



Assessing the value of nature parks in Kamloops



Kenna Cartwright Park

Photo credit: Brad Harrison

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Executive Summary

The purpose of this report is to share with the City of Kamloops (CoK) Parks Department results of a research project entitled "Assessing the value of nature parks in Kamloops." The research project design includes user intercept surveys and online user surveys to determine park use, primary activities, satisfaction, and perceived benefits of two selected nature parks in Kamloops, Kenna Cartwright and Peterson Creek.

Intercept surveys were used to collect data from members of the public entering or exiting Kenna Cartwright and Peterson Creek parks from July 1st until September 30th, 2022. Park users unable to participate in the survey at the park but still interested in participating in the study were given a QR code to access the survey at their convenience. There were 165 online surveys and 228 intercept surveys received, for a total of 393 surveys included in the data set.

Research results indicate that overall nature parks such as Peterson Creek and Kenna Cartwright in Kamloops are highly valued by park users. In terms of features, the natural setting is highly valued by users of both parks. Scenery and convenient location as well as hiking and walking trails were identified as important features that facilitate a number of activities in the parks. Survey comments collected from visitors of both parks also highlighted that time spent in nature parks has an overall positive impact on mental and physical health.

With regard to satisfaction levels, the data shows that the majority of visitors are satisfied with the overall cleanliness and quality of trails in both parks. However, respondents identified more trail maintenance and signage as areas for improvement and enhancement of park-user experiences.

Survey respondents also indicated conservation of Peterson Creek and Kenna Cartwright as important and there is a willingness to engage in park volunteer opportunities.

Within the municipal governance of Kamloops there are a number of documents relevant to the Parks Management Plan. These governing documents and subsequent guiding bylaws, programs and practices can be utilized to support a holistic approach to managing nature, and nature parks in particular, in the city.

There are also a number of Canadian urban park research studies that identify municipal challenges such as allocation of budgets, operating budgets, property markets and the role of urban nature parks in ecosystems as services important to biodiversity and climate change. These studies also suggest new ways of approaching the provision of greenspaces in cities and could be valuable resources for the 2023 revision of the CoK Park Management plan.



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Report Background

The City of Kamloops (CoK) has over 100 municipal parks. Of these, 12 are categorized as nature or open space parks. The current City of Kamloops Parks Master Plan, published in 2013, is the primary document guiding the classification and management of parks in the city. In the past nine years, ecological changes and social impacts such as the pandemic and economic challenges have all had an impact on the use and management of natural urban parks in Kamloops. The CoK Parks department is currently developing a new 10-year Parks Master Plan and does not have any current data on park use, activities, demographics, or user perceptions of benefits of any nature parks in Kamloops. While the City Parks Department has installed counters at entrances to some of these parks, the information gathered from the counters is limited and does not survey activities or attitudes of park users.

This nature park values research project provides baseline data through user intercept surveys and online surveys to document motivations, activities, and ecological and social values of users of the two selected urban natural parks in Kamloops, Kenna Cartwright, and Peterson Creek. Ideally, these research results will assist the CoK in aligning its urban parks strategy and policy decisions with the values of park users and reflect the ecological and social values of park ecosystems.

In November 2021 and March 2022, TRU Researcher in Residence, Cheryl Gladu, facilitated zoom meetings with Robin Reid, Associate Professor in the Tourism Management Dept at TRU and members of the CoK Parks Department. City Parks representatives expressed enthusiasm for the proposed research project highlighting the importance of filling research gaps that will contribute to the direction of the 10-year Parks Management Plan. These initial meetings between faculty and the city were instrumental in facilitating a community university research project and partnership as well as a focus for the research and types of surveys to be used to collect park-user responses.

It was concluded that a combination of intercept surveys at park entrances and online surveys would be conducted in the summer of 2022. Initially, four nature parks were selected for the intercept surveys pending grants to support four students administering the surveys in the parks. However, only one grant was secured through the TRU Sustainability Grant, which provided funding for two students to conduct surveys in two parks, Kenna Cartwright, and Peterson Creek.

The City of Kamloops has a licencing agreement with Yardstick, an international project management platform that helps local governments in Canada, Australia, New Zealand, and Scandinavia establish benchmarks for municipal parks and recreational facilities. The platform also allows municipalities the opportunity to compare their results with partner cities. Through this licence the City of Kamloops has access to intercept survey questions and data analysis of survey results. Initially we were planning to use the Yardstick platform to design survey questions and analyse the data. Upon review of the Yardstick questions and platform it was determined that a broader approach with options to customize the survey questions and maintain access to the raw data would be more beneficial for this study. A few of the yardstick questions were adapted for inclusion in the surveys, such as park user satisfaction levels. However, the majority of survey questions were designed to capture user responses relevant to Kamloops nature parks in particular.

We would like to extend our appreciation for the TRU Sustainability Research Grant for the financial support in moving this project forward; Cheryl Gladu, TRU Researcher in Residence for her support and for coordinating the initial meetings to facilitate this community university research project, and the City of Kamloops Parks Department for their support.

Introduction

In 2021-22, approximately 55% of the world's population was estimated to be living in an urban area or city, a percentage expected to increase to 68% by 2050 (UN Department of Economic and Social Affairs).

In European cities, patterns of urbanization and densification of cities often resulted in the removal or degradation of green spaces actions that were difficult to reverse. In addition to the impacts of urbanization, "funding cuts for municipal service provisions, including parks, have meant reduced resources (staff and financial) for park maintenance in Europe, including Berlin, the United Kingdom and Denmark (Boulton, et al 2020). While urban centres across North America are at varying stages of development, many face the same challenges of diminished public greenspaces along with diminished financial and natural resources associated with the provision of these spaces (Boulton, et al 2020).

Green space allocation in urban centres across Canada has also been impacted by population growth, development activity and urban sprawl. A recent survey of urban green space by Stats Canada revealed a decline in urban greenness in Canadian cities. The researchers used satellite images from 2001, 2011, 2019 to estimate the amount of greenspace in 31 urban centres across the country. The study highlighted how urbanization processes such as densification and urban expansion result in more 'grey' areas consisting of "buildings, impervious surfaces, bare soils and low-density vegetation" (Lantz, Grenier and Wang 2021). As urban centres move toward densification, parks and green spaces become even more important to individual and community wellbeing and overall sense of place in the city (Ellis and Schwartz 2016).

On a positive note, there are studies being conducted in Europe (Seaman, et al 2010), Mexico (Ayala-Azcarraga 2019), the USA (Talal 2021) and Canada (Ellis and Schwartz 2016) documenting park usership, experiences and recommendations in support of greenspace provision in urban park planning. Research into social and economic benefits is rapidly improving our understanding of the many ways in which nature is essential to cities (Evergreen 2004). Ellis and Schwartz (2016) emphasize the critical role urban park systems play in achieving the goals of the following public sectors: "Culture; recreation; community development; heritage; economic development; health and wellness; natural environment; education; and transportation" (pg.1).

The ecological and social benefits of natural areas in urban centres are increasingly being documented in the literature. The challenge is to translate these values into qualitative and quantitative data that can be incorporated into municipal strategic planning and policy decisions impacting nature parks in urban areas.

A 2021 Canadian City Parks Report entitled "Valuing Parks as Natural Infrastructure" highlighted the importance of accounting for nature in a Municipal Natural Assets Initiative. This project included 22 Canadian municipalities participating in an inventory of natural assets. The emphasis was on helping cities to incorporate natural assets in the balance sheet and on recognizing the benefits of assets such as woodlands, creeks, and other greenspaces in planning for climate resilience in cities (Parks People 2021). The importance of natural greenspaces being essential to city functions was also highlighted in a recent study in Prince George, emphasizing the maintenance of ecosystem services including cooling and water retention (Booth, 2022). The City of Saskatoon's Natural Capital Asset Valuation Project in 2020 confirmed the need to recognize services provided by natural assets and the importance of including them in an overall asset management strategy. The report highlights such benefits as risk mitigation of effects of climate change, regulating services provided by ecosystems and saving capital and operating costs. A cautionary note from this report is that when these benefits are not recognized, managed, or valued these services may not be available in the future (City of Saskatoon, 2020). The report also notes the challenges of implementation of natural asset management in the city including, "lack of policy to direct valuation of natural assets; lack of experience in applying this new

approach to asset management; lack of information about the use and health of natural assets in general, and; inability to reflect natural assets in the financial statements of the corporation as these values cannot currently be audited" (pg. 36).

As noted in the literature, one of the challenges of greenspace provision in urban centres is the system of valuation that determines how land will be used. Pressure on urban greenspace is influenced by the economic value of land and the profits associated with urban land development for both commercial and residential purposes. The impact of global markets and economies has an impact on development activities at the local level and ultimately has an impact on available financial and natural resources for urban greenspace provision (Boulton, et al 2020, Kruize, et al 2019). While urban parks are generally seen as valuable assets for their environmental, social and health benefits, often the only quantifiable value attached to these assets is in relation to capital and maintenance costs. As a result, parks are not seen as profitable assets of a publicly provided service (Ellis and Schwartz, 2016). While the 2020 Parks People study found an increase in appreciation for municipal parks and Canadian residents are increasingly willing to support increased spending on parks, many cities have experienced negative post-pandemic impacts on park budgets and staffing.

Many cities in Canada are struggling to put a financial value on greenspaces, but there are efforts to do so. For example, the "challenge of using financial terminology to describe nature's value is addressed in Saskatoon's new Green Strategy, which was released in 2020 alongside the city's Natural Capital Asset Valuation study. The latter received funding from the Federation of Canadian Municipalities' 'Municipalities for Climate Innovation Program'" (Parks People 2021). Another study focused on the impacts of urban sprawl on ecological connectivity and biodiversity in the Montreal Metropolitan Region and the need to demonstrate the real economic contribution of natural capital to the wellbeing of communities (Dupras et al., 2016).

Closer to home, a recent publication entitled, "A study of the value of Kamloops parks" demonstrated the significant value of greenspaces in urban areas. According to the editor, Peter Tsigaris, "It is very important that we start putting value not only on physical assets, but also recognizing the capital present within nature and show its importance to society.... When you substitute nature for physical capital, there is a cost, seen in losing ecosystem services which should be accounted for in a cost-benefit valuation of the project" (TRU News Release, Dec 7, 2022). As an example, "Kenna Cartwright Nature Park, the largest urban park in British Columbia, has an estimated value of \$3 billion. However, the annual flow of ecosystem services was estimated at \$45 million and rises by two per cent per year" (TRU News Release, Dec 7, 2022). In this same publication, Umma Shemo estimated the value of Peterson Creek at \$306 million with ecosystem services estimated at between \$12.8 – 15.3 million per year (Shemo 2021). While the author acknowledged it is challenging to estimate the value of urban parks and ecosystem services, it is worth assigning a dollar value to urban parks with the intended outcome of creating awareness in the community of the value of mental and physical health benefits and the importance of conserving parks as assets.

The literature on Canadian municipalities assessing park usage and intrinsic values of natural spaces in urban centres is growing. For example, Evergreen's report entitled Ground Work: Investigating the Need for Nature in the City (2000), documents some of this research on the environmental, social and economic benefits of restoring healthy natural landscapes in the urban environment.

Prior to the COVID-19 pandemic, research on the benefits of greenspaces in urban environments, including their potential for promoting healthy living, physical activity, and well-being, had steadily increased over the past two decades. It is now widely recognized that urban green infrastructure has a positive influence on urban

life and the urban economy (Kruize et al., 2019a). In 2015, Toronto Public Health conducted a critical analysis of existing literature that examines urban greenspace and physical health, mental health and well-being. The purpose of the review was "to better understand how different types of green space promotes good health for residences" and "to provide planners and policy makers with additional information to guide the provision and design of green spaces in the city" (Toronto Public Health, 2015, p. 9). The review included 106 studies, with 78% being statistically significant for a positive relationship between greenspace and at least one aspect of health. "When broken down into physical health, mental health, and well-being, the strongest evidence is for physical health with the type of green space most commonly studied being green space near people's homes (Toronto Public Health, 2015, p. 10).

There is also increasing information available on the impact of the COVID-19 pandemic on urban greenspaces in terms of usership, municipal experiences nationwide, current challenges and plans for the future of urban parks. In a 2020Parks People survey of 1600 Canadian residents, park use increased in over 55% of cities during the pandemic, with 66% of Canadians being more likely to visit parks in their own neighbourhood. The type of parks visited were also important to Canadians, with 53% stating natural experiences were preferred during the pandemic and more opportunities to access wild/natural spaces in parks were important for COVID-19 recovery.

Other studies have shown the health benefits of having access to greenspaces in urban areas, including lower mental distress and higher wellbeing (White et al., 2013).

These findings are consistent with another large (n=10,089), high quality study conducted in the Netherlands by Maas et al. (2008). They looked at social contacts and health in relation to the percentage of green space within a one- or three-kilometre radius around an individual's residence. After adjustment for socio-economic and demographic characteristics, less green space in people's living environment was significantly associated with feelings of loneliness and with perceived shortage of social support. (Toronto Public Health. 2015 p. 15)

It is also important to note that proximity of greenspace is an important factor.

Green space close to home has been found to be significant for other health outcomes. Grahn and Stigsdotter (2003) found that adults do not compensate for lack of green space in their own residential area by visiting public parks or other green spaces farther away. Closer proximity to green space is associated with reduced morbidity (Maas et al., 2009a), reduced stress and a lower likelihood of obesity (Neilsen & Hansen, 2007). These findings are supported by another study that found living more than one kilometre away from the nearest green space is associated with poorer health and decreased quality of life (Stigsdotter et al., 2010). (Toronto Public Health. 2015 p. 19)

A study conducted by L. Lindsay (2004) through Evergreen looked into finding new, innovative ways to improve environmental protection and stewardship for Canadian urban parks. Evergreen is a not-for-profit organization offering community centered programs and resources focused on empowering urban planners to reimagine connections between people, natural and built public spaces in Canadian cities. Findings of the study showed a need for improved communication with community members and that creating opportunities for community involvement in the municipal parks system should be explored further. Lindsay suggested locals will be more engaged and invested in the sustainability and protection of urban greenspaces and parks if they have a say in how parks are managed and utilized. The importance of community engagement of community members in the retention of greenspaces was also noted by Booth (2022) in a recent report, "The Value of Nature: Ecological Protection and the Impacts of Urban Sprawl in Prince George."

Our report contributes to this discussion of the value of nature parks in Kamloops by investigating the primary activities, selected features, satisfaction levels and suggested improvements identified by users of two nature parks in Kamloops.

Methodology

The research project design included user intercept surveys and online user surveys to determine park use, primary activities, satisfaction, and perceived benefits of two selected nature parks in Kamloops. The primary research questions were:

- 1) Who are the users of selected nature parks in Kamloops?
- 2) What is their primary purpose/activity?
- 3) What features of the park are most valuable?
- 4) How satisfied are park users with their overall experience?
- 5) What are the social and other benefits to users of nature parks in Kamloops?
- 6) What improvements would enhance park user experiences?

Intercept surveys were used to collect data from members of the public entering or exiting Kenna Cartwright and Peterson Creek parks from July 1st until September 30th, 2022. Specific entrances for Kenna Cartwright included Pacific Way and Hillside Drive with the majority of activity seen at the Hillside Drive entrance. At Peterson Creek, two entrances, Glenfair and Summit, were used for survey recruitment, with an equal number of participants from each entrance. The research students, Paisley Hoogenraad and Haley Caouette, selected various times on weekdays and weekends to visit the park entrances and stayed an average of two hours, three times per week. A table with surveys, pens, consent forms, disinfectant wipes and a shade canopy with signage provided a visual display of the research activity. As an incentive and in appreciation for participating in the survey, respondents were offered the opportunity to enter a draw for one of four \$25 gift certificates for the award-winning Taste Kitchen Café located at the Tournament Capital Centre in Kamloops.

Student researchers began the random recruitment process by introducing themselves, explaining the purpose of the research, and providing a description of the consent form and gift certificates. Paper copies of the intercept surveys and pens were provided to participants who consented to participate in the research.

Park users that were not able to participate in the survey at the park but were still interested in participating in the study were given a QR code to access the survey at their convenience via Survey Monkey. An electronic consent form appeared before the online survey was accessed in Survey Monkey.

The intercept survey consisted of 16 questions and took approximately five minutes to complete. The online survey was longer, consisting of 28 questions and took approximately nine minutes to complete. All of the questions on the shorter intercept survey were included in the longer online survey. The online version provided more flexibility for participants to decide when they would like to take the survey and how much time they would like to spend on it.

• Data analysis.

Data gathered from the intercept surveys was entered manually into Survey Monkey by student researchers, while data from the online surveys loaded automatically into Survey Monkey. Once data collection was complete, data responses were organized, cleaned (errors and omissions removed), and the valid responses prepared for a variety of statistical computations. Non-quantitative data was sorted and analyzed independently by the researchers. Using postal codes of survey respondents and mapping software, we were able to determine the proximity of individual users to selected parks.

We received 165 online surveys and 228 intercept surveys, for a total of 393 surveys. (See Appendices A and B for copies of both surveys).



Peterson Creek

Photo credit: Brad Harrison

Results

This section organizes survey questions and results according to themes and subthemes to provide a more comprehensive analysis of the data. Results include responses from combined surveys when the same question was asked in both formats. Results from questions that appeared on the online survey only have been marked with an Asterisk.

1. Park usage

a. Primary activity (Q3)

Both parks offer similar recreational opportunities on different scales According to the data from both online and intercept surveys, the most common activities enjoyed by users at both Peterson Creek and Kenna Cartwright parks are walking, hiking, and enjoying nature (see Table 1). Additional comments provided in the surveys also reveal other primary activities in which visitors engage, including botany and photography in Peterson Creek and geocaching in Kenna Cartwright.

Peterson	Kenna						
Answered: 201 Skipped: 1	Answered: 191 Skipped : 0						
Walking 148 (74%)	Hiking 123 (64.%)						
Enjoying nature 124 (62%)	Walking 105 (55%)						
Hiking 111 (55%)	Enjoying nature 99 (52%)						
Personal wellness 102 (51%)	Exercise 95 (50%)						
Walking dog(s) 94 (47%)	Personal wellness 92 (48%)						

Table 1: Primary Activity

Comments from this question also shed light on some lesser known yet popular ways that visitors use these parks. Participants noted that they often visit Kenna Cartwright Park with hiking or biking clubs, while others mentioned using both parks as an educational opportunity for young children or students.

b. Park features (Q11)

Table 2 shows the top four features enjoyed by users of Peterson Creek Park are convenient location, natural setting, scenery, walking and hiking trails. The top features enjoyed by users of Kenna Cartwright Park are hiking trails followed by natural setting, convenient location, and scenery. These results align with the trend we have observed, where Peterson Creek Park appears to be valued for its natural setting in a convenient location while Kenna Cartwright Park seems to be more popular among those looking for more terrain in a natural setting to engage in physical activities. Both Peterson and Kenna are designated off-leash for dogs, an appealing feature mentioned in the comment section for both parks.

c. Features of the park (Q11) and preferred activities (Q3) combined.

Online survey respondents (162) and intercept respondents (224) selected natural setting as a top feature in both parks regardless of the activities in which they were engaged. Convenient location and hiking trails were the second features selected across activities for both parks. The priority of features selected by participants appear to be aligned with the activities supported by those features. For example, natural setting, hiking, and walking trails are preferred features for those engaged in activities supported by trails in both parks. Additional user comments highlighted other popular features not listed here, including having scooter friendly trails, parking and toilet facilities.

	Peterson Answered: 197 Skipped: 5		Kenna Answered: 189 Skipped: 2	
	Responses		Responses	
Convenient location	155 (79%)	1	133 (70%)	3
Natural setting	153 (78%)	2	138 (73%)	2
Scenery	148 (75%)	3	128 (68%)	4
Walking trials	142 (72%)	4	110 (58%)	5
Hiking Trails	141 (72%)	5	154 (81%)	1
Other	19 (20%)		16 (8%)	

Table 2: Park Features. Additional columns indicate rankings of which features are most liked.

2. Time spent including frequency, duration, longevity and COVID (Q's 4,5,6,7,8)

a. Frequency of visits on a weekly basis (Q5)

The frequency of visits may be related to the primary activities in which park users engage, including the convenience of accessing the parks and if their visitation was solo or in the company of others. The high frequency of visits (5-7 times per week) at Peterson Creek Park may be related to activities such as walking with dogs/pets and convenience of accessing the park (see Table 3). Respondents from Peterson Creek Park (47%) and from Kenna Cartwright Park (50%) indicated they bring dogs/pets with them during their visit. While walking with dogs/pets was popular in Kenna Cartwright Park, the highest frequency of visits to Kenna was less than one day per week followed by one to two times per week.

	Peterson Answered: 201 Skipped: 1	Kenna Answered: 190 Skipped: 1	
ANSWER CHOICES	Responses	Responses	
First time	3 (1%)	3 (2%)	
Less than one day per week	44 (22%)	57 (31%)	
1-2 times per week	46 (23%)	55 (29%)	
3-4 times per week	43 (21%)	38 (20%)	
5-7 times per week	51 (25%)	28 (15%)	
More than 7 times per week.	14 (7%)	9 (5%)	
	Total: 201	Total: 190	

Table 3: Frequency of visits. The two most common responses by park users are highlighted below.

The location of Peterson Creek Park in the downtown area with higher population density may be relevant to the frequency of visits and the ease of accessing the park. Research results indicated 63% of the people who visit Peterson Creek are within walking distance. Kenna Cartwright Park is situated in an area with lower population density adjacent to the park boundaries. Most visitors to Kenna Cartwright Park prefer to drive (88%). Park location and accessibility may also correlate with the lower frequency of visits to Kenna Cartwright Park compared to Peterson Creek Park.

b. Duration of visits (Q4) and preferred times during the week (Q5)

With regard to the duration of time spent per visit (in minutes), the majority of visitors to both parks spent between 30-60 minutes, with Peterson Creek at 55%, and Kenna Cartwright at 46%. The percentage of users (29%) who visited Kenna Cartwright Park for 60-90 minutes was noticeably higher than those who visited Peterson Creek Park for the same duration (16%). This trend continued for visits of longer duration, with 11% of respondents reporting visits of 90-120 minutes at Kenna Cartwright Park in comparison with 6% reporting visits of the same duration at Peterson Creek Park. Only 5% of the visitors to Kenna Cartwright Park indicated visits of less than 30 minutes while 17% of the visitors to Peterson reported spending less than 30 minutes per visit.

Participants in the online survey^{*} indicated they visit the parks on both weekends and weekdays, with Peterson Creek Park at 74% and Kenna Cartwright Park at 60%. Weekday-only visits to Kenna Cartwright Park were reported by 33% of respondents as compared to 20% for visitors to Peterson Creek Park. Visits on weekends only were consistent for both parks at 6%. c. Park visitation alone or accompanied (Q2)

At Peterson Creek Park, the majority (58%) of visitors tend to enjoy the park solo, while 54% of respondents reported visiting Kenna Cartwright Park with friends. Users of both parks reported a similar trend in terms of bringing pets along, with 47% of respondents from Peterson Creek Park and 50% from Kenna Cartwright Park indicating they bring dogs with them during their visit.

d. Longevity of park usage (Q7).

Results from the online survey* in regard to longevity of park usage at Kenna Cartwright and Peterson Creek parks indicate use of both parks was similar, with the majority of respondents having visited for over 15 years (Kenna Cartwright 43%, Peterson Creek 42%) (see Table 4). The next highest longevity of use was reported as one to five years, with a similar relative proportion of respondents (27% Kenna Cartwright Park, 30% Peterson Creek Park).

	Peterson Answered: 81 Skipped:2	Kenna Answered: 81 Skipped 1	
ANSWER CHOICES	Responses	Responses	
Less than 1 year	8 (10%)	2 (2.%)	
1-5 years	22 (27%)	24 (30%)	
6-10 years	9 (11%)	14 (17%)	
11-15 years	7 (9%)	7 (9%)	
Over 15 years	35 (43%)	34 (42%)	
	Total: 81	Total: 81	

Table 4: Longevity of park usage. The two most common responses by park are bolded.

e. Frequency of visits during COVID (Q8)

Our study found that the Covid-19 pandemic led to over 30% of the respondents visiting both parks more often, while just under half of the respondents indicated their visitation did not change during the pandemic, with Kenna Cartwright at 49% and Peterson Creek at 46%.



Peterson Creek

Photo Credit: Brad Harrison

Table 5: Frequency of visits during COVID -19. Additional columns indicate rankings of frequency of park visits.

	Peter	son		Kenna	
	Answered: 191	Skipped:11		Answered: 186 Skippe	ed 5
ANSWER CHOICES	Responses			Responses	
I did not visit the park at all	16	(8.%)	4	11 (2%)	4
l visited the park less than usual	24	(13%)	3	18 (12%)	3
I visited the park the same amount	88	(46%)	1	99 (49%)	1
l visited the park more than normal	63	(33%)	2	58 (36%)	2
	Total: 191			Total: 186	

f. Visits to other nature parks in Kamloops (Q10)

Results from the online survey* (158) showed that the highest percentage of respondents visit other nature parks in Kamloops less than one day per week followed by one or two times per week. This finding was consistent across all activities with the exception of those who selected biking as their primary activity. These respondents were more likely to visit other parks one or two times per week.

3. Satisfaction levels and possible improvements.

The three questions on the online survey^{*} regarding satisfaction levels are revised versions of the questions that appear in the Yardstick Program.

a. Satisfaction levels (Q 12,13 and 14)

The data showed that overall, the majority of visitors to both Peterson Creek and Kenna Cartwright parks were satisfied with the overall cleanliness and quality of trails, with only a small percentage of respondents indicating they were dissatisfied (see Tables 6a and 6b). Regarding dog owner etiquette, just over half of respondents in total stated they were "Somewhat satisfied" or "Extremely satisfied." A level of dissatisfaction with dog owner etiquette in both parks is worth noting, as 20% of respondents indicated they were "Somewhat dissatisfied." It is possible that dissatisfaction in respect to dog owner etiquette may be related to user conflicts discussed in the next section.

(answered 81 skipped 2)	Extremely dissatisfied	Somewhat dissatisfied	Neither dissatisfied or satisfied	Somewhat satisfied	Extremely satisfied	Don't know
12. Overall Cleanliness	2 (2%)	4 (5%)	10 (12%)	37 (46%)	28 (35%)	
13. Quality of trails	2 (2%)	6 (7%)	5 (6%)	33 (41%)	33 (41%)	2 (2%)
14. Dog owner etiquette	6 (7%)	15 (19%)	12 (15%)	29 (36%)	17 (21%)	2 (2%)

Table 6a: Satisfaction levels for Peterson Creek Park (online survey)

(answered 81 skipped 2)	Extremely dissatisfied	Somewhat dissatisfied	Neither dissatisfied or satisfied	Somewhat satisfied	Extremely satisfied	Don't know
12. Overall Cleanliness	1 (1%)	7 (9%)	4 (5%)	33 (41%)	36 (44%)	
13. Quality of trails	1 (1%)	4 (5%)	2 (2%)	28 (35%)	46 (57%)	0
14. Dog owner etiquette	2 (2%)	18 (22%)	11 (14%)	31 (38%)	13 (16%)	6 (7%)

 Table 6b: Satisfaction levels for Kenna Cartwright Park (online survey)

b. User conflicts (Q15)

Eighty percent of the intercept and online survey respondents for Kenna Cartwright Park (187) and Peterson Creek Park (196) reported no user conflict experiences. Of the respondents who did (20%), the most frequently cited issue in both parks was related to unruly or aggressive off-leash dogs (39 responses). Other conflicts mentioned for both Peterson Creek and Kenna Cartwright parks include fast or aggressive bikers (8 responses) and conflicts between people and bikers.

c. Signage options (Q16)

Survey results from both intercept and online surveys indicate that visitors to both parks place a high value on signage about nature and trail signage including maps, distance and elevation information (see Table 7). Respondents also brought attention to poor signage regarding trail closures, upgrades and races as well as signage regarding walking/hiking/biking-specific trails. Trail signage was identified as a priority (73%) for visitors to Kenna Cartwright Park while nature signage (61%) was a priority for Peterson Creek Park users.

A desire for more signage about Indigenous history was expressed by 51% of visitors to Peterson Creek Park. also expressed. In contrast, 42% of visitors to Kenna Cartwright Park expressed the same desire. A need for more signage about invasive species was indicated by 55% of visitors to Peterson Creek Park , while only 40% of visitors to Kenna Cartwright Park expressed the same desire.

	Peterson		Kenna	
	Answered: 194 Skipped: 8		Answered: 189 Skipped: 9	
	Responses		Responses	
Signage about nature	119 (61%)	1	95 (52%)	2
Trail signage (map, distance, elevation)	104 (54%)	2	133 (73%)	1
Signage about Indigenous history	99 (51%)	3	77 (42%)	3
Signage about invasive species. (online 80 answered)	44 (55%)	4	31 (40%)	5
Signage would have no impact	35 (18%)	5	21 (12%)	6
Boundary signage	30 (15%)	6	37 (20%)	4
Other (intercept survey)	14 (12%)		9 (9%)	

Table 7: Signage options. Additional columns indicate rankings of which signage are most preferred.

d. Improvements (Q17)

Question 17 gave respondents an opportunity to provide comments on one specific improvement they would like to see in each park (See Appendices C and D for comments).

Peterson Creek Park: There were 160 comments received in total from the online and intercept surveys for Peterson Creek Park. Overall, the data suggests that visitors would like to see improvements in park amenities and maintenance to enhance their overall experience at Peterson Creek Park, specifically in the areas of trails, garbage, and signage (See Table 8a).

Table 8a: Peterson Creek Park Improvements (includes number of times comments were made).

- More trail maintenance/preventative maintenance(25)
- More garbage cans(23)
- More & better signage/maps(17)
- More bathrooms(9)
- More/better signage (9)
- Better trail maintenance (8)
- Fewer invasive species (8)

- Waterspout (5)
- More frequent bathroom cleaning & garbage pick up by city (4)
- Pick up poop (3)
- More benches/shaded areas for rest(3)
- Fix fences in & around park(3)
- Signage in the park (3)

Additional comments:

More Indigenous signage, Length of trail/elevation listed on map, Enlarge parks, More trails, Get permission to use grassland in Peterson, Proper regrowth after construction, A tie off at bathrooms for dogs.

Kenna Cartwright Park: There were 126 comments received in total for Kenna Cartwright Park. The aggregate comments from visitors to Kenna Cartwright identified similar key areas of improvement as those received for Peterson Creek.

Table 8b: Kenna Cartwright Park Improvements (includes number of times comments were made)

More garbage cans (22)	• More mountain bike trails (6)
• More/better signage (19)	 More/improved bathrooms (5)
More trails (12)	More Indigenous signage (4)
Better trail maintenance (11)	Waterspout (4)
Less construction (9)	• Signage in the park (3)
• No pipeline (7)	 Fewer invasive species (3)

Additional comments:

Length of trail/elevation listed on map, Better signage re: construction, Proper regrowth after construction, Include on streamlined bus route [from North Shore], Enlarge the park, More frequent visits by city workers, More geocaches.

4. Participation in cleanup and volunteer programs

a. Personal actions to improve cleanliness of the park (Q23)

The data in Table 9 shows that park visitors at both Peterson Creek and Kenna Cartwright nature parks are invested in keeping the parks clean. A large majority of users at both parks said they would take their own garbage home if no bins were available. A third of the respondents at each park also indicated they would also be willing to take other people's garbage home when garbage bins were not available. These actions are aligned with comments from park users who mentioned the importance of "user ownership" and responsibility for the park's cleanliness. This sentiment is supported by the number of people who bring their own dog waste bags and the number of people who take their garbage home when there are no bins: Peterson Creek Park (76%) and Kenna Cartwright Park (83%). Comments also revealed an ethos of "pack it in pack it out" (7 comments) and a call for signage regarding this practice at the park entrances.

	Peterson	Kenna	
	Answered: 192 Skipped: 10	Answered: 181 Skipped 10	
ANSWER CHOICES	Responses	Responses	
Take my own garbage home where there are no bins	146 (76%)	150 (83%)	
Take other people's garbage home where there are no bins	69 (36%)	64 (35%)	
Bring my own dog bags	78 (41%)	72 (40%)	
Pick up other people's dog bags left on the trails	53 (28%)	47 (26%)	
None, not my responsibility	6 (3%)	4 (2%)	
Other - please specify	23 comments (29%)	17 (22%)	

Table 9: Actions to improve cleanliness.

b. Participation in volunteer cleanup programs (Q24)

Results from the online surveys suggest almost half the park users at both Peterson Creek Park (48%) and Kenna Cartwright Park (46%) are likely to participate in volunteer clean-up programs. Participation in volunteer cleanup is higher at Peterson Creek Park (20%) as compared to Kenna Cartwright Park (5%). Participants not willing to participate in volunteer cleanup programs was higher at Kenna Cartwright Park (13%) than at Peterson Creek Park (6%).

Overall, the data indicates that most visitors to both Peterson Creek and Kenna Cartwright nature parks are willing to participate in volunteer clean-up programs, which aligns with previously noted personal actions to keep the parks clean (Q23)

c. Years visiting park (Q7) and likelihood of participating in volunteer programs (Q24) combined data.

Both of these questions appeared on the online survey^{*} and resulted in 81 respondents for Peterson Creek Park and 80 respondents for Kenna Cartwright Park. When correlating the likelihood of participating with the number of years participants have been visiting the parks, data shows that respondents who have visited the parks for one to five years or for over 15 years are the most likely to volunteer, with 39 respondents for Peterson Creek Park and 37 respondents for Kenna Cartwright Park falling into these categories. Sixteen respondents for Peterson Creek Park indicated that they already participate in a clean-up program while only four respondents for Kenna Cartwright Park indicated the same.

d. Conservation of nature (20)

Results from both online and intercept surveys (Table 10) indicate over 80% of respondents revealed that conservation is important for both Peterson Creek and Kenna Cartwright nature parks. This may be a factor related to the large percentage of park users willing to keep the parks clean and engage in volunteer programs.

	Peterson Answered: 199 Skipped: 3	Kenna Answered: 189 Skipped 2	
ANSWER CHOICES	Responses	Responses	
Totally unimportant	25 (13%)	17 (9%)	
Unimportant	0	4 (2%)	
Neither important nor unimportant	8 (7%)	7 (4%)	
Important	41 (21%)	44 (23%)	
Very important	125 (63%)	117 (62%)	
	Total: 199	Total: 189	

Table 10: Importance of conservation in nature parks

5. Significance of nature parks and health

a. Mental and physical health (Q18)

There were 98 comments received from visitors to Peterson Creek Park and 73 comments received from visitors to Kenna Cartwright Park. Survey comments collected from online and intercept surveys from both parks highlighted that time spent in nature has an overall positive impact on mental and physical health Peterson Creek Park (23 comments) and Kenna Cartwright Park (14 comments). The beneficial effects of nature on mental well being in particular was mentioned in 17 comments for Peterson Creek Park and 11 comments for Kenna Cartwright Park. This is supported by respondents

from both parks who contended that nature parks help alleviate stress and anxiety and stated that they find nature parks relaxing and meditative (see Appendices C and D for more comments).



Peterson Creek	Kenna Cartwright		
 Positively (23) Improves mental health (17) Helps with stress and anxiety (12) Relaxing and meditative (10) Enjoy being outdoors (9) Good for the soul and body (8) Improves stamina and fitness (5) Peaceful beauty (5) Increases happiness (4) A lot (3) Gets rid of hustle of daily activities (2) 	 Positively (14) Improves mental health (11) Relaxing and meditative (10) Helps with stress and anxiety (9) Good for the soul and body (7) Increases happiness (6) Improves stamina and fitness (5) Enjoy being outdoors (5) A lot (3) Peaceful beauty (3) 		

b. Improved mental and/or physical health (Q18) and preferred activities (Q3) combined data.

The value of nature parks for improved mental and/or physical health was also confirmed by respondents regardless of the preferred activity selected. 57% of online respondents and 43% of intercept respondents from both parks provided comments regarding the mental and/or physical benefits of nature parks.

c. Connections to Kamloops (Q19)

The question of how time spent in nature parks enhanced participant connections to Kamloops appeared on the online survey^{*} and resulted in 70 responses. The most common theme arising from the responses was participants' appreciation for the parks (29) and the way parks positively enhanced participant connections to Kamloops (19). Views of the city/landscape (17) and convenience of accessing the parks (11) were also mentioned. Nature parks were identified as contributing to the city's beauty (12) and considered a defining feature of Kamloops (8). Respondents also indicated nature parks were the reason they chose to live in Kamloops (5). Socializing opportunities such as meeting people and making friends (13) was identified as one of the ways nature parks enhanced participant connections to Kamloops.

d. Inclusion of nature parks in holiday plans (Q25)

This question appeared on both surveys and asked respondents if they purposely included nature parks or natural areas on their agenda when making holiday plans. The purpose of this question was to ascertain if visiting nature parks was common practice as both a resident and as a tourist. Of the 385 survey responses received, 70% indicated they often or almost always include nature parks or natural areas on their travel agenda with 23% indicating they sometimes included parks or natural areas. These results suggest that nature parks or natural areas are valued by both residents and travellers.

6. Year of birth (Q28)

Visitors to both parks have a similar age demographic, with only slight variations in the number of visitors in specific age ranges. According to the data from both online and intercept surveys, the majority of visitors at both parks are in the 60 to 69 age group. The second-largest group of visitors (30) at Peterson Creek Park were in the 50 to 59 age range, while Kenna Cartwright had the second-most proportion of visitors in the 30 to 39 age range, at 28 visitors.



Figure 1: Age distribution of respondents.

7. Place of residence (Q26)

The maps in Appendices E and F display the postal codes of survey respondents to show the proximity of individual users to Peterson Creek and Kenna Cartwright parks.

Survey questions omitted from these categories.

For the purpose of this study, the following questions are not included in the review of results. Both questions appeared on the online survey only and the results from Q21 did not correlate with the results from Q22 in any meaningful way (See Appendices C and D).

- a. Concerns about the state of the natural world (Q21)
- b. Concerns about the state of the natural world and nature parks in Kamloops (Q22)



Kenna Cartwright Park

Photo Credit: Brad Harrison

Discussion

Results of our combined surveys indicate that overall, nature parks such as Peterson Creek and Kenna Cartwright in Kamloops are highly valued by park users. The most common activities enjoyed by users of both Peterson Creek and Kenna Cartwright parks are walking, hiking, and enjoying nature.

In addition to a general appreciation for the parks, participants commented that the parks enhance the beauty of Kamloops and deepen their connection to the city. For some respondents, nature parks are related to the reasons why they choose to live in Kamloops. Socialization opportunities and meeting people were also identified as ways nature parks enhance participant connections to Kamloops. It has been shown that when residents appreciate their local urban parks and a strong sense of place and connection is created, there is a likelihood that residents will care more about the local environment in general (Ellis and Schwartz, 2016). Survey results indicate that most park users care about the conservation of Peterson Creek and Kenna Cartwright parks. This is supported by a high proportion of survey respondents who are active in keeping the parks clean (picking up garbage and dog poop bags). There is also a large portion of respondents who indicated they are willing to participate in volunteer cleanup programs.

In terms of features, the natural setting is highly valued by users of both parks. Scenery and convenient location as well as hiking and walking trails were identified as important features that facilitate a number of activities in the parks. Survey comments collected from visitors of both parks also highlight that time spent in nature has an overall positive impact on mental and physical health.

Results from our study also reveal interest in park features that support dog walking and activities on multi-use trails. Both Peterson Creek and Kenna Cartwright parks are designated off-leash for dogs, an appealing feature mentioned in the comment section for both parks.

In the 2022 Parks People Report, participating cities noted an increased interest in park features such as dog walking and exercise on multi-use trails. The following features identified in the Parks People (2022) report relevant to our study are off-leash dog areas (93%) multi-use trails (86%), volunteer-based natural stewardship and education opportunities (48%), and Indigenous engagement/programming (83%).

Visitors to both Peterson Creek and Kenna Cartwright parks place a high value on signage about nature and trail signage including maps, distance, and elevation information. In addition, over half of participants indicated they would like to see more signage about Indigenous history. These results correlate with the park features identified in the 2022 Parks People report. As park usership increases, participant experiences and connections to park landscapes could be enhanced through signage regardless of the activities in which users are engaged.

Previous studies have shown that greenspaces that are accessible, attractive, objectively safe and wellmaintained, with opportunities for socialization along with adequate education and information about the greenspaces and parks are key for creating both adequate opportunity and motivation for people to use urban greenspaces more frequently (Kruize et al., 2019).

There is a correlation between the location and the convenience of accessing nature parks in the city in respect to frequency of visits for park users. For example, the location of Peterson Creek Park in the downtown area with higher population density in surrounding neighbourhoods supports the high percentage of people within walking distance of the park and high frequency of visits by park users. In comparison, at Kenna Cartwright Park, situated in an area with lower population density adjacent to the park, most visitors surveyed prefer to drive to the park. The presence of natural outdoor environments near residential homes was confirmed in a study by Kruize et al. (2019b) of four European cities, which also noted an association between a higher frequency of social contacts with neighbours and better mental wellbeing with more time spent in natural outdoor areas.

The emerging literature suggests that having access to greenspaces close to urban neighbourhoods results in more health benefits for residents, particularly when they are within walking distance. According to our surveys, 63% of visitors walked to Peterson Creek Park, likely due to the park's proximity to surrounding neighborhoods. Overall respondent comments from both Peterson Creek and Kenna Cartwright parks describing the beneficial effects of nature on overall wellbeing supports the findings in the literature.

During the COVID -19 pandemic, parks were even more critical to Canadians' health and well being, with 82% of Canadians indicating parks became more important to their well-being (Parks People 2020). Not surprisingly, our study found that the Covid-19 pandemic also led to an increase in park usage at Kenna Cartwright and Peterson Creek parks, with over 30% visiting more often, although there was also a high percentage of users who used the parks the same number of times per week during the pandemic as they did previously.

With regard to satisfaction levels, the data shows that the majority of visitors are satisfied with the overall cleanliness and quality of trails in both parks. However, respondents identified a need for more trail maintenance and signage as being areas for improvement to enhance park user experiences. Regarding dog owner etiquette, 20% of respondents indicated a level of dissatisfaction, with the most frequently cited user conflict related to unruly or aggressive off-leash dogs.

Current challenges with dog activities in our study are similar to challenges identified in the January 2013 City of Kamloops Parks Master Plan - Oasis of Activity. Specifically, "the primary concern is a lack of picking up waste; other concerns relate to use conflicts (mainly Kenna Cartwright Park and Peterson Creek, and in Dallas/Barnhartvale Nature park to a lesser extent" (City of Kamloops Parks Master Plan pg. 59).

Overall, the qualitative comments and quantitative data from our study provides the CoK Parks department with an overview of park features most valued by survey participants in support of primary activities and their satisfaction levels and identify areas for improvement.

• Limitations of this study

Research results are considered a snapshot of park users visiting Peterson Creek and Kenna Cartwright during the time of this study in the summer of 2022.

Some of the questions on the longer online survey (28 questions) did not appear on the shorter intercept survey (16 questions). The rationale for the varied number of questions was in response to the type of surveys being conducted. Generally, people visiting the park may not have the time to fill in a longer survey while online respondents could control when they filled in the survey and the necessary time to complete it. Results in this report include separate data sets and the combined data sets for questions that appeared on both surveys.

This study surveyed users of only two nature parks in Kamloops and thus the results may not reflect the sentiments of users of other Kamloops nature parks.

Further research and recommendations

There are a number of opportunities for further research, which include conducting further comparative analysis of survey questions for a deeper understanding of respondent behaviours and preferences. For example, further surveys could compare respondents' age, activities, and frequency of visits. Further research could also determine if respondent satisfaction levels of dog-owner etiquette is related to respondents being dog owners or dog walkers.

While our study used six-digit postal codes to visually plot where visitors to the parks came from, using data from the Canadian census could be useful to gain further insights into the densification and demographics of neighbourhoods proximal to nature parks in Kamloops. In 2018, the Sagebrush Neighbourhood Association conducted a survey of its membership. One of the questions asked was the main reason members enjoyed living in the Sagebrush area. Of the 86 responses received, 24 comments were related to walkability and 14 comments indicated proximity and walking distance to Peterson creek was an important attribute of the neighbourhood. Engaging neighbourhood associations in the creation and conduct of surveys of their members' use of greenspaces, and nature parks in particular, could provide the Parks Department with further insight into how the parks are being used and identify areas for improvement. It may also be valuable to determine how different levels of socioeconomic status impact the visitation of the park, as measured by neighborhood income quintiles which can be obtained from Canadian Census data.

Survey respondents indicated a willingness to engage in park volunteer opportunities. A City Park Stewards program in the City of North Vancouver has played a key role in advancing that city's environmental restoration and stewardship goals and has provided a rewarding opportunity for participants to experience urban nature and contribute to the ecological health of the city (City Park Stewards, Evergreen). The City of Kamloops could consider developing a similar City Park Stewards program for nature parks in Kamloops.

One of the recommendations in the 2013 City of Kamloops Parks Master Plan was to consider opportunities for trails designated for certain uses, e.g., no bikes or no dogs (pg. 60). The Plan also acknowledged that some areas can be sensitive at certain times of the year, such as nesting seasons (pg. 67). Perhaps signage could be used to inform park users of seasonal conditions as they relate to park use and activities.

There are a number of documents relevant to the Parks Management Plan and research direction in Kamloops, including the 2021 Community Climate Action Plan, the 2019 Recreation Master Plan, the 2018 Official Community Plan (OCP), the 2016 Urban Forest Management Strategy (UFMS), the 2013 Trails Master Plan, the 2010 Bicycle Master Plan and the 2010 Sustainable Kamloops Plan. While some of these plans may be dated or under renewal, there is value in finding linkages in these plans to minimize siloed efforts in achieving similar goals. For example, the 2016 Urban Forest Management Strategy refers to the 2013 Park Management Plan as being applicable to urban forest management in Kamloops. In particular the 2013 Parks Master Plan emphasized the importance of nature in the city, including natural parks and trees in the urban setting.

One of the goals in the 2016 Urban Forest Management list of recommendations was to design and manage the urban forest to maximize environmental, social, health, and economic benefits. These benefits align with the values of nature parks as noted in the study by Tsigaris (2022) on the value of nature parks in Kamloops. In the 2021 Community Climate Action Plan, goal #8 refers to the preservation of urban ecosystems and using green infrastructure to provide carbon sequestration and climate resilience. These are only a few examples of how governing documents and subsequent guiding bylaws, programs and practices can be used to support a holistic approach to managing nature in the city.

Challenges and opportunities for municipalities:

There are a number of challenges for many Canadian cities around maintaining parks to a high standard . In particular, challenges identified by participating cities in the Parks People Report (2022) included aging infrastructure (97%), addressing impact from climate change (93%), protecting biodiversity (90%), revitalizing/redesigning parks to meet changing needs (93%), houselessness in parks (90%) insufficient operating budget (86%), collecting data on park use (76%) and addressing overuse of natural areas and/or trails during the pandemic due to increased visitor use (72%) (Parks People 2022). While Kamloops was not a participating city, the city shares many of the same challenges, such as collecting data on park use. This research project attempted to address this need by providing insights into visitor use of two of the twelve nature parks in Kamloops. In the future, research and data collection on park use could benefit from the combination of big data, online and intercept surveys. Using big data is a more cost-effective method of collecting park user information.

Boulton, et al. (2020) also highlight the challenges of greenspace provisions with a particular focus on mid-sized cities such as Surrey, B.C. Their research identifies the allocation of park budgets in competition with budgets for other services such as roads, sewer, and other utility services. In an effort to address some of these challenges, they suggest a new way of approaching the provision of greenspaces in cities is needed. In particular,

Those responsible for urban greenspace provision must optimise the opportunities presented by property markets and changing economic conditions in an economically, environmentally, and socially sustainable manner. This might incorporate Council's collaboration with the development industry to identify innovative opportunities for urban greenspace provision in the form of green roofs, green walls, enhanced street trees, and landscape areas (including water sensitive urban design infrastructure). Adopting these principles may in fact offer a starting point in realising a better approach to providing urban greenspace as an alternative to simply pursuing more parkland (Boulton et al., 2020 pp. 11-12).

An increased interest in urban park research can assist urban planners in planning and managing parks to optimize services and align urban park systems with the roles and values they contribute to the community. Canadian national surveys revealed an overall increase in appreciation 70% for residents in respect to urban parks systems, and a 94% increase in municipal leadership awareness of park impacts on local health and crisis resiliency (Parks People, 2021). With this increased appreciation comes an opportunity for more holistic collaboration with developers, non-profit organizations and residents to envision greenspaces in the city (Boulton, et al 2020).

Each year, Parks People, a non-profit organization, publishes a report to track trends and challenges facing city parks across Canada. In 2022, 30 Canadian cities participated, however, Kamloops was not one of them. The more cities that participate in parks research in Canada, the more useful the data is for understanding the value of nature in the city.



Peterson Creek waterfall

Photo credit: Brad Harrison

References

- Ayala-Azcarraga, C., Diaz, D., Zambrano, L. (2019). *Characteristics of urban parks and their relation to user wellbeing*.<u>https://doi.org/10.1016/j.landurbplan.2019.04.005</u>
- Booth, A. (2022). The Value of Nature: A Study of the Importance of Green Space in the City of Prince George, British Columbia. A Report from ENVS 210 University of Northern British Columbia. <u>https://www2.unbc.ca/sites/default/files/sections/environmental-and-sustainability-studies/valueofnature-finalreportenvs210december2022.pdf</u>
- Boulton C., Dedekorkut-Howes, A., Holden, M., Bryne, J. (2020). Under pressure: Factors shaping urban greenspace provision in a mid-sized city. *Cities*. Vol 106. Nov 2020. <u>https://dx.doi.org/10.1016%2Fj.cities.2020.102816</u>

City of Kamloops Parks Master Plan (2013). Oasis of Activity.

City of Saskatoon (2020). Natural Capital Asset Evaluation pilot project.

- Dupras, J., Marull, J., Pacerisas, L., Coll, F., Gonzalez, A., Girard, M., and Tello, E. (2016). The impacts of urban sprawl on ecological connectivity in the Montreal Metropolitan Region. *Environmental Science and Policy 58*, 61-73.Elsevier Ltd.
- Evergreen City Park Stewards. <u>https://www.evergreen.ca/our-projects/city-park-stewards/</u>
- Ellis, D., Schwartz, R. (2016). *The Roles of an Urban Park System. World Urban Parks*. <u>https://www.worldurbanparks.org/images/Documents/The-Roles-of-an-Urban-Parks-System.pdf</u>
- EU Urban Greening Platform (2022). *Supporting towns and cities in restoring nature and biodiversity*. <u>https://environment.ec.europa.eu/topics/urban-environment/urban-greening-platform_en</u>
- Huerta, C. M., Cafagna, G. (2021). Snapshot of the Use of Urban Green Spaces in Mexico City during the COVID19 Pandemic: A Qualitative Study. *International Journal of Environmental Research and Public Health 18(8)* doi: 10.3390/ijerph18084304
- Kruize, H., van der Vliet, N., Staatsen, B., Bell, R., Chiabai, A., Muiños, G., Higgins, S., Quiroga, S., Martinez-Juarez, P., Aberg Yngwe, M., Tsichlas, F., Karnaki, P., Lima, M. Luísa, García de Jalón, S., Khan, M., Morris, G., Stegeman. I. (2019). Urban Green Space: Creating a Triple Win for Environmental Sustainability, Health, and Health Equity through Behavior Change. *International Journal of Environmental Research and Public Health*. doi: 10.3390/ijerph16224403
- Kruize, H., van Kamp I., van den Berg, M., van Kempen, E., Wendel-Vos, W., Ruijsbroek, A., Swart, W., Maas, J., Gidlow, C., Smith, G., Ellis, N., Hurst, G., Masterson, D., Triguero-Mas, M., Cirach, M., Gražulevičienė, R., van den Hazel, P., Nieuwenhuijsen, M.(2020). Exploring mechanisms underlying the relationship between the natural outdoor environment and health and well-being Results from the PHENOTYPE project. *Environ Int. 2020 Jan;134:105173*. doi: 10.1016/j.envint.2019.105173. Epub 2019 Oct 31. PMID: 31677803.
- Lantz, N., Grenier M., Wang, J. (2021). Urban Greenness 2001,2011 and 2019. *EnviroStats*. Statistics Canada Catalogue no. 16-002-x Government of Canada. <u>https://www150.statcan.gc.ca/n1/pub/16-002-x/2021001/article/00002-eng.htm</u>

- Lindsay, L. (2004). Evergreen. Green Space Acquisition and Stewardship in Canada's Urban Municipalities. Results of a Nation-wide Survey. <u>https://www.evergreen.ca/downloads/pdfs/Green-Space-Canada-Survey.pdf</u>
- Maas, Jolanda, Verheij, R. A., Spreeuwenberg, P., Groenewegen, P. (2008). Physical activity as a possible mechanism behind the relationship between green space and health: a multilevel analysis. *BMC public health*, *8*(1), 206. doi:10.1186/1471-2458-8-206.
- Parks People (2020). The 2020 Canadian City Parks Report. https://ccpr.parkpeople.ca/2020/
- Parks People (2021). *The 2021 Canadian City Parks Report. Centering Equity and Resilience*. <u>https://ccpr.parkpeople.ca/2021/</u> https://ccpr.parkpeople.ca/2021/cities
- Parks People (2022). The 2022 Canadian City Parks Report. https://ccpr.parkpeople.ca/2022/data
- Seaman, P.J., Jones, R., Ellaway, A. (2010). It's not just about the park, it's about integration too: why people choose to use or not use urban greenspaces. *International Journal of Behavioral Nutrition and Physical Activity*. DOI: <u>10.1186/1479-5868-7-78</u>.
- Shemo, U. (2022). Peterson Creek Nature Park. In Tsigaris et al. (Ed.), A Study of the Value of Kamloops Parks. https://kamloops-parks.pressbooks.tru.ca/
- Talal, M. L., Santelmann, M. V. (2021). Visitor access, use, and desired improvements in urban parks. Urban Forestry & Urban Greening. <u>https://www.sciencedirect.com/science/article/pii/S1618866721002417?via%3Dihub</u>
- Toronto Public Health. (2015). *Green City: Why nature matters to health An Evidence Review*. Toronto, Ontario. <u>https://www.toronto.ca/legdocs/mmis/2015/hl/bgrd/backgroundfile-83421.pdf</u>
- TRU News Release, 2022, December 7. New book examines value of city parks.
- Ten Brink, P., Mutafoglu, K., Schweitzer, J.P., Kettunen, M., Twigger-Ross, C., Baker, J., Kuipers, Y., Emonts, M., Tyrväinen, L., Hujala, T. (2016). *The Health and Social Benefits of Nature and Biodiversity Protection*. Institute for European Environmental Policy; London, UK: 2016. [(accessed on May 14)]. Available online: <u>https://environment.ec.europa.eu/topics/nature-and-biodiversity_en</u>
- Tsigaris P., Abubakar, L., Ajani, A., Bhardwaj, S., Ibekwe, A., Kaur, A., Rahman, S. F., Shemo, U., Taghiyev, R., Truscott, J., Waithe, D.. (2022). *A Study of the Value of Kamloops Parks*. <u>https://kamloops-</u> parks.pressbooks.tru.ca/
- UN Department of Economic and Social Affairs News (2018). <u>https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html</u>
- White, M. P., Alcock, I., Wheeler, B., & Depledge, M. H. (2013a). Coastal proximity, health and wellbeing: Results from a longitudinal panel survey. *Health & Place*, 23, 97–103.

Appendices



Northern Saw-Whet Owl – Peterson Creek Park

Photo credit: Brad Harrison

Appendix A

Assessing the value of Nature Parks in Kamloops Online (Long) Survey

1. Name of park

Peterson Creek Kenna Cartwright

The first set of questions in this survey focus on your use and enjoyment of the park

2. When visiting this park are you most often Check all that apply

With friends With family By yourself With pets/dogs Other – please specify

3. What is your primary activity in the park? Check all that apply

Walking

- Hiking Biking Walking dog/s Commuting Meeting friends Being with family Birding Enjoying nature Running Exercise Personal Wellness Other – please specify
- 4. How much time do you usually spend in the park per visit (in minutes)?
- 5. On a weekly basis, how often do you use this particular park?
 - First time less than one day per week 1-2 times per week 3-4 times per week 5-7 times per week more than 7 times per week

- 6. When do you usually visit the park?
 - Weekdays Weekends Both weekends and weekdays
- 7. How many years have you been visiting this particular park?
 - Less than 1 year 1 – 5 years 6 – 10 years
 - 11-15 years Over 15 years
- 8. During COVID did the frequency of your visit to this particular park change?
 - I didn't visit the park at all
 - I visited the park less than usual
 - I visited the park the same amount
 - I visited the park more than usual
- 9. What modes of transport do you usually use to get to this park?
 - Vehicle Bike Walking Public transportation Other – please specify
- 10. On a weekly basis, how often do you use any of the other nature parks in Kamloops?
 - never less than one day per week 1-2 times per week 3-4 times per week 5-7 times per week more than 7 times per week

The next set of questions explore your enjoyment of the park and possible improvements to enhance your experience.

- 11. In general, what features of this park do you like the most? Check all that apply.
 - Easily accessible Convenient location Scenery Natural setting Hiking trails Walking trails Biking trails Other – please specify

- 12. How satisfied are you with the overall cleanliness in this park?
 - Extremely dissatisfied Somewhat dissatisfied Neither satisfied or unsatisfied Somewhat satisfied Extremely satisfied Don't know
- 13. How satisfied are you with the quality of the trails in this park?
 - Extremely dissatisfied Somewhat dissatisfied Neither satisfied nor unsatisfied Somewhat satisfied Extremely satisfied Don't know
- 14. How satisfied are you with dog owner etiquette in this park ?
 - Extremely dissatisfied Somewhat dissatisfied Neither satisfied nor unsatisfied Somewhat satisfied Extremely satisfied Don't know
- 15. Have you experienced any user conflicts in this park?
 - Yes No If yes, please explain
 - If yes, what might be solutions for these conflicts. Please explain
- 16. Do you think any of the following signage options would enhance your experience in this particular park? (Check all that apply)

Signage about nature (such as birds, animals, plants, pollinating insects, and vulnerable species)

- Signage about Indigenous history in the park
- Signage about invasive species.
 - Boundary signage
 - Trail signage (map, distance, elevation)
 - Signage would have no impact on my experience
- 17. If there was one improvement you could make to this park, what would it be?

The following questions explore relationships between nature and urban parks

18. How does time spent in nature parks enhance your mental and/ or physical health?

19. How does time spent in nature parks enhance your connection to Kamloops?

- 20. How important to you is the conservation of nature in this park (birds, animals, plants, pollinating insects, and vulnerable species)
 - Very unimportant Unimportant Neither important nor unimportant Important Very important
- 21. On a weekly basis, what concerns you most about the state of the natural world in general (check all that apply)

Climate change Overpopulation Species loss Habitat loss Deforestation Forest fires Flooding Melting glaciers Air Pollution Water pollution Plastic pollution Noise pollution Light pollution Waste disposal Other – please specify

- 22. Are you seeing any of the concerns you identified (above) being played out in nature parks in Kamloops?
 - No,

Yes,

If yes, which ones in particular? Please explain.

23. What actions (apart from using litter bins where provided) would you choose to improve the cleanliness of this park? (check all that apply)

None, not my responsibility Take my own garbage home where there are no bins Take other people's garbage home where there are no bins Bring my own dog bags Pick up other people's dog bags left on the trails Other – please specify

24. How likely are you to participate in volunteer cleanup programs for this park?

Not likely Neither likely nor unlikely. Likely I already participate in cleanup programs in this park.

- 25. When making holiday plans, do you purposely include nature parks or natural areas on your agenda?
 - Never Rarely Sometimes Often Almost always

Three final questions about you.

26. Visitors/users:

Are you from Kamloops? If yes, what is your postal code?

If no, where are you from? Prefer not to answer

- 27. What is your current gender?
 - Male Female Other

28. What year were you born?

Year Prefer not to answer



Peterson Creek Park

Photo credit: Brad Harrison

Appendix B

Assessing the value of Nature Parks in Kamloops Intercept (Short) Survey questions

- 1. Name of park
 - Peterson Creek
 - □ Kenna Cartwright
- 2. When visiting this park are you most often (Please check all that apply)
 - □ With friends
 - □ With family
 - □ By yourself
 - □ With pets/dogs
 - □ Other please specify
- 3. What are your primary activities in the park? (Please check all that apply)

Walking	Commuting
Walking dog/s	Meeting friends
Birding	Being with family
Hiking	Enjoying nature
Running	Personal Wellness/relaxation
Biking	Exercise

- 4. How much time do you usually spend in this park per visit (in minutes)?
- 5. On a weekly basis, how often do you use this particular park?
 - □ First time
 - □ less than one day per week
 - □ 1-2 times per week
 - □ 3-4 times per week
 - □ 5-7 times per week
 - □ more than 7 times per week
- 6. During COVID did the frequency of your visit to this particular park change?
 - □ I didn't visit the park at all
 - □ I visited the park less than usual
 - □ I visited the park the same amount
 - □ I visited the park more than usual

7. In general, what features of this park do you like the most? (Please check all that apply).

	Accessibility		Hiking trails	
	Convenient location		Walking trails	
	Scenery		Biking trails	
	Natural setting		Park benches	

Other – please specify

8. Have you experienced any user conflicts in this park?

No Yes

If yes, please explain

- 9. How does time spent in nature parks enhance your mental and or physical health?
- 10. Which of the following signage options would improve your experience in this particular park? (Check all that apply)
 - Signage about nature (such as birds, animals, plants, pollinating insects, vulnerable species)
 - Signage about Indigenous history in the park
 - Park boundary signage
 - □ Trail signage (map, distance, elevation)
 - Signage would have no impact on my experience

Other_____

- 11. How important to you is the conservation of nature in this park (birds, animals, plants, pollinating insects, and vulnerable species)
 - □ Totally unimportant Important
 - □ Unimportant

□ Very Important

- Neither
- 12. What actions would you choose to improve the cleanliness of this park? (check all that apply)
 - □ None, not my responsibility
 - Take my own garbage home where there are no bins
 - Take other people's garbage home where there are no bins
 - Bring my own dog bags

- 13. If there was **one improvement** you could make to this park, what would it be?
- 14. When making holiday plans, do you purposely include nature parks or natural areas on your agenda?
 - □ Never

Often

Almost always

- □ Rarely
- □ Sometimes
- 15. Visitors/users: Are you from Canada?
 - □ If yes, what is your postal code? _____
 - □ If no, where are you from?_____
 - Prefer not to answer

16. What year were you born?

Year _____

□ Prefer not to answer



Peterson Creek

Photo credit: Brad Harrison

Appendix C: PETERSON CREEK PARK

Intercept (short) Survey Comments – the number in brackets shows how many times the comment was made. If no number appears then only one comment was made.

Q.7. In general, what features of this park do you like the most?

- Off leash (4)
- Nature (2)
- Regulars there at same time
- Scooter friendly
- Gazebo/resting area

Q 8. Have you experienced any user conflicts in this park? If yes, please explain.

- Unruly/aggressive off-leash dogs (13)
- Fast/aggressive bikers (8)
- Homeless people (3)
- _ Racism
- Downhill vs uphill courtesy
- Non-dog people

Q 9. How does time spent in nature parks enhance your mental and/or physical health?

- Relaxation and stress relief (21) Beautiful scenery (7) Connection with nature and time spent unplugged (18) -_ Fresh air (7) - Exercise and physical activity (16) Improves mood (6) Relief from work/stress (11) Mental clarity (6) Socialization and connection with others (2) Calming and refreshing (8)

Q 10. Which of the following signage options would improve your experience in this particular park?

- Old/inaccurate signage (5) -
- Historical park info/species signage (4)
- Endangered/dangerous animal warning (2)
- Off-leash warning/signage in/throughout the park

Q 13. If there was one improvement you could make to this park, what would it be?

- More garbage cans (18)
- More trail maintenance/preventative maintenance (17)
- More & better signage/maps (8)
- Waterspout (5)
- More bathrooms (5)
- -More frequent bathroom clean/garbage pick up by city (4)
- -Pick up poop (3)
- More benches/shaded areas for rest (3)
- Less invasive species (3)
- Fix fences in & around park (3) -
- No *plastic* doggy bags (2)
- More trails [some advanced preferred] (2)
- Zone areas [for bikers, for hikers, on leash area, etc.]
- Turn Summit trailhead into a 'campground'

- Walking vs. biking signage/trail markers
- Dog bag enforcement signage
- "You are here"/locational signage
- Stroller trails
- No vehicle traffic
- No additional trails
- More trees
- More things for dogs
- Less pollution
- City watches for homeless camps
- Benches to put on/take off gear
- Bird houses
- Better management of native species
- Better accessibility for disabled
- Bear awareness
- Lights for night hikers

Online (long) Survey Comments – the number in brackets shows how many times the comment was made. If no number appears then only one comment was made.

Q 2. When visiting this park are you most often

- Students/kids [to teach]
- Visitors/others

<u>Q 3.</u> What is your primary activity in the park?

- Botany (3)
- Appreciation (2)
- Snowshoeing
- Photography [goes w/ appreciation?]

Q11. In general, what features of this park do you like the most?

- Water access (2)
- Appreciation (2)
- Plant variety (2)
- Garbage cans
- Good & accurate trail markings
- Convenience of trails to navigate city

<u>Q 15.</u> Have you experienced any user conflicts in this park? If yes, please explain.

- Unruly/aggressive off-leash dogs (10)
- Doggy bags not being disposed of (8)
- Homeless interactions (3)
- People vs. bikers (2)
- People vs. people (2)

Q 17. If there was one improvement you could make to this park, what would it be?

- More/better signage (9)
- Better trail maintenance (8)
- More garbage bins (5)
- Less invasive species (5)
- More bathrooms (4)
- Signage in the park (3)
- More mountain bike trails (2)
- No pipeline (2)
- More frequent visits by city workers (2)
- Permanent bathroom at Glenfair entrance
- Get permission to use grassland in Peterson
- More indigenous signage
- More trails

- Less construction
- Length of trail/elevation listed on map
- Proper regrowth after construction
- More parking
- No dogs
- Do not provide poop bags
- More shaded areas
- Grade the trails
- Better signage re: construction
- Access to water
- Enlarge parks
- More geocaches
- A tie off at bathrooms for dogs

Q 18. How does time spent in nature parks enhance your mental and/or physical health?

- Positively (23)
- Improves mental health (17)
- Helps with stress and anxiety (12)
- Relaxing and meditative (10)
- Enjoy being outdoors (9)
- Good for the soul and body (8)

- Peaceful beauty (5)
- Increases happiness (4)
- A lot (3)
- Gets rid of hustle of daily activities (2)

Improves stamina and fitness (5)

<u>Q 19.</u> How does time spent in nature parks enhance your connection to Kamloops?

- Appreciation (8)
- Beauty (6)
- Positively (4)
- Meet people/make friends (4)
- Views of the city/landscape (3)
- Proud to live here (3)
- Reason I chose to live in Kamloops (3)
- Some connection (3)

- Convenience (2)
- Multi terrain/species/flowers (2)
- Kamloops is its nature [parks] (2)
- Connection to history/'roots' (2)
- Deepens sense of place (2)
- Well maintained (2)
- Feel safe (2)

Q 21. On a weekly basis, what concerns you most about the state of the natural world in general?

- Human selfishness (2)
- Dog owners
- Lack of human empathy
- Vandalism
- Mines affecting watersheds
- 'Humans suck'

<u>Q 22.</u> Are you seeing any of the concerns you identified (in question 21) being played out in nature parks in Kamloops?

- Habitat loss (5)
 - \circ $\;$ Habitat loss the integrity of the watercourse must be better protected $\;$
 - Plastic pollution; habitat loss (more bears etc.)
 - o Kenna Cartwright newer houses built on land that was previously trails
 - The far end of Kenna Cartwright Park has been lost totally for hikers due to the ugliness of the pipeline construction right through the park
 - o Destruction of habitat
- Construction/pipeline (4)
- Invasive species (4)
 - Habitat and species lost due to invasive species and trail braiding
 - o Invasive species issues, particularly against housing in Kenna
 - o loss of native species decrease in pollinator friendly plants
 - It is disheartening to see that mining/mineral/petroleum rights seem to trump everything else in our parks.

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- Forest fires (4)
- Conflicts with wildlife (3)
- Plastic pollution (2)
- Garbage in parks (3)
- Poor management by government (3)
- Loss of hiking trails (2)
- Pollution (general) (2)

- Water contamination (2)
- Habitat restoration (2)

Species loss (2)

Erosion/flooding (2)

- Air pollution (2)
- Multi-user pathways (2)
- Plastic pollution (general trash) is a problem.
 - Poor air quality often in Kamloops (even when no forest fires).
- Noise pollution
- Drug use in parks

- Water quality
- Trail washouts

<u>Q 23.</u> What actions (apart from using litter bins where provided) would you choose to improve the cleanliness of this park?

- Take others garbage to the bin, not home (7)
- User ownership (5)
- Self motto of "pack it in, pack it out" signage regarding this at entrance/in the park (3)
- Reporting system for big trash items [tires]
- Self directed big cleanup



Redtail Hawk Chicks - Peterson Creek

Photo credit: Brad Harrison

Appendix D: KENNA CARTWRIGHT PARK

Intercept (short) Survey Comments – the number in brackets shows how many times the comment was made. If no number appears then only one comment was made.

Q 2. When visiting this park are you most often

-With work/co-workers (4)

Q.7. In general, what features of this park do you like the most?

- Off leash (3)
- Parking (2)
- Bathrooms (2)
- Dog bags
- Gazebo/resting area

Q 8. Have you experienced any user conflicts in this park? If yes, please explain.

-	Pipeline/Fortis/Construction work (10)	-	Dogs vs bikes (2)
-	Unruly/aggressive off leash dogs (5)	-	Dog poop [bags] (2)
-	Non-dog people (4)	-	Dogs
-	Fast/aggressive bikers (2)	-	People

<u>Q 9.</u> How does time spent in nature parks enhance your mental and or physical health?

-	Exercise and physical activity (17)	-	Fresh air (4)
-	Connection with nature & time spent unplugged (13)	-	Beautiful scenery (3)
-	Relaxation and stress relief (12)	-	Relief from work/stress (2)
-	Calming and refreshing (11)	-	Exercise for dogs (2)
-	Improves mood (8)	-	Good for relationships
-	Mental clarity (6)	-	Improves physical and mental health.
-	Socialization and connection with others (5)		

Q 10. Which of the following signage options would improve your experience in this particular park?

- Old/inaccurate signage (4)
- Endangered/dangerous animal warning -
- Walking vs. biking trail markers
- Historical park info/species signage
- -Dog bag enforcement signage

<u>Q 13.</u>	If there was one improvement you could make	to this park, what would it be?
-	More garbage cans (16)	- Plant more trees (2)

- More & better signage/maps (12)
- More trails [some advanced preferred] (7)
- More/better preventative maintenance (7)
- Less construction in & around park (6) -
- Waterspout (4) -
- More bathrooms (3)
- No pipeline (3)
- More benches/shaded area for rest (2) -

- Stroller trails (2)
- Feel safer
- Directional bike signage
- Suggested routes for 1st timers
- Less invasive species
- Pick up poop
- No *plastic* doggy bags
- Lights for night hikers

Online (long) Survey Comments – the number in brackets shows how many times the comment was made. If no number appears then only one comment was made.

- Good & accurate trail markings

- Scooter friendly

- Dogs vs. bikes (2)

- People with headphones (2)

- Poor signage re: walk/hike/bike specific trails (2)

- Geocaching

<u>Q 2.</u> When visiting this park are you most often

- Hike/bike club (3)
- Students/kids [to teach]
- For events
- For work
- Visitors/others

<u>Q 3.</u> What is your primary activity in the park?

- Appreciation (3)
- Work
- Geocaching

<u>Q 9.</u> What modes of transport do you usually use to get to this park?

- Both [walk/drive; depends on entrance/which park] (2)
- Mobility scooter

Q 11. In general, what features of this park do you like the most?

- Appreciation (4)
- Terrain (3)
- Parking (2)
- Bathroom

$\underline{Q15.}$ Have you experienced any user conflicts in this park? If yes, please explain.

- Unruly/aggressive off-leash dogs (11)
- Poor signage re: trail closures, upgrades, races (4)
- People vs. bikes (4)
- Doggy bags not being disposed of (3)

Q 17. If there was one improvement you could make to this park, what would it be?

More/better signage (7) _ More parking (2) More/improved bathrooms (2) - More garbage bins (6) -- More trails (5) More Indigenous signage (2) Better trail maintenance (4) Length of trail/elevation listed on map -No pipeline (4) Better signage re: construction Less construction (3) Proper regrowth after construction -_ More mountain bike trails (3) Enlarge the park -_ Signage in the park (3) More frequent visits by city workers Less invasive species (3) More geocaches Include on streamlined bus route [from North Shore] _

Q18. How does time spent in nature parks enhance your mental and/or physical health?

-	Positively (14)	-	Increases happiness (6)
-	Improves mental health (11)	-	Improves stamina and fitness (5)
-	Relaxing and meditative (10)	-	Enjoy being outdoors (5)
-	Helps with stress and anxiety (9)	-	A lot (3)
-	Good for the soul and body (7)	-	Peaceful beauty (3)

Q 19. How does time spent in nature parks enhance your connection to Kamloops?

$\underline{\alpha}$ $\underline{1}$	non does time spent in nature parks enhance your o				
-	Meet people/make friends (8)	-	Convenience (3)		
-	Positively (7)	-	Kamloops is its nature [parks] (3)		
-	Reason I chose to live in Kamloops (7)	-	Deepens sense of place (3)		
-	Views of the city/landscape (6)	-	Well maintained (3)		
-	Beauty (5)	-	Feel safe (3)		
-	Proud to live here (5)	-	Multi terrain/species/flowers (2)		
-	Some connection (5)	-	Connection to history/'roots' (2)		
-	Appreciation (4)				
Q 21. On a weekly basis, what concerns you most about the state of the natural world in general?					
-	Fossil fuel dependency (3)	-	Homelessness		
-	Climate change (2)	-	Environmental racism		
-	People's perspectives on the world (2)	-	'Humans suck'		
-	Invasive species (2)	-	Famine		
-	Electric vehicle movement [worried about rolling bla	ckouts]			

<u>Q 22.</u> Are you seeing any of the concerns you identified (in question **21**) being played out in nature parks in Kamloops?

Drug use in parks

Multi-user pathways

Conflicts with wildlife

Trail washouts

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- Construction/pipeline (4)
- Habitat loss (3)
 - \circ $\;$ Housing and new builds encroaching on our green spaces and parks.
 - Habitat Loss-area clearcut for pipeline.
 - Habitat loss due to ongoing projects in Kenna
- Forest fires (3)
- Garbage in parks (3)
- Invasive species (2)
 - \circ $\;$ The impact of noxious weeds is very significant in the park.
 - Invasive species introduced to the park.
- Species loss (2)
- Water contamination (2)
 Air pollution (2)
 Water quality
 Testing in the park
- Poor management by government (2)
- Pollution (general)
 - Overcrowding/overpopulation
 - Smoke from fires air pollution.
- Noise pollution
- Plastic pollution

<u>Q 23.</u> What actions (apart from using litter bins where provided) would you choose to improve the cleanliness of this park?

- User ownership (4)
- Take others garbage to the bin, not home (3)
- Self motto of "pack it in, pack it out" (3) *signage regarding this at entrance/in park
- Self directed big clean up (2)
- Noxious weed management
- Reporting system for big trash items [tires]









Live Intercept Survey.bmp

Double click on .bmp to view map details. Use Scroll Function to Zoom in