2019

2018-2019 Upper Gunnison Valley Winter Visitor Use Study

MONITORING AND ANALYZING WINTER BACKCOUNTRY USE

KENDALL COX, CHERYL CWELICH, JUSTIN SANCHEZ, MAXWELL SAWYER IN PARTNERSHIP WITH SILENT TRACKS & SHARE THE SLATE

Abstract

Crested Butte and the Upper Gunnison Valley (UGV) are renowned for backcountry access which is revered by, and beneficial to, innumerable winter recreation groups. Certain characteristics of the valley, including the long winters, exceptional snowfall, and extremely cold temperatures have turned the area from a mining town to a tourist destination that thrives due to its outdoor opportunities. Currently, the UGV's backcountry is regulated by a Winter Travel Management Plan (WTMP) that was designed and created more than twenty years ago. Since its implementation, the tools available for backcountry access have improved dramatically. Coupled with a 2015 United States Forest Service ruling that declared, "a system of routes and areas to provide for over-snow vehicle use" must be established for all winter use areas, this study set out to collect a baseline dataset concerning the recreational use of winter trailheads in the UGV.

To do this, we followed the methods and study designed by Doug Shaw in the 2017-2018 version of this study. It is our hope that by following the methods and design as closely as we could, that this study can continue to provide a better model of winter recreation usage in the UGV, along with be able to show any trend that emerge with time. Game-style digital trail cameras were installed at eight locations from which the UGV backcountry is traditionally accessed. Data was downloaded from the cameras often, saved on an external hard drive, images were filed by trailhead and date, and analyzed. This information is presented in both spreadsheet and graph forms, providing data for individual forms of recreation as well as similar user groups (e.g., non-motorized, mechanized, motorized). Students were not enlisted to field-check camera positioning due to time and budget constrictions. This study presents a broad view of local backcountry use trends in this second year of the study. Comparisons to last year's data are discussed, although no in-depth statistical analysis was performed as there are not yet enough data points to draw any significant conclusions.

Introduction

The first major rendition of the UGV winter use study was undertaken last winter 2017-2018 by then graduate student Doug Shaw as his Master in Environmental Management project at Western State Colorado University. The goal of the study was to gather "quantitative data regarding backcountry travel and use in the UGV" to aid in the U.S. Forest Service's decision-making process regarding the potential implementation of a new travel management rule to add to their Winter Travel Management Plan. The initial study installed trail cameras at eight trailhead locations in the UGV, and images were collected twice per week throughout the duration of the study. The study began December 1, 2017 when cameras were installed, and ended on April 16, 2018, one week after Crested Butte Mountain Resort closed for the season.

This rendition of the UGV winter use study followed the same methodology and study design outlined by Shaw (2018). We were only able to put up seven cameras; the eighth location used by Shaw was placed on a fence on private property along Brush Creek road, and despite repeated efforts, we were never able to contact the owner to gain permission to place a camera on their property. Despite this limitation, the rest of the study was implemented and analyzed in the same manner as the first study in order to maintain scientific rigor and validity needed to continue multi-year study efforts.

Results

Each of the seven trailheads we observed had its own unique demographic of users. Overall, despite increased data days at most trailheads, average daily users decreased at each of the trailheads except for Cement Creek (Table 2). The changes seen at each trailhead are unique and specific to the types of experiences available at each trailhead, and not generalizable to any trend throughout the entire UGV, such as an overall increase in mechanized use for example. As this is only the second year of the study, it is too soon to tell any trends from these two data points.

Brush Creek Trailhead

Brush Creek trailhead was accessed almost specifically by non-motorized users specifically, making up 98.12% of the total users (Figure 1). Of these, hikers comprised 62.54% of the total, followed by Nordic skiers at 33.48% of the total (Figure 2).

Cement Creek Trailhead

76.17% of the access at Cement Creek Trailhead is by non-motorized users, and 19.59% was by motorized users, primarily residents accessing property via Cement Creek Road (Figure 3). 43.7% of the total use is by Nordic skiers and 29.51% was by hikers. 11.76% of the use was by private snowmobiles, and 4.48% of the use was by UTVs/side-by-sides (Figure 4).

Gothic Corridor Trailhead

Gothic Corridor Trailhead was also predominantly accessed by non-motorized users, making up 93.04% of the total use (Figure 5). The most popular non-motorized activities were hiking at 33.43%, Nordic skiing at 28.93%, and AT skiing, at 27.59% of the total use. The second most popular user group was mechanized, making up 6.55% of the total use (Figure 6).

Kebler Pass

Unsurprisingly, Kebler Pass was the only trailhead where motorized users dominated with 95.72% of the total (Figure 7). 49.69% of the use was by private snowmobiles, and 33.17% was by rented snowmobiles (Figure 8).

Slate River Road

Like Cement Creek, Slate River Road had a more shared trailhead. 74.98% of the use was non-motorized, and 24.28% of the use was motorized (Figure 9). 36.94% of the users were hikers, 26.06% of the users were Nordic skiers, and 18.88% of the users were hybrid snowmobiles (Figure 10).

Snodgrass Trailhead

Like Brush Creek and Gothic Corridor, 96.99% of Snodgrass Trailhead access was by non-motorized users (Figure 11). Also like Gothic Corridor, the next most popular user group was mechanized users, at 2.28% of the total. Over half of the users, 54.96%, were AT skiers, followed by 31.78% of user that were hiking (Figure 12).

Washington Gulch

Washington Gulch also was shared between user groups, with 84.68% of users being non-motorized, and 15.1% motorized (Figure 13). The most prevalent user group were AT skiers at 36.38% of the total, and hikers at 25.15% (Figure 14). Motorized use was split between hybrid snowmobiles and private snowmobiles, at 6.61% and 7.27% of total use, respectively.

Table 1. Overall group numbers and changes at each trailhead for this winter and last winter.

Trailhead	17-18 Total Days with Data	18-19 Total Days with Data	% Change	17-18 Total Users	18-19 Total Users	% Change	17-18 Total Non-Motorized Users	18-19 Total Non-Motorized Users	% Change	17-18 Total Mechanized Users	18-19 Total Mechanized Users	% Change	17-18 Total Motorized Users	18-19 Total Motorized Users	% Change
Brush Creek Trailhead	90	108	20.00%	1412	905	35.91%	1,392	888	36.21%	18	9	50.00%	2	8	300.00%
Cement Creek	44	120	172.73%	773	2,501	223.54%	557	1,905	242.01%	30	106	253.33%	186	490	163.44%
Gothic Corridor	84	121	44.05%	3,427	3,132	8.61%	3,187	2,914	8.57%	216	205	5.09%	24	13	45.83%
Kebler Pass	60	110	83.33%	5,022	6,635	32.12%	372	260	30.11%	10	24	140.00%	4,340	6,351	46.34%
Slate River Road	112	118	5.36%	3,465	3,173	8.43%	2,514	2,379	5.37%	111	24	78.38%	840	770	8.33%
Snodgrass	103	94	8.74%	5,776	5,180	10.32%	5,629	5,024	10.75%	120	118	1.67%	27	38	40.74%
Washington Gulch	113	85	24.78%	4,004	2,298	42.61%	3,222	1,946	39.6%	47	5	89.36%	735	347	52.79%

Table 2. Average daily user group numbers and changes at each trailhead for this winter and last winter.

Trailhead	17-18 Average Daily Users	18-19 Average Daily Users	% Change	17-18 Average Daily Non-Motorized Users	18-19 Average Daily Non-Motorized Users	% Change	17-18 Average Daily Mechanized Users	18-19 Average Daily Mechanized Users	% Change	17-18 Average Daily Motorized Users	18-19 Average Daily Motorized Users	% Change
Brush Creek Trailhead	15.69	8.38	46.59%	14.97	8.22	45.08%	0.19	0.08	56.14%	0.02	0.07	270.37%
Cement Creek	17.57	20.84	18.62%	12.66	15.88	25.39%	0.68	0.88	29.90%	4.23	4.08	3.47%
Gothic Corridor	40.80	25.88	36.56%	35.81	24.08	32.75%	2.43	1.69	30.28%	0.27	0.11	60.21%
Kebler Pass	83.70	60.32	27.94%	6.20	2.36	61.88%	0.17	0.22	28.34%	77.33	57.74	25.34%
Slate River Road	30.94	26.89	13.09%	21.67	20.16	6.96%	0.96	0.20	78.81%	7.24	6.53	9.87%
Snodgrass	56.08	55.11	1.74%	48.95	53.45	9.19%	1.04	1.26	20.70%	0.23	0.40	75.76%
Washington Gulch	35.43	27.04	23.69%	35.43	22.89	35.38%	0.41	0.06	85.65%	6.34	4.08	35.61%

Limitations

There were several limitations we encountered in the continuation of the UGV Winter Use Study. As mentioned in the introduction, we were unable to contact and obtain permission from the private landowner on whose property a camera was located the previous year, and therefore were only able to collect data on seven, rather than all eight, UGV winter trailheads. Additionally, we experienced gaps in data at all of our trailheads, from dead batteries, incorrect camera positioning, failure to turn cameras back on after collecting SD cards, and tampering from the public. Due to time and budget constrictions, we were not able to field check our traffic camera numbers. We were also unable to distribute a survey that would have provided this study with interesting qualitative data

Despite these limitations, we still were able to collect more data days at almost all of the trailheads than in the previous year's study. Overall, I feel confident about the quality of our data and analysis in this year's study. Recommendations for future studies include: communicating with the private landowner well ahead of the study start date; field checking cameras; distributing a survey; and being conscious with handling of cameras in the field to avoid preventable errors that lead to gaps in data.

Acknowledgements

Thank you to our partners, *Silent Tracks* and *Share the Slate*. This second year of the UGV Winter Use Study would not have been possible without your generous support and funding. Thank you to my interns, Cheryl Cwelich, Justin Sanchez, and Maxwell Sawyer, for your hours of hard work and dedication driving to trailheads, downloading data, and analyzing photos. Your hard work made this study come to fruition in the time period we had allotted, and I have no doubt that I would still be working on this next winter if it hadn't been for your help. Thank you to Mandy Casteel-Denny and Dr. Melanie Armstrong for your technical and logistical support in managing technological, financial, and human capital throughout this process. Thank you to Doug Shaw for designing and implementing the original study. There would be no second study without your first.