

2020/21 WINTER DATA COLLECTION INITIATIVE



2020/21

Upper Gunnison Valley Winter Visitor Use Report

The town of Crested Butte, and the surrounding Upper Gunnison Valley (UGV), is well known for its world class winter recreation opportunities. This visitor use study aims to provide a database for stakeholders interested in winter recreation patterns in the UGV.

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UPPER GUNNISON VALLEY WINTER VISITOR USE REPORT

Introduction

The “last great Colorado ski town” – Crested Butte, is located near the north end of the Upper Gunnison Valley (UGV), in central Colorado. This former coal mining town is now a tourist destination that attracts recreationists year-round, but the long winters, low temperatures, and heavy snowfall are what have built this area’s reputation as a winter recreators dream. The town’s location within in the Elk Mountains offers a truly outstanding amount of winter backcountry access within 30 min drive from the town. Currently, these popular trailheads in the Crested Butte area are under the regulation of United States Forest Service’s (USFS) Winter Travel Management Plan (WTMP), which was created over 20 years ago. Since the agency’s plan was developed, technological changes along with observed increased visitation to the backcountry have prompted members of the Crested Butte community to express interest in updating the WTMP. Beginning with former student Doug Shaw’s 2017/18 study, graduate students from the Master of Environmental Management program at Western Colorado University, have been working in collaboration with The Center for Public Lands to produce an annual quantitative dataset (in addition to a qualitative winter backcountry user survey) regarding backcountry use/travel in the UGV. The goal of this study is to increase knowledge of winter travel patterns and enhance stakeholder’s ability to aid the USFS in a winter travel management planning process.

While Crested Butte and the UGV is certainly a well know place for winter recreational opportunities, they are not the only community facing changes in winter recreational planning. In 2015, a United States Forest Service ruling declared that “a system of routes and areas to provide for over-snow vehicle use” must be established for all winter use areas across the nation. While the local Forest Service office does plan to implement changes to the WTMP to account for the 2015 ruling, they have not done so yet. There are plans to complete a Forest Plan Revision before considering the WTMP. In the meanwhile, the community aims to study and better understand visitor use patterns in order to inform the planning of the WTMP once the process commences.

In addition to this report, the Center for Public Lands will be producing a comprehensive, multi-year study, starting from the 2017/18 season, to compile data that can be used by different land mangers (USFS, BLM, private lands owners, etc..) to help inform policies for winter recreation management. The goal of this study is to increase knowledge of winter travel patterns and enhance stakeholder’s ability to aid the USFS’s Winter Travel Management Plan.

This study is an ongoing collaboration between the Master of Environmental Management program at Western Colorado University, The Center for Public Lands, Silent Tracks, and the Town of Crested Butte. The following presents the results of data collection in the winter of 2020-21.

METHODOLOGY

The methods and design of the 2020/21 study have been repeated with minimal variation since the original 2017 study. It is our hope that continuing a similar methodology will produce the most accurate model of recreational usage and show any trends or patterns that might emerge over time. Trailhead monitoring occurred via eight remote cameras installed trailheads in the six major drainages used for backcountry travel in the Upper Gunnison Valley. Images are collected from December to April and the cameras are maintained once every week or two to retrieve SD cards, ensure proper camera framing and replace batteries if needed. Infrared counters could be used to record number of trailhead users, but the photo-capture mode available on remote cameras allows a better understanding of what type of winter recreation is occurring on the various trailheads.

Users are categorized in 4 main user types: **non-motorized** (cross-country skiers, snowshoes, backcountry skiers/splitboarders, hikers, etc.), **motorized** (snowmobiles, any type of over snow vehicle), **hybrid** (a user encompassing more than one category) and **mechanized** (fat tire bikes, mountain bikes). Motorized users are defined as “any vehicle which is self-propelled, other than a wheelchair or mobility device” by the US Forest Service. Hybrid users appear to be participating in multiple forms of recreation, typically identified by a snowmobile carrying skis or pulling skiers. Primarily, we focused on counting “outgoing” traffic, so some users who walked around the camera, were linking trail systems, etc... may have been missed.

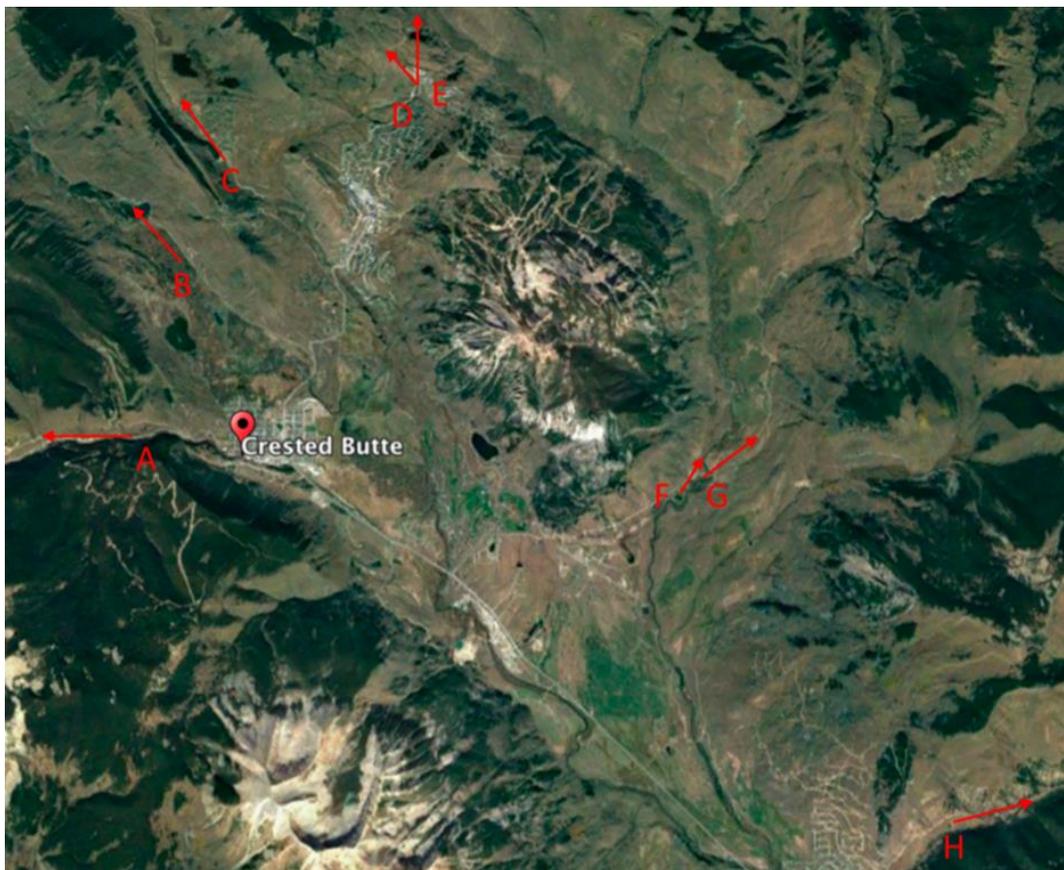


Figure 1: Location of Trailheads: A – Kebler Pass B – Washington Gulch C – Slate River D – Snodgrass E – Gothic F – Brush Creek Trail Head G – Brush Creek Road H – Cement Creek. (Image: Google Earth, 2018).

COMMUNITY SURVEY

For the 2020/21 WDCI, we chose to include a user survey on winter recreation in the UGV, based on previous surveys included in the 2107 and 2020 collections. Like the database, the community survey has been conducted with minimal variation and we have used the same questions since the initial 2017 survey. We worked with local news outlets, our stakeholders, and community/backcountry user groups to reach as many local and visiting backcountry users as possible. The survey consists of 20 questions that cover things like: type of backcountry use (motorized, skier, fat bike, etc.), duration & location of use, trends in visitation, and their perceptions of current use and management, as well as future management. We also gather logistical information through this forum like age brackets (under 18; 18-24; 25-30; 31-40; 40-60; 60+), and the general location of primary residence (Gunnison, CB South, Crested Butte, other in Gunnison county; other in Colorado, out of state, etc.).

Results

Our counts show that between Dec 3rd, 2020 and April 15th, 2021 there were at least 44,051 recreational visits that took place on winter trails in the Upper Gunnison Valley (Table 1). Kebler Pass was the most visited trailhead with close to 12,000 recreators counted, averaging to 100 users per day. The overwhelming majority of users counted at Kebler Pass were motorized users, with this category adding up to 10,499 (89% of trailhead total) people, mostly snowmobilers. The other 7 trailheads were primarily used by non-motorized recreators, with just over 1,000 motorized visits at these remaining basins through the duration of the study. Around 98% of the non-motorized visits that took place in the UGV throughout this study were in the remaining 7 trailheads.

The camera with the lowest number of users counted was at Brush Creek Road, with a total of 1,542 visits. 5 of the trailheads had between 4,500 and 5,000 users for the winter season (Slate River, Washington Gulch, Gothic and Cement Creek). Snodgrass Trailhead received the 2nd greatest number of visitors, totaling over 10,100 users. Snodgrass also saw the most amount of mechanized use, with 375 fat-tire bikers counted across the season.

Trailhead	Days with Data	Total Users	Non-motorized	Motorized	Hybrid	Mechanized
Brush Creek TH	134	1,998	1,974	1	0	23
Brush Creek RD	89	1,542	1,473	22	17	30
Cement Creek	134	4,615	3,777	595	71	230
Gothic	129	4,445	4,113	47	9	276
Snodgrass	126	10,122	9,968	14	3	379
Washington Gulch	131	4,781	4,120	383	242	36
Slate River	130	4,726	3,919	101	656	50
Kebler Pass	116	11,822	504	10,499	768	51
Totals	989	44,051	29,848	11,662	1,766	1,075

Table 1: 2020-2021 Totals, including number of days data was collected, total recreation visits, and number of visits by category for each trailhead.

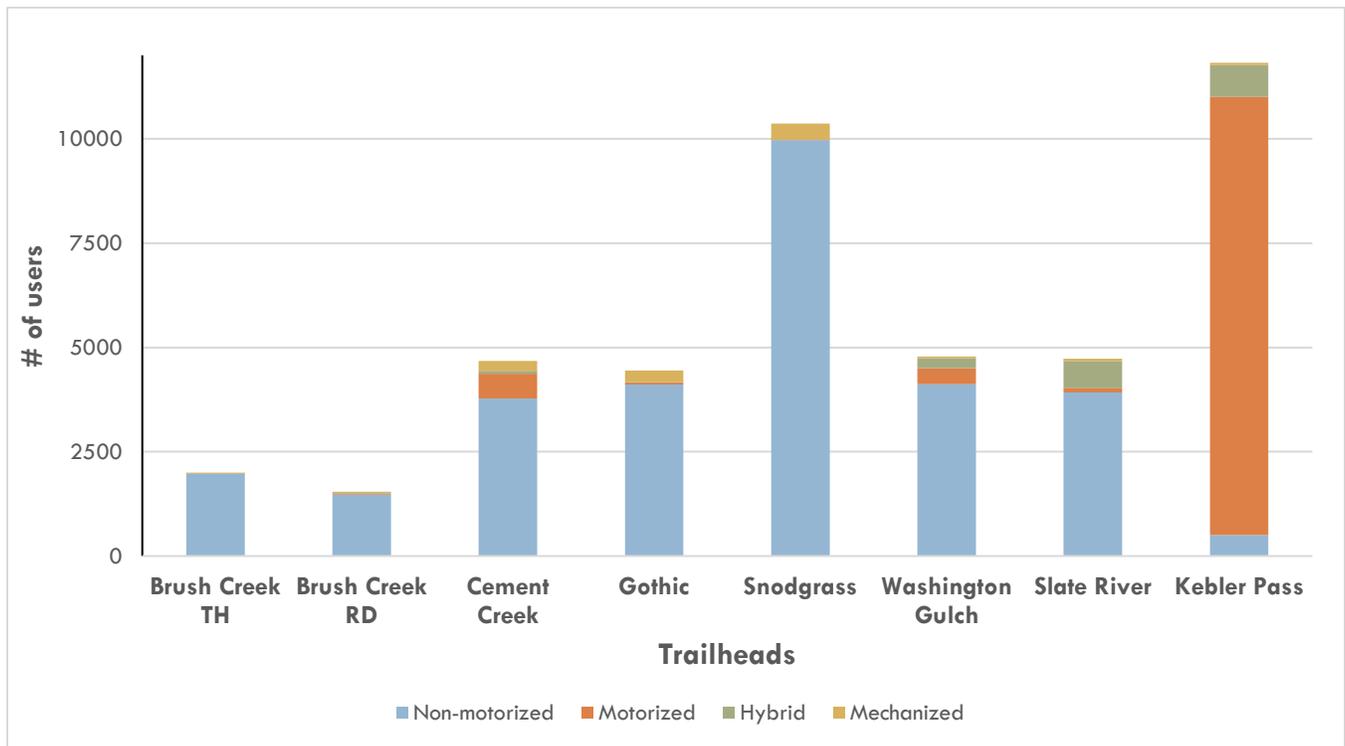


Figure 2: This bar chart represents the number of non-motorized, motorized, hybrid, and mechanized users at each trailhead, to highlight the proportional use of each recreation type by trailhead.

Consistent with the total user data, Snodgrass and Kebler Pass had the two highest daily averages at around ~80 and ~100 users respectively, while the both Brush Creek trailhead and road averaged the lowest daily average, both averaging less than twenty users per day. The remaining 4 trailheads averaged between 34 and 37 users per day.

<u>Trailhead</u>	<u>Average Daily</u>	<u>Average Daily Non-Motorized</u>	<u>Average Daily Motorized</u>	<u>Average Daily Hybrid</u>	<u>Average Daily Mechanized</u>
Brush Creek TH	14.91	14.73	0.0075	0	0.17
Brush Creek RD	17.33	16.56	0.25	0.19	0.34
Cement Creek	34.44	28.19	4.44	0.53	1.28
Gothic	34.46	31.89	0.36	0.070	2.14
Snodgrass	80.33	79.11	0.11	0.024	1.08
Washington Gulch	36.50	31.45	2.92	1.85	0.27
Slate River	36.35	30.15	0.78	5.047	0.38
Kebler Pass	101.91	4.34	90.6	6.62	0.44

Table 2: 2020 – 2021 Averages, including total valley wide daily use, user category averages, and trailhead specific averages. Average daily use was calculated by dividing total annual visits by number of days data were collected

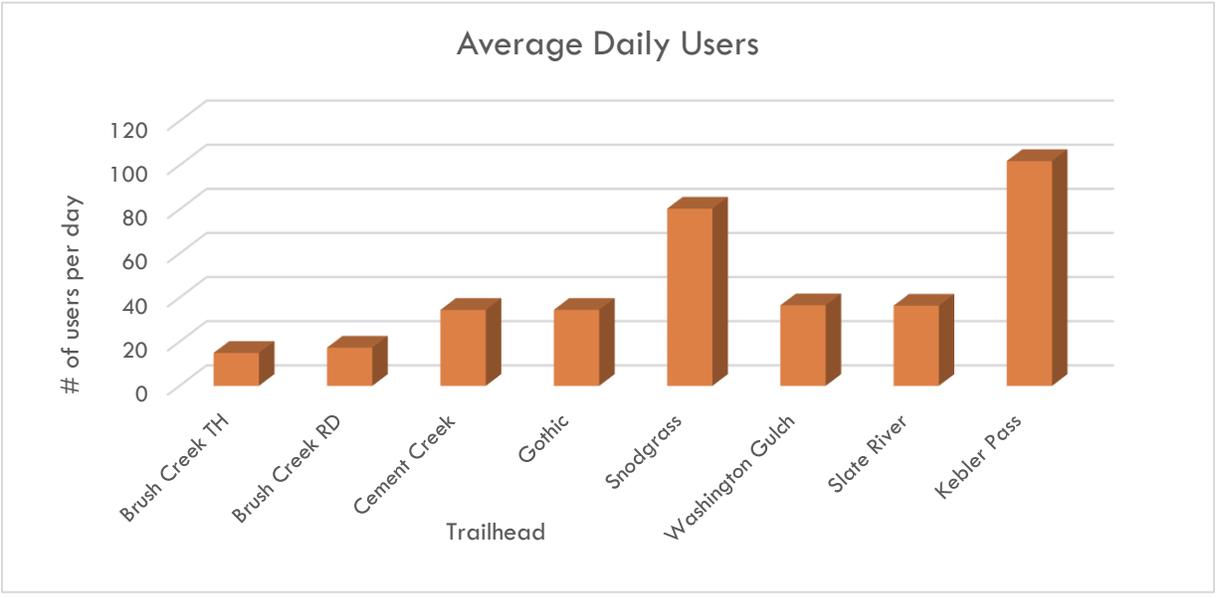
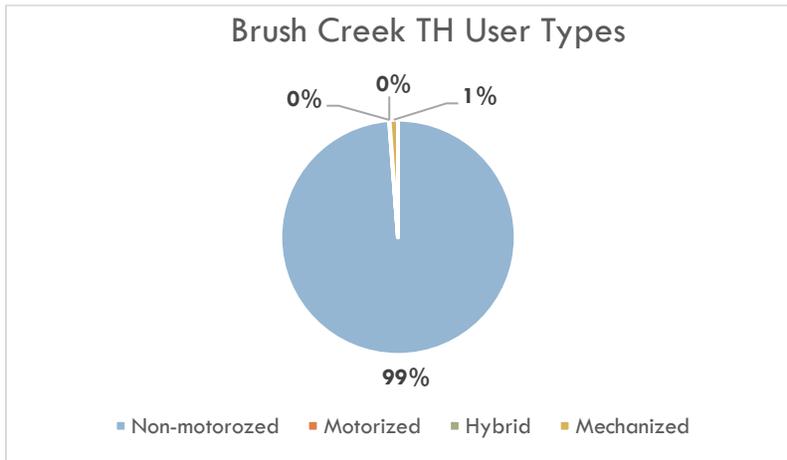


Figure 3: Bar chart representing daily average number of users at each trailhead.

BRUSH CREEK TRAILHEAD

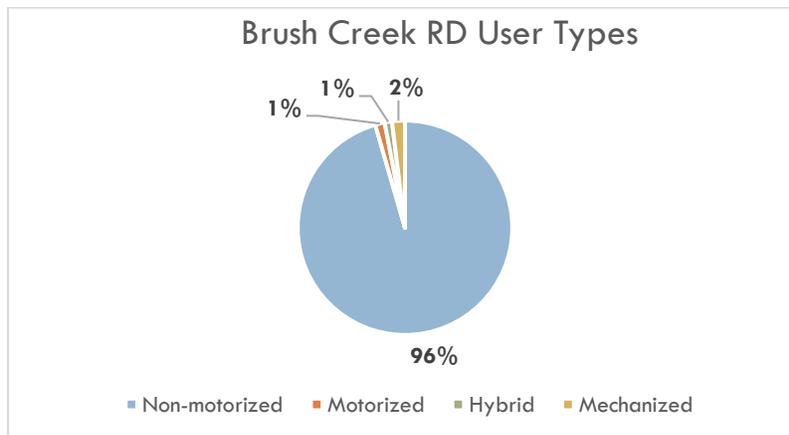
Total # of visitors = 1,998
Average # of visits per day = 14.91



2020-21 study shows a 6.21% increase of daily use from the previous season. 2nd highest daily average since study began. Highest amount of total use observed (previous total # = 1412).

BRUSH CREEK ROAD

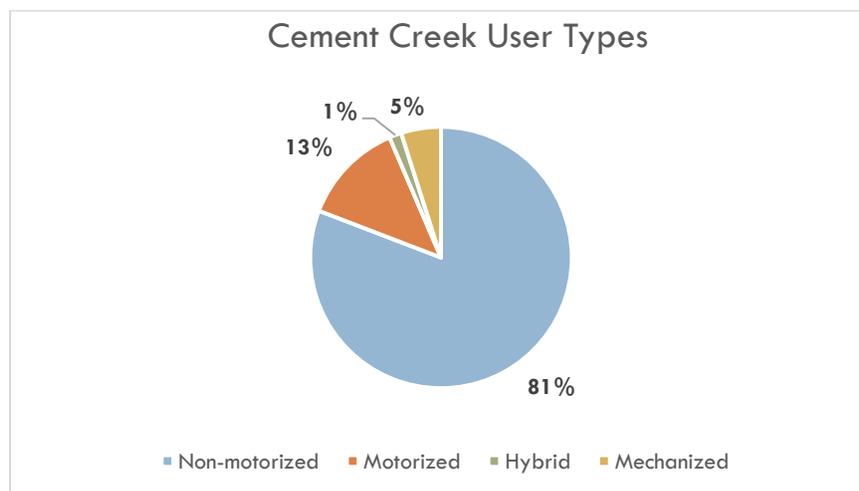
Total # of visitors = 1,542
Average # of visits per day = 17.32



First time looking at Brush Creek Road since the initial study. Potentially missed a majority of motorized and hybrid users, as visitors tend to drive vehicles/trailers to further down the road.

CEMENT CREEK

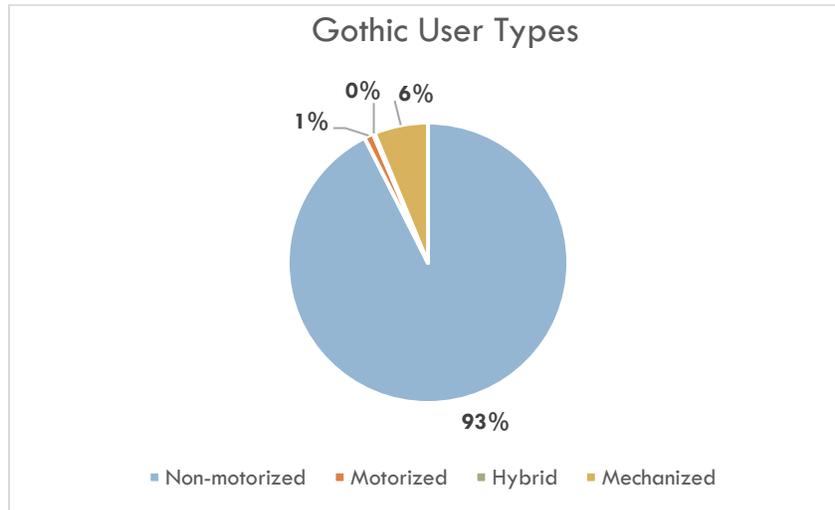
Total # of visitors = 4,615
Average # of visits per day = 34.40



2020 – 2021 study shows a 13.4% increase in daily use from the previous year. Highest total and averages seen at Cement Creek since the initial season.

GOTHIC

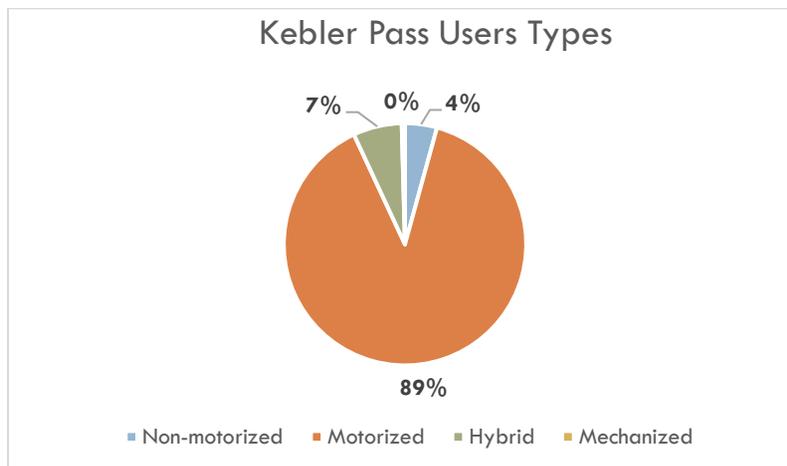
Total # of visitors = 4,445
Average # of visits per day = 34.45



2020 – 2021 study shows 13.95% increase from the previous winter season at the Gothic Trailhead. This was the greatest number of users counted at this trailhead and the 2nd highest average since the initial study.

KEBLER PASS

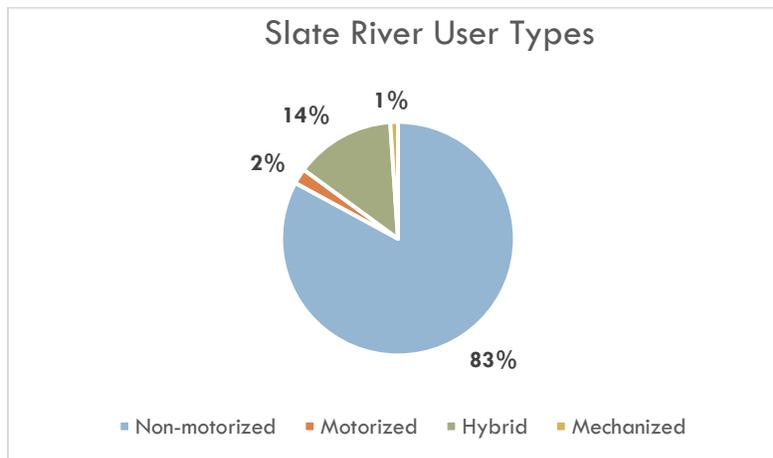
Total # of visitors = 11,882
Average # of visits per day = 101.91



There was a 37.21% increase in daily use at the Kebler Pass trailhead this season. This is the highest average recorded in this study, 18.21% more users per day than the previous highest average. Kebler pass saw nearly 4,000 more visits than any previous season recorded.

SLATE RIVER

Total # of visitors = 4,726
Average # of visits per day = 36.35



This season's study had the highest number of visitors recorded at the Slate River Trailhead since the implementation of the study. A noted decrease in # of motorized users, with the 2019-20 study showing around 600 motorized users, while this season's study only observed 108 motorized users. A higher percentage of hybrid use is seen at this trailhead than any other in the study.

Slate River Trailhead Parking Lot

An additional camera was used in the 2020/21 Winter Data Collection Initiative with the intention of capturing the vehicle use at the Slate River Trailhead parking area. This camera captured two images at multiple time intervals each day (7AM, 11 AM, and 3 PM). Vehicles in the frame were counted and categorized into 4 groups – Trucks/SUVs, Mid-Size/Compacts, Vans/RVs, and Vehicles with Trailers (any type of vehicle with an attached trailer).

Over 1,000 vehicles were observed over the study's duration and at it the busiest periods of the winter season, the camera was able to capture up to 15 vehicles parked in the parking lot and along CO Rd. 734. 11 AM was the busiest interval, averaging around 8 vehicles in frame every capture. Trucks and SUVs were the most common vehicle type, followed by Mid-Size/Compacts. Nearly 250 vehicles pulling some sort of trailer were observed over the 3 and half month period.



Figure 4: Busy day at the Slate River Trailhead. Cars lined up down CO Rd. 734 and trailers backed up to trailhead.

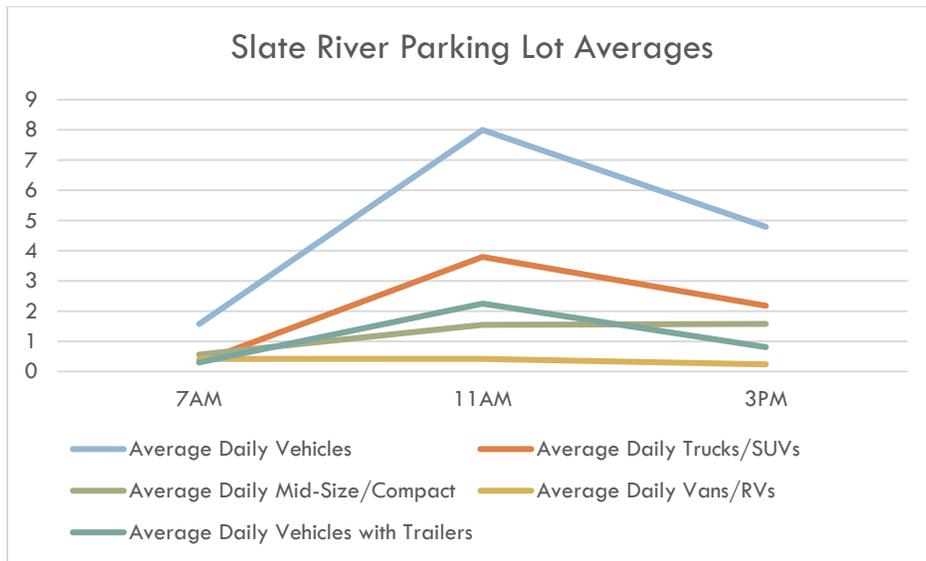
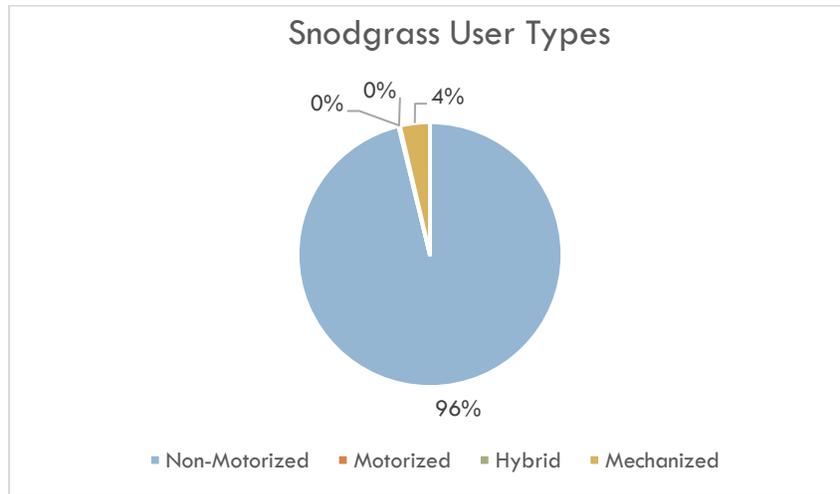


Figure 5: Average number of vehicles in the parking lot based on category type.

SNODGRASS

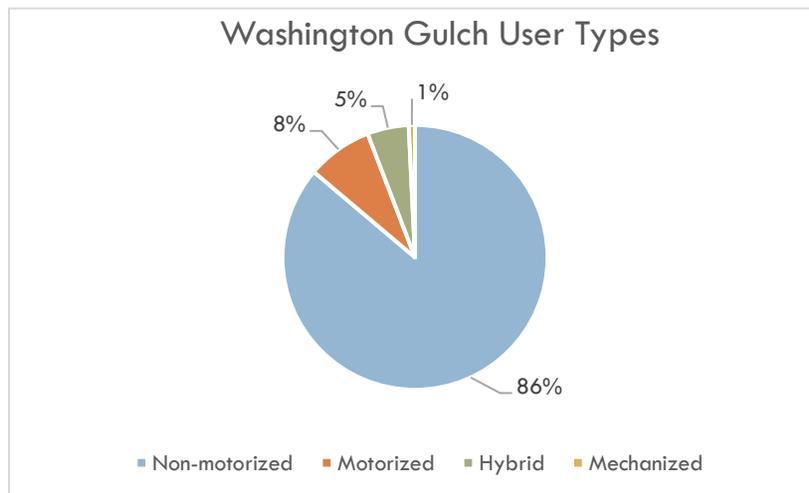
Total # of visitors = 10,122
Average # of visits per day = 80.33



There was a large increase in use observed at the Snodgrass Trailhead, with more visitors counted this season than any previous. Observed increase of nearly 50% in use, compared to any previous year data was collected. Averaging almost ~20 more people than the previous highest average (2019/20 = 63.10). This season there was almost three times the number of mechanized users than any previous study.

WASHINGTON GULCH

Total # of visitors = 4781
Average # of visits per day = 36.50



Highest number of recorded visits at Washington Gulch since the beginning of this study. This season's WDCI counted around 2,300 more people at the Washington Gulch Trailhead than last year. The average of the 36.50 visits per day is almost 14 more observed in the 2019/20 study.

CONCLUSIONS

There was an increase in both the total number and averages of recreation use observed in the 2020/21 Winter Data Collection Initiative. Every trailhead that was monitored recorded its highest number of users since the implantation of the Winter Data Collection Initiative. There are several factors that could explain why such a large increase was seen in this year's study. This season's study having the most total days for analysis (compared to previous years) is an obvious reason, but one must consider the increased interest in outdoor recreation following COVID-19 pandemic and the growing popularity of Crested Butte Mountain Resort as potential factors. While this year's collection registered the highest total and average user numbers, it is important to notice that a lot of values observed from the 2017/18 study were the 2nd highest and there was actually a decrease in use through those previous three seasons. While some patterns of linear growth have appeared at specific trailheads, overall, the data is mostly fluctuating. There were a couple different observations that stood out to the author, including the Snodgrass Trailhead having almost doubled its previous highest count. This year's study has shown that there appears to be a continued growth in the number of recreational visits at Kebler Pass, with close to 4,000 more users counted than last season. Cement Creek also is showing a similar trend, starting with only 780 users counted in the 2017/18 study, to ~2,400 last season, and this year's observation of around 4,600. Trailheads like Gothic, Slate River Road and Washington Gulch all recorded about 2,000 more visits than last year. This season has also been the first time that a trailhead has recognized a user count of over 10,000 people, occurring at both Kebler Pass and Snodgrass trailheads.

Trailhead	17-18	18-19	19-20	20-21
Brush Creek Rd	538	ND	ND	1542
Brush Creek Trailhead	1,388	911	979	1998
Cement Creek Trailhead	780	1,890	2,418	4615
Gothic Rd	3,457	3,083	2,400	4445
Kebler Pass	5,388	7,064	8,154	11,882
Slate River Rd	4,130	4,042	2,355	4726
Snodgrass Trailhead	5,776	5,203	3,661	10,122
Washington Gulch Trailhead	4,355	2,450	2,371	4,781
Total Days for Analysis	718	952	924	1029
Total Days with No Data	71	34	197	40
Total Days with Data	647	918	727	989
Avg Users/Day	35.94986	25.8855	24.17532	44.541
Total Users	25,812	24,643	22,338	44,051

Figure 6: 4-year comparison chart, showing total counts and overall average users per day.

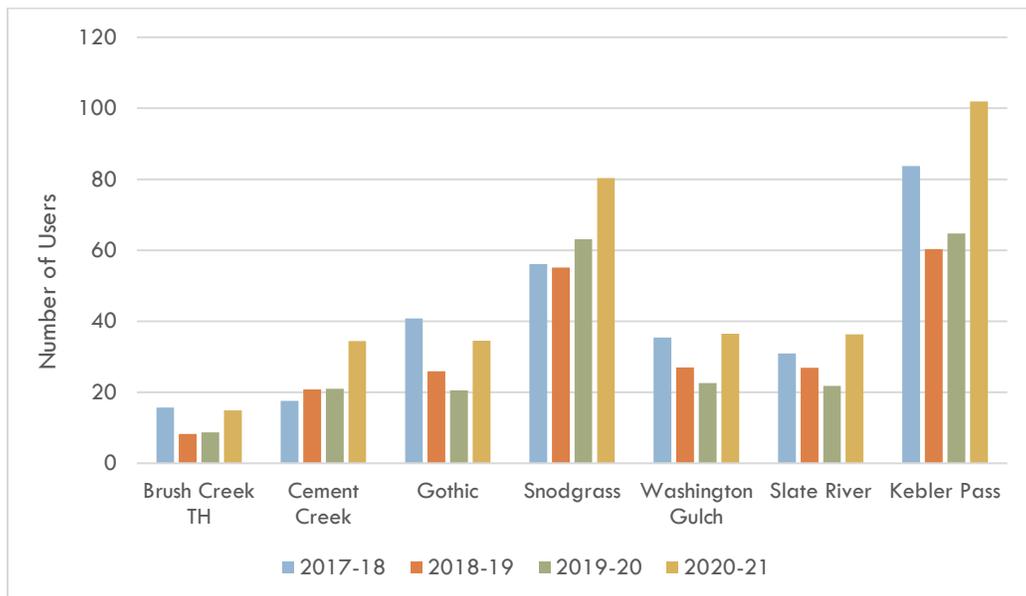


Figure 7: This bar chart illustrates the average daily recreation visits for each site during the 4 years of data collection.

This season’s survey was open March-April 2021 and garnered **143** responses. Previous years have had varied levels of response, with the highest number of responses in 2017 (313) and the lowest being 2020 (39). A few different variables have contributed to these higher and lower amounts (the 2020 COVID-19 pandemic, duration of survey window, winter conditions, etc..) but we aim to double our responses for the 2021/22 study by administering the survey slightly earlier and working with more local media outlets and community groups.

The 2021 survey’s main respondents were local, frequent, and experienced backcountry users - 93% of participants being full time residents of Gunnison County and 60% of participants having taken at least a level 1 Avalanche Safety course. The most popular activity types of the 2021 survey were – Nordic skiing (139 replies) followed closely by ski touring (137 replies). Of the 137 responses for ski touring (which includes alpine touring, telemarking and split-boarding), nearly 40% of the users replied that they participate in ski touring 25+ times a season, the highest percentage of the activity types in this category. The Snodgrass and Cement Creek Trailheads received the highest number of total responses for the question “where do you recreate?”, both garnering 140 replies. Kebler Pass was the area that saw the most 25+ day users, with around 25% of replies in that usage category. Trailheads like Cement Creek and Brush Creek see a higher percentage of use in the 1-4 uses a season category, while Snodgrass and Slate River are the two highest percentages in the 11-19 uses a season category. Nearly 55% of all respondents say they recreate in the Gunnison County backcountry 2-4 times a week throughout an average winter (November – May).

Based on responses, most participants are either neutral towards or in favor of the current winter travel management plans and how those plans are “meeting the needs of backcountry users in Gunnison County”. That being said, the category with the most responses was “I agree with this statement, but there is still room for improvement in the winter travel management plan” and only around 11% of responses said they “no concerns” for the “detracted backcountry experience” question. When asked about situations that may negatively affect their backcountry experience, around 75% of respondents replied to the “trailhead parking congestion and/or traffic” option, followed by “sense of crowdedness

just at the trailheads” at ~52%. The “trailhead improvements” question polled survey participants on what they would like to see be implemented at winter backcountry trailheads and they were in favor of “Improved and/or more parking” (~67%) and “Bags available to clean up after pets” (~66%). The categories that received the highest percentage of “No, this would detract from experience” replies were “Availability of transportation via snow cats in the major drainages around Crested Butte” (~53%) and “More drainages encouraging motorized access” (~53%).

Additionally, we found that 98% of the users that took our survey typically take their personal vehicle to the trailhead. This is mainly due to the “convenience of having their vehicle at the trailhead” (~52%) and/or they “have a dog and public transportation often does not permit dogs” (50%). When polled about public transportation, the two categories with the highest percentage of answers were “I likely would” (~28%) and “Yes, I defiantly would” (~25%). Of the 50 people who answered “Yes, I defiantly would”, 48 of those said they were motivated in increasing public transportation so that they could “decrease their carbon footprint”.

Acknowledgements

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