

# Yukon River Camp Areas Impact Assessment

## Summary of findings: Whitehorse to Carmacks

Completed by

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## **Non-technical Summary**

The Yukon River has seen numbers of river users increase over the years. This is great for business and the Yukon's tourism industry. However, this growth could be put at risk by the environmental impact of more people using the rivers irresponsibly or without the skills and knowledge required for wilderness travel.

An assessment of the observed impacts at camp areas was undertaken in August 2020. The assessment recorded the number of fire pits, manmade structures and pit toilets as well as a qualitative assessment of the amount of trash, human excrement and toilet paper found and the amount of recent live tree damage. An assessment of the level of recent use as well as the general condition of each camp area was made. In total, 115 sites were assessed.

More than three quarters of sites were found to be in excellent or good overall condition. However, of the remaining 28, eight were in poor condition and two were considered to be very poor, meaning that significant trash, human excrement and toilet paper were found, along with other issues like multiple fire pits and extensive tree damage.

A series of recommendations has been made including developing a Yukon Rivers website with information on best practice wilderness travel, expectations on visiting First Nations' lands as well as information on camp areas. The ultimate aim, however, should be to develop an agreed, funded, long-term management plan to protect the river system for the future.

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## Introduction

The Yukon River has seen numbers of river users increase over the years<sup>1</sup>. This is great for business and the Yukon's tourism industry. However, this growth could be put at risk by the environmental impact of more people using the rivers irresponsibly or without the skills and knowledge required for wilderness travel.

The Yukon Canoe and Kayak Club are working on a project that aims to assess and then address the growing problem of environmental damage to camp areas along popular rivers in the territory. The initial focus of this project is the Yukon River with the hope that successful implementation of solutions can be applied to other popular rivers suffering similar problems (such as the Big Salmon, Nisutlin and Teslin).

The first part of this project was an impact assessment of camp areas from Whitehorse to Carmacks. Originally, an early and late season impact assessment was proposed, but delays getting funding partly caused by the ongoing Covid-19 pandemic meant that only one impact assessment was possible.

During August 2020, an environmental impact assessment of camp areas was conducted on the Yukon River between Whitehorse and Carmacks. This was undertaken by canoe on the river sections and by motorboat on Lake Laberge. The assessment was carried out by Abi and Ric Horobin, on behalf of Yukon Canoe and Kayak Club. The project was funded by the Government of Yukon's Environmental Awareness Fund.

## Methodology

The camp areas were identified from Mike Rourke's river guide and by observation during the assessment. For each camp area, the information shown in Table 1 was recorded:

<b>Impact type</b>	<b>Method of recording</b>
Fire pit(s)	Total number within camp area
Unofficial manmade structures	Total number within camp area (heritage structures and official Government of Yukon structures such as tables and shelters were not included)
Pit toilets	Number of pit toilets and state of repair
Presence of trash	Subjective assessment of none, minimal or lots
Presence of human excrement and/or toilet paper	Subjective assessment of none, minimal or lots

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<sup>1</sup> As part of this project, an ATIPP request was submitted to the Government of Yukon for data on numbers of visitors who accessed the Yukon and Teslin Rivers. An assessment of the information is provided in Appendix A.

Presence of recent live tree damage	Subjective assessment of none, minimal or lots
Approximate level of recent use	Subjective assessment of none, minimal or lots
General condition of campsite	Assessment from the above information of overall condition categorised into very poor, poor, medium, good and excellent

*Table 1 Information recorded at each camp area*

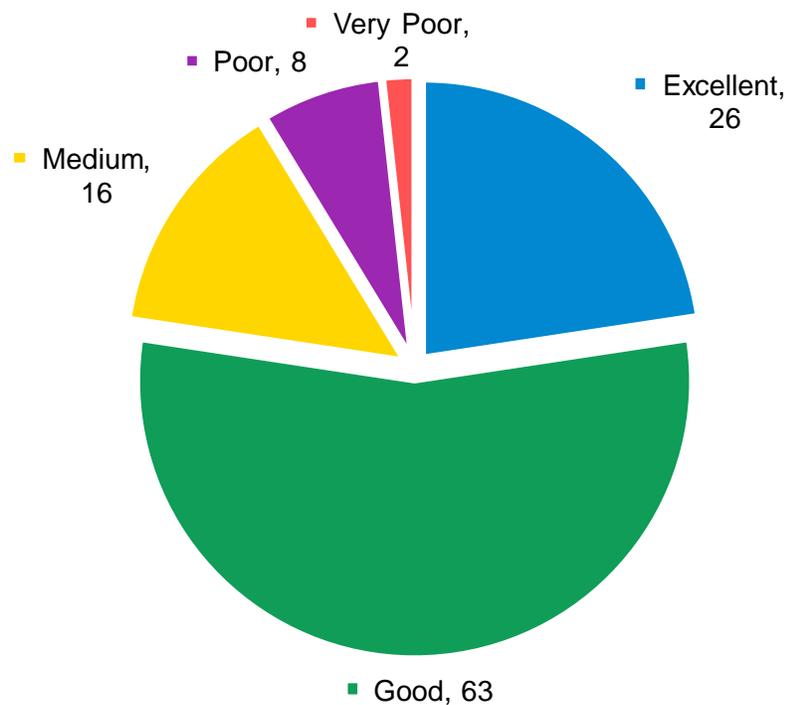
Camps were numbered sequentially from Whitehorse to Carmacks. At each camp area, coordinates were recorded, and a selection of photographs were taken of the overall area and key items of interest.

The information was recorded digitally during the assessment. After completion, the information was displayed on Google Maps GIS. Figures from the GIS are presented in Appendix B.

This assessment was conducted during the COVID-19 pandemic which significantly reduced tourism numbers in 2020. At the time of the assessment, it is likely that only Yukoners and visitors from B.C. would have been using the river and overall numbers would be expected to be less than an average year.

## **Results**

In total, 127 sites were assessed. Of these, 12 were either inaccessible or were not found. Figure 1 shows the general condition of all camp areas assessed, rated from excellent to very poor.



*Figure 1 Overall general condition of campsite*

Overall, more than 75% of sites assessed were assessed to be in either excellent or good condition, in terms of the observed impact from river users. Note that sites assessed to be excellent were not necessarily great places to camp, just that there was little or no observable impact. Only two sites were assessed to be very poor. These were sites 80 (Big Eddy Woodcamp) and 98 (approximately 350 m downstream from Cyr's Gold Dredge). Both camps had considerable observable trash and the obvious presence of human excrement and toilet paper.

The results have been broken down to show the level of impact at different areas between Whitehorse and Carmacks. Figure 2 shows the general condition assessment proportionally for four sections of the river. Note that the total number of sites (given in the axis title) is different for each of the sections.

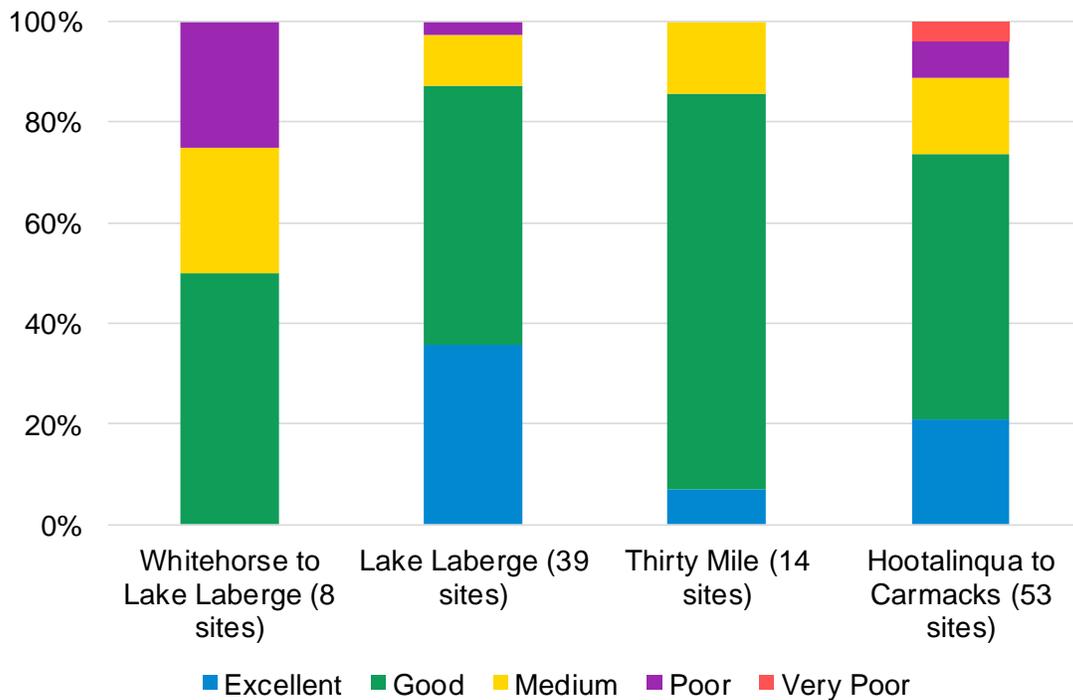


Figure 2 Difference in general condition of campsite for different sections of river

It is clear from this, and was noted during the assessment, that the overall condition of camp areas was generally worse above Lake Laberge and below Hootalinqua.

Additional analysis of the data has been carried out and the following conclusions can be drawn.

1. At the time of the assessment, there were 22 pit toilets at 15 sites<sup>2</sup> along the river. When all sites are considered, there is apparently no less impact from toilet paper and human excrement where pit toilets are present (Figure 3). However, that does not account for the fact that many sites are rarely used. The impact from toilet paper and human excrement at high use sites is significantly greater where no pit toilet is present (Figure 4). This demonstrates, perhaps unsurprisingly, that pit toilets generally reduce the impact from toilet paper and human excrement. This is not always true and there was one site with a pit toilet and lots of impact (site 101, Twin Creeks).

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<sup>2</sup> LLRRC obtained funding to install an additional 8 pit toilets along Lake Laberge and the Thirty Mile in October 2020.

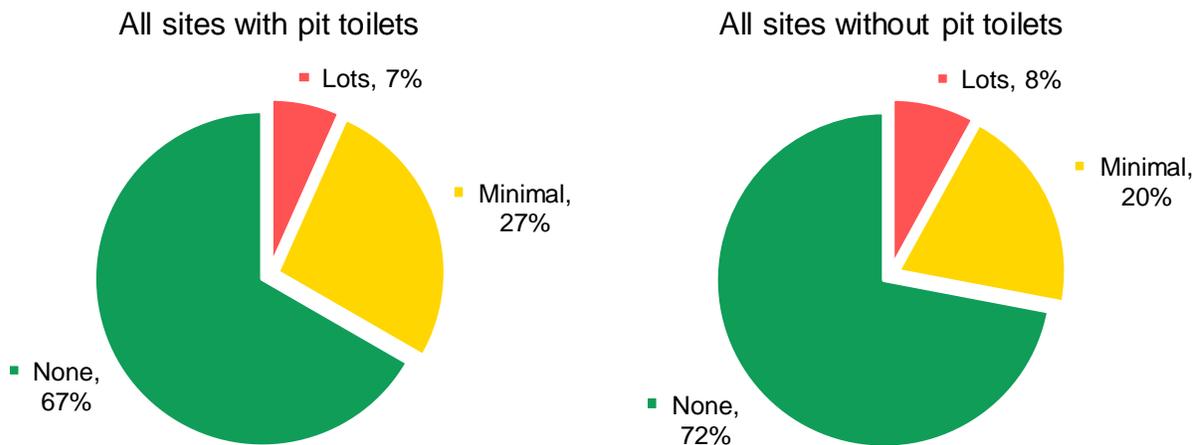


Figure 3 Impact from toilet paper and human excrement – all sites

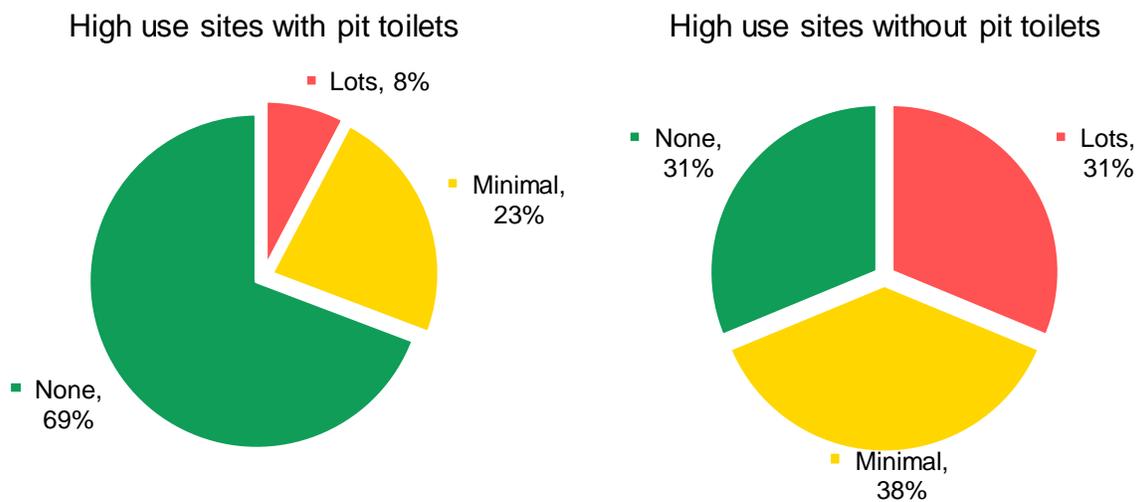


Figure 4 Impact from toilet paper and human excrement – high use sites

2. Minimal impact was seen at camp areas on Lake Laberge where 87% of camp areas were assessed to be either good or excellent. It was notable that the east side of the lake received more visitors than the west, but even then there were only a few sites where impact was high.
3. The Thirty Mile section of the river has developed camp areas historically managed by TKC under contract from the Government of Yukon. These all have pit toilets, picnic tables and fire rings. These sites were in generally good condition.

4. High impact was generally seen at popular camp areas where there was no pit toilet present, e.g. at Big Eddy, or where a poor pit toilet was present, e.g. at Claire Creek. It's likely that heavily used camp areas receive more visitors, due in part, to their reputation but also due to their location on the river, as most people doing the river journey will have similar schedules and will cover similar distances, which will tend to land them at those locations for the night.
5. A number of camp areas located on gravel bars had been flooded recently, so little to no impact was evident.
6. There is evidence of camps being developed, but by who and managed by who is unknown. Tables, picnic tables, pit toilets and tree clearance were in evidence at non-Government of Yukon developed sites. In two of these cases, the pit toilet had been installed less than 50 meters from the river or other water source.
7. The majority of camps affected by impact were on Crown Land but impact was also evident on land belonging to the Ta'an Kwäch'än Council and the Little Salmon/Carmacks First Nation.

We discussed at length during the assessment what an acceptable level of impact was. For example, at sites not developed by Government of Yukon, is it acceptable for tables and benches to be built or brought to site? How do you stop others adding to these improvements? It goes against the Leave No Trace principles set out by Government of Yukon. Also, many sites had multiple fire pits, up to six were counted at one site. These sorts of discussions need to be taken forward with input from all river users.

## **Recommendations**

We make the following recommendations:

- A. Install pit toilet at camp areas that are most commonly used and are being heavily impacted upon.
- B. A management plan for currently installed pit toilets should be developed.
- C. Signage should be installed in pit toilets to remind people how to practice leave no trace.
- D. Agree with stakeholders what the expectations of leave no trace are. How much development of sites is acceptable and who takes responsibility for it?
- E. Discuss the development of a leave no trace awareness video with organisations that could be encouraged to share it. These could include include YCKC, WTAY, Whitehorse Visitor Centre, TIA, FGA and all tour operators who sell services related to river use.
- F. Develop a web page dedicated to the Yukon River that acts as an information portal for all river users and sets out expectations for use. Information regarding each of the First Nations' Traditional Territory and Settlement Lands located along the river should be provided. Locations of pit toilets could be shared on the site.

G. Develop an app made available to river users, to enable ongoing data collection on camp site impact. Use this to monitor any changes and take action as required.

H. Ultimately, an agreed river management plan is required moving forward into the future.

For more information on this report, please don't hesitate to contact Ric Horobin at [ric.j.horobin@gmail.com](mailto:ric.j.horobin@gmail.com).

*Appendix A Analysis of visitor numbers provided by Government of Yukon*

In February 2020, an ATIPP request was submitted to the Government of Yukon requesting data on the numbers of recreational users on the Yukon and Teslin Rivers. The full text of the request was as follows:

*We are looking for data describing the annual numbers of recreational river users on the Yukon and Teslin Rivers over a five-year period for the following journeys;*

*Whitehorse to Carmacks*

*Whitehorse to Dawson*

*Johnston Crossing to Carmacks*

*Johnston Crossing to Dawson*

*We only require numbers; we do not require details of names of operators who submitted numbers. This is to assist us with a project that we are doing to address the environmental impact at camping areas along the Yukon River. We aim to carry out an assessment of the impacts caused by river users and one part of this is identifying what the increase in use is over the years. The outcome from the impact assessment will be sustainable solutions to the problem of trash and human waste on wild camping areas on the riverbanks.*

*As well as total numbers, we would like to identify whether a particular type of group has increased in its use of the river, so we would also like information about numbers of self-guided trips, guided trips, group size and where the individuals came from (i.e. are they local to the Yukon, from elsewhere in Canada or from overseas).*

On August 10<sup>th</sup> 2020, the final response was provided by the Government. The following pages present a high-level assessment of the data.

Data from 2010 to 2019 was provided. For each year, the following information was recorded:

1. Number of people on each trip
2. Whether the trip was guided or rental only
3. The start and end point of each trip
4. The duration of each trip

Data for the Yukon and Teslin rivers only was requested. The summary graphs below have been compiled from information returns provided to the Government of Yukon by tourism operators. It is not known if all operators provided information in all years. There is no information on recreational users who did not rent equipment or guides from Yukon operators, so the information below should be viewed with caution. However, it is likely that the overall trends seen are reasonable. The graphs below show the following information:

- Figure A-1. Total number of recreational users per year
- Figure A-2. Total number of recreational users by river
- Figure A-3. Destination of trips
- Figure A-4. Split between guided and rental only trips
- Figure A-5. Average number of users for guided and rental trips
- Figure A-6. Average trip duration

The following broad conclusions can be drawn from the data:

- i. There was an increase in recreational canoe users to 2017, but numbers in 2018 and 2019 were lower. This could be a result of additional visits up to the celebration in 2017 of the 150<sup>th</sup> anniversary of Canada.
- ii. More people travel the Yukon River than the Teslin River. It is not clear from the data whether this includes paddlers who travel the route across Lake Laberge or who were dropped at Lower Laberge.
- iii. Most trips end at Carmacks, meaning that the number of trips on the river upstream of Carmacks is more than twice that downstream.
- iv. The majority of trips are self-guided (where equipment is rented only).
- v. Guided trips are usually larger than self-guided with the average for guided being 5.5 people per trip versus 2.8 for self-guided.
- vi. The average trip duration is 6 days to Little Salmon, 8 days to Carmacks and 15 days to Dawson City.

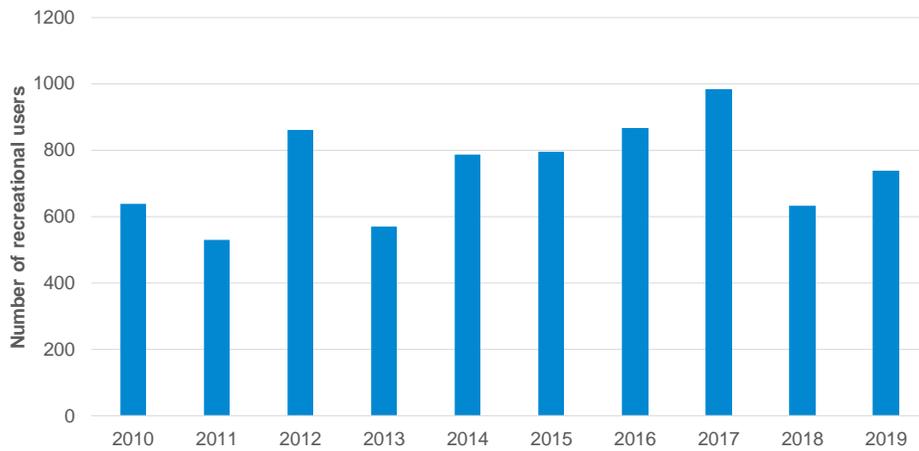


Figure A-1 Total number of recreational users per year

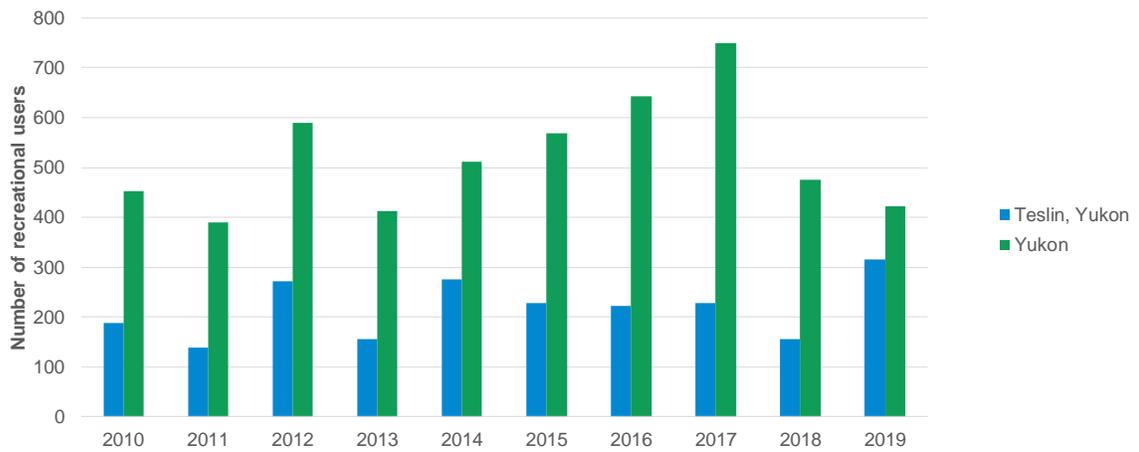


Figure A-2 Total number of recreational users by river

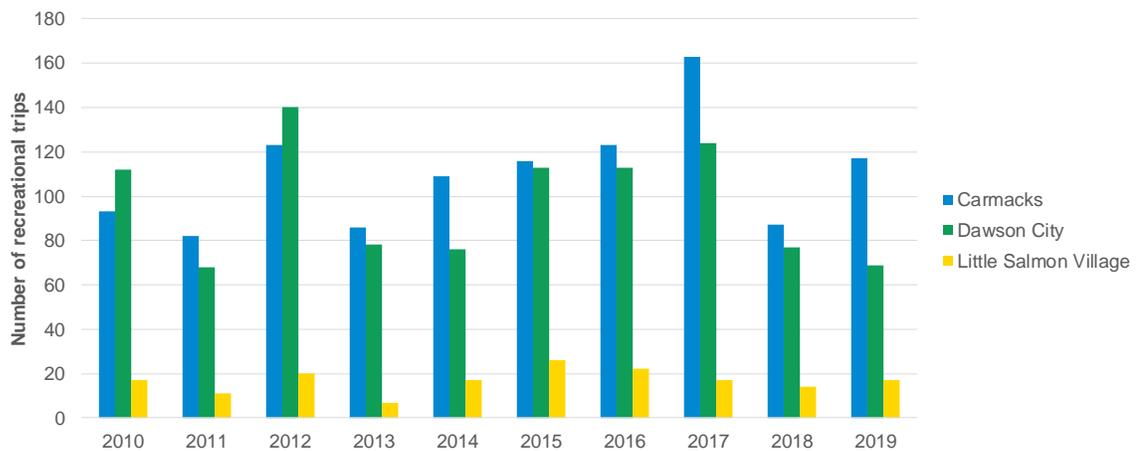


Figure A-3 Destination of trips

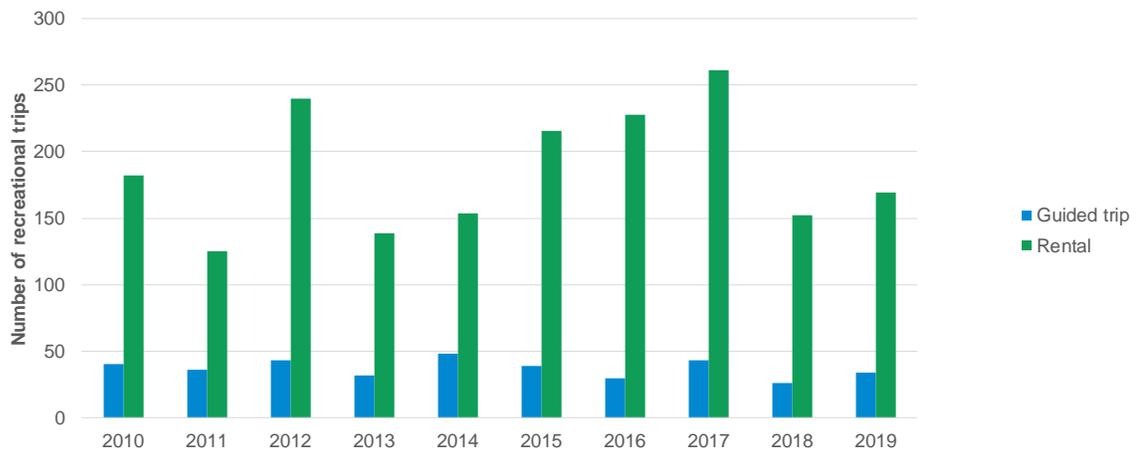


Figure A-4 Split between guided and rental only trips

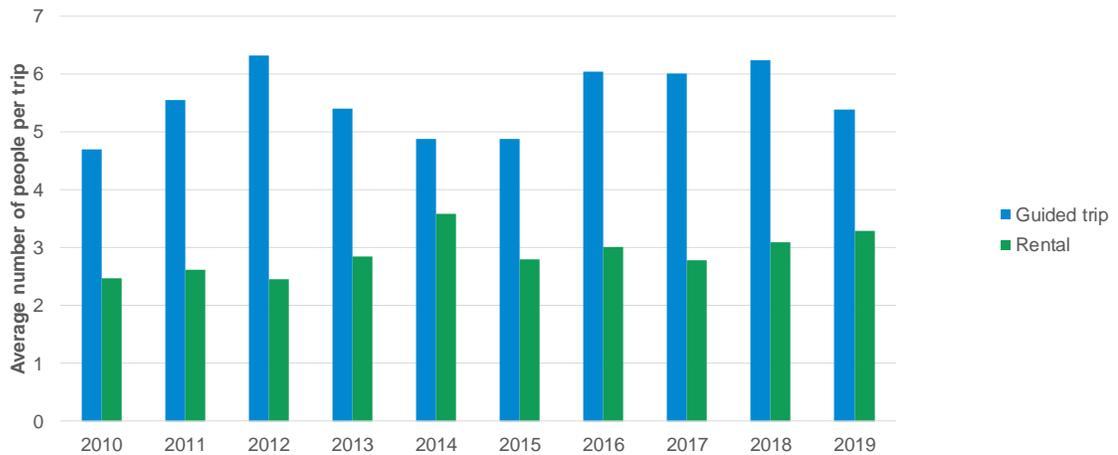


Figure A-5 Average number of users for guided and rental trips

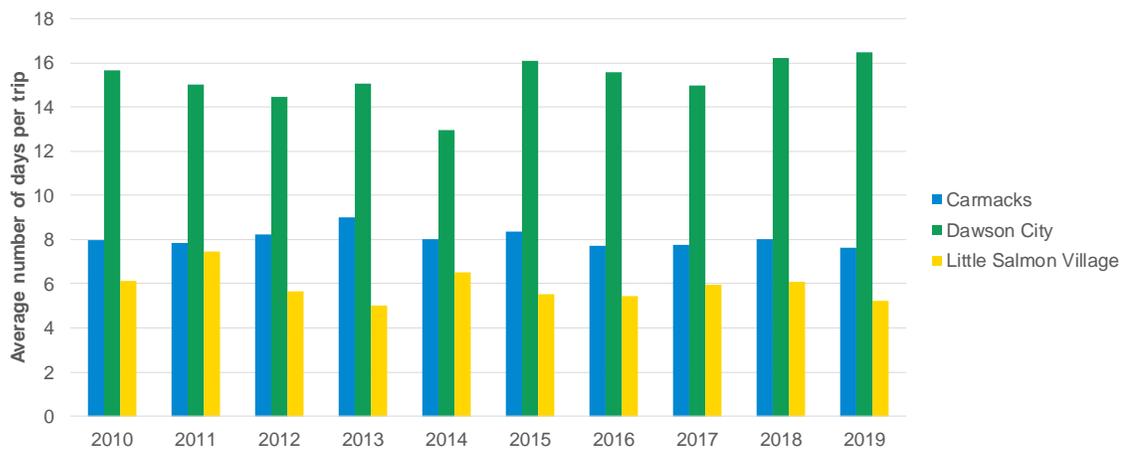


Figure A-6 Average duration of trip by final location

Appendix B Maps showing the camp areas and the assessed general condition

