

September 12, 2023

To: Mary Quinlan, CSLA, AALA
Landscape Architect, The City of Calgary

cc: Jonathan Slaney, P.Eng.
River Engineer, The City of Calgary

Subject: Bow River 10th St Gravel Bar Project: Existing Park + Trail Use Summary

Background and Introduction

As part of the literature review for the Bow River 10th St. Gravel Bar project, data on existing use patterns was summarized to address Task 1.2.4 in the project work plan. This helps visualize the existing social dynamics of the study area, enhancing the project team's understanding of current park and trail use to inform design.

Methodology

Early scoping of this task in the summer of 2023 confirmed that there is no City of Calgary Parks information on park and trail use in the project study area. Instead, O2 used anonymized cellular location data to map use patterns. This data is obtained from a 3rd party provider, Near Inc.¹ They source the data from all smartphone users visiting the area who provided permission to share their location in service-oriented apps. Near Inc. collects and anonymizes the data further by:

- De-identifying the device ID to an UberMedia ID
- Ensuring that no personal information is included
- Certifying their data by global privacy regulations (<https://near.com/privacy/>)

O2 processes and further anonymizes the data by reporting it as aggregated heat maps to represent the relative density of use and visitation. Visitors may drop multiple pins, meaning visitors who stay longer will have a larger effect on the heatmap. The data also represents a subset of the population who have data-enabled devices with location tracking turned on (not all users). To focus the map on recreational visitation and remove unwanted artifacts and outliers from the data, the following steps were also taken for the study area: (i) Bridges above the river and parks were removed; (ii) The river channel was removed, as it contained inconsistent and suspicious data points; (iii) Several outlier hotspots not correlated with a known public gathering space were removed, to focus the analysis on recreational uses.

Results and Discussion

Figure 1 shows the initial results as well as the areas where removal of the outliers and artifacts was undertaken. Swamping of the data by the large volume of cell phone users crossing the bridges is obvious. In addition, several hotspots in The South Slopes

¹<https://near.com>

and The North Channel areas appear to represent homeless encampments observed in the field. However, these only capture encampments where occupants carry cell phones with location-based services enabled, so is not an inventory of encampments. Several of the other outliers removed were unresolved artifacts or obvious data errors.

Figure 2 shows the results after removal of all the outliers. Results may vary in their accuracy and should be interpreted with care; however, this is considered a relatively accurate representation of current use intensities, based on the data from 2022 and 2023. The highest concentration of uses occurs at the following locations:

- The Calgary Fire boat launch area at the downstream end of The Landing
- The Wave Deck area in between the 10th St (Louise) Bridge + LRT Bridge area and adjacent shoreline areas²
- The park bench above the gabion wall at the west end of The South Slopes

Other, more moderate use trends include:

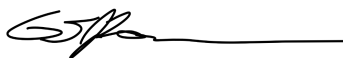
- The downstream (east) end of the study area in the vicinity of the Peace Bridge
- Several parts of The South Slopes, including the vicinity of the eroding slope near the newer stormwater outfall at the upstream (west) end
- Existing use is very low throughout The North Channel area

To supplement the hotspot map, photos of typical existing uses observed during field photos taken on July 29, 2023, as well as supplied by Surf Anywhere are included as an Attachment. These activities include: sunbathing, rafting, canoeing, kayaking, river surfing, swimming, walking, sightseeing, frisbee, reading and relaxation. Loitering, drinking, and smoking, campfires (informal) and homeless encampments are some other activities that have also been observed during study area visits.

Summary, Conclusions, and Next Steps

This memorandum highlights and visualizes existing use patterns to inform the Bow River 10th St. Gravel Bar project. This information is being considered to inform project planning and design development as needed by the project team as the project progresses. Elements of this information will also be incorporated into the subsequent preliminary design report, which will be presented later this year.

George Roman, PMP
Project Manager, O2



²The 2022 and 2023 cellular data available does not represent use intensity from prior years. Anecdotal reports indicate that the number and density of users in the Wave Deck between the two bridges was far higher during prior years when the river wave was being actively used by the river surfing community as well as congregating spectators (Neil Egsgard, Surf Anywhere, personal communications)

Figure 1. Visitation Heatmap 2022 + 2023 *Prior to Removing Outliers and Data Artifacts*

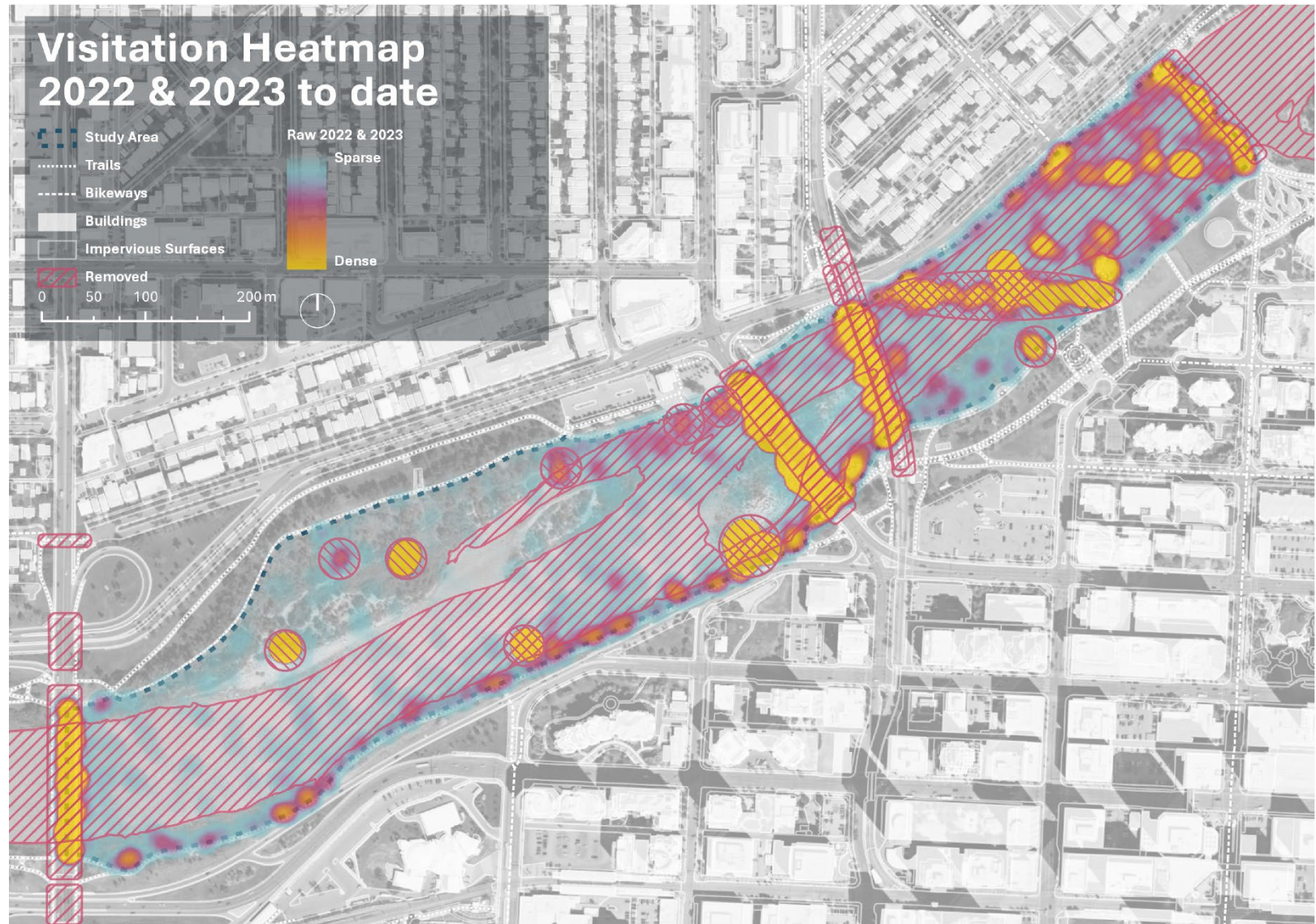
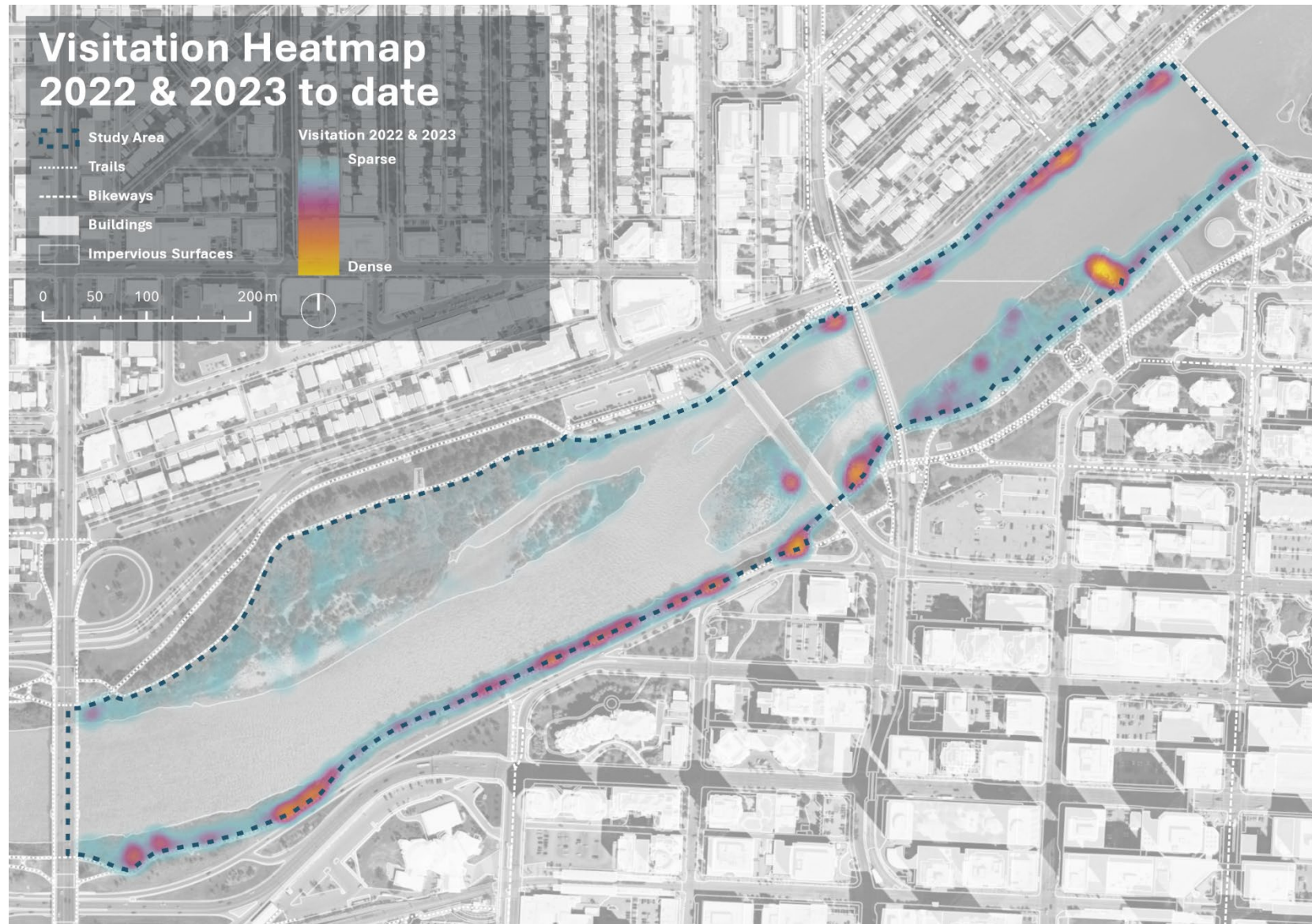


Figure 2. Final Visitation Heatmap for 2022 + 2023



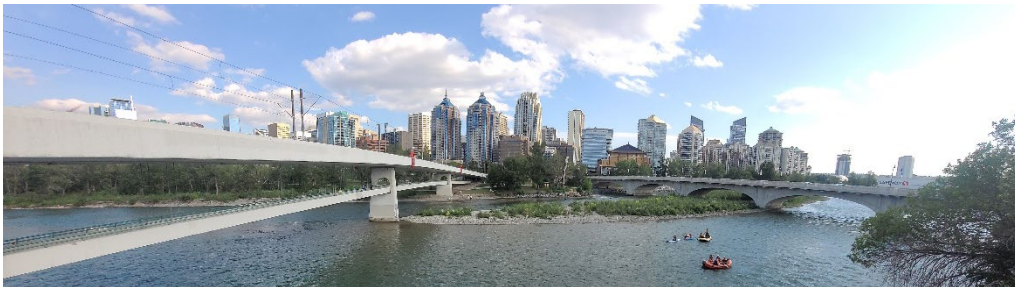
ATTACHMENT: PHOTOS ILLUSTRATING EXISTING USES



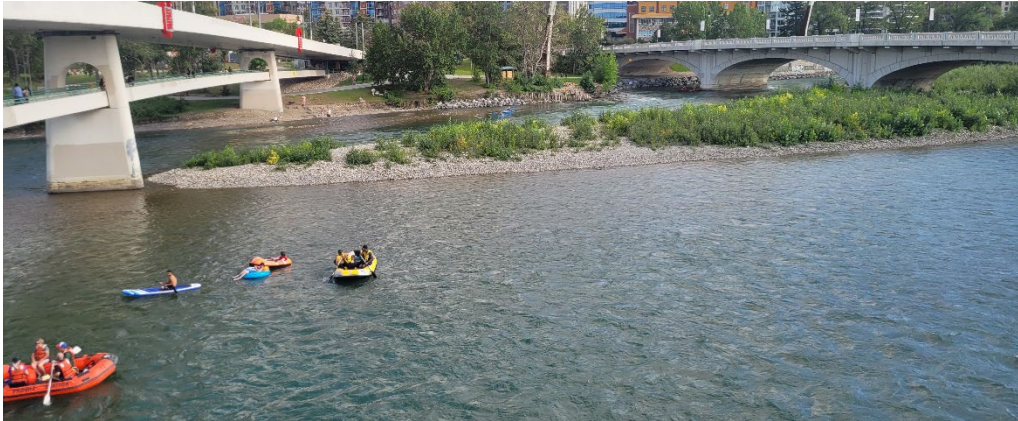
The Landing, from storm outfall to boat launch (July 29th, 2023)



The Landing (upstream – West end) + Wave Deck near LRT bridge (July 29th, 2023)



The Louise Bar between Louise Bridge + LRT Bridge (July 29th, 2023)



The Louise Bar and typical summer river users (July 29th, 2023)



The Wave site (July 29th, 2023)



Downstream portions of the study area + The Landing (right bank) (July 29th, 2023)



The Landing, showing beach-like use and sunbathing (July 29, 2023)



The Wave and Wave Deck (July 29, 2023)



The South Slopes (upstream end) + river users, as viewed from the North Channel (August 1, 2023)



A Homeless Encampment – North Channel treed area (August 1, 2023)



Informal Campfire, North Channel area (August 1, 2023)



Abandoned Shopping Cart, North Channel area (August 1, 2023)



Former River Surfing Activity (Photo courtesy Neil Egsgard, Surf Anywhere)



Former River Surfing Activity (Photo courtesy Neil Egsgard, Surf Anywhere)