancing and Updating Park Amenities
To develop a comprehensive asset management and replacement program for Bright Angel Park.

Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> • Assess all amenities and develop a cost upgrade/replacement strategy. 	<ul style="list-style-type: none"> • Conditional assessments have been completed for major park facilities (caretaker’s residence, public washroom, storage shed, upper and lower picnic shelters, pump house and the suspension bridge), 	<ul style="list-style-type: none"> • Cap the types of visitor attractions (Action 4.1.1). • Rescind further exploration of an off-leash dog park at Bright Angel Park (Action 4.1.2).

	including scheduling recommendations for capital replacement upgrades and future replacement. This information is incorporated into the CVRD corporate asset management program currently being implemented.	<ul style="list-style-type: none"> Discontinue group camping bookings (Action 4.1.4). Septic and well assessments (Action 4.3.1).
<ul style="list-style-type: none"> Develop a priority replacement program for the pedestrian bridge, two picnic shelters and caretaker's residence. 	<ul style="list-style-type: none"> The suspension bridge was upgraded in 2021/2022, extending the functional life for an additional 10-15 years. The 2021-2024 budgets for Bright Angel Park include funds for roof replacement and minor improvements to the upper and lower shelters. The caretaker residence will be addressed through the CVRD asset management program. 	
<ul style="list-style-type: none"> Continue engagement with community to reflect needs for enhancing park experience. 	<ul style="list-style-type: none"> The Parks & Trails Division regularly receives public comments, questions and feedback regarding Bright Angel Park which are considered for park improvements. A visitor use survey is proposed for 2023/2024. 	

Management Plan Objective 8 – Communications

To provide greater in park communications through the development of an interpretive sign program and assess directional signage needs.

Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Develop and install interpretive signs for the park. 	<ul style="list-style-type: none"> There is an existing kiosk, as well as interpretive signage about riparian restoration work completed in recent years and pollinator meadow restoration projects. 	<ul style="list-style-type: none"> Update park signage (Action 4.4.3).
<ul style="list-style-type: none"> Develop and install park maps in the upper parking area, 	<ul style="list-style-type: none"> A park map is available on the central kiosk. Additional 	

<p>pedestrian entrances on Riverfield Road and Howie Road North and on the east side of the pedestrian bridge over the Koksilah River.</p>	<p>park maps at secondary entrances have not been developed, but will be considered in future years as budget funds and resources are available.</p>	
<p>Management Plan Objective 9 – Maintenance To review and update the maintenance practices at Bright Angel Park investigating financial, environmental and ethical maintenance opportunities.</p>		
<p>Management Plan Actions</p>	<p>2023 Status Update</p>	<p>Visitation Review & Capacity Assessment Actions</p>
<ul style="list-style-type: none"> • Schedule annual review of maintenance between CVRD park operations, contractors and park caretakers to ensure up-to-date practices and address emerging issues or ideas. 	<ul style="list-style-type: none"> • Annual reviews are completed. 	<ul style="list-style-type: none"> • No new actions.
<ul style="list-style-type: none"> • Conduct a park user satisfaction survey. 	<ul style="list-style-type: none"> • A visitor use survey is proposed for 2023/2024. 	
<p>Management Plan Objective 10 – Fires and Urban Interface To maintain best management practices for permitting camp fires within the park and to minimize urban interface fire risk through forest fuel assessment and appropriate abatement.</p>		
<p>Management Plan Actions</p>	<p>2023 Status Update</p>	<p>Visitation Review & Capacity Assessment Actions</p>
<ul style="list-style-type: none"> • Retain a consultant to perform an assessment and provide fuel management prescriptions. 	<ul style="list-style-type: none"> • CVRD parks within the South Cowichan part of the region were prioritized for fuel abatement treatment. The 2017 CVRD South Zone Community Wildfire Protection Plan identified parks within the southern portion of the CVRD as priorities for fuel abatement treatment. However, Bright Angel Park was identified as low priority in the plan for interface fuel treatment, and to date has not been prioritized for funding under the program for completing 	<ul style="list-style-type: none"> • Discontinue group camping bookings (Action 4.1.4). • Increased Park Ranger presence (Action 4.4.2).

	fuel management prescriptions.	
<ul style="list-style-type: none"> To develop a priority abatement action schedule dependent on annual funding. 	<ul style="list-style-type: none"> Funding has not as yet been secured. 	
<p>Management Plan Objective 11 – Emergency Planning To formalize an emergency plan with annual review for Bright Angel Park.</p>		
Management Plan Actions	2023 Status Update	Visitation Review & Capacity Assessment Actions
<ul style="list-style-type: none"> Review emergency protocol for CVRD staff and Bright Angel Park caretaker and develop an interface with the Local Authority Emergency Plan. 	<ul style="list-style-type: none"> A review of emergency protocol is completed annually as part of the annual maintenance plan and park caretaker protocol. 	<ul style="list-style-type: none"> Discontinue group camping bookings (Action 4.1.4). Update park signage (Action 4.4.3).
<ul style="list-style-type: none"> Review emergency access for all locations within the park. 	<ul style="list-style-type: none"> Emergency access is reviewed as part of the annual park maintenance plan for Bright Angel Park. 	
<ul style="list-style-type: none"> Ensure emergency information is available on all park signs and informational documents. 	<ul style="list-style-type: none"> Signs are posted with emergency information in various locations throughout the park. 	

ENDNOTES

-
- ⁱ rennie intelligence. 2019. Review of *Long-Range Projections of Population, Housing, and Employment in the Cowichan Valley Regional District*. <https://www.cvrld.ca/DocumentCenter/View/94223/Long-Range-Projections-of-Population-Housing-and-Employment>.
- ⁱⁱ BC, Emergency Management. n.d. "Be Prepared for Extreme Heat - Province of British Columbia." Www2.Gov.bc.ca. <https://www2.gov.bc.ca/gov/content/safety/emergency-management/preparedbc/know-your-hazards/severe-weather/extreme-heat>.
- ⁱⁱⁱ Park, Hyeone. Rep. *Measuring & Managing Park Carrying Capacity*. Vancouver, BC: UBC, 2020. (Report prepared for Metro Vancouver Regional Parks). https://sustain.ubc.ca/sites/default/files/2020-18_Measuring%20Managing%20Park%20Carrying%20Capacity_Park.pdf.
- ^{iv} Parks and Nature, and Lori Hennings, The impacts of dogs on wildlife and water quality: A literature review (2016). <https://www.oregonmetro.gov/sites/default/files/2017/09/28/impacts-of-dogs-on-wildlife-water-quality-science-review.pdf>.