

Town of Vail East Vail Trails Survey Report

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13. ABSTRACT (Maximum 200 words) On select days in August and September 2019, Town of Vail staff and volunteers, in partnership with the Volpe Center, administered a survey to visitors to four trailheads located in East Vail. The purpose of the survey was to collect information on characteristics related to transportation choices, visitor attitudes, and trip logistics to inform future management decisions for each trailhead and trail. This report summarizes the results from this survey. Key findings include that visitors to Booth (one of the trailheads, and the most popular of the four) are unique when compared to visitors on the other three trails, most notably with regard to knowledge of its wilderness area designation, commitment to hiking the specific trail, and feeling that the trail was crowded, among other characteristics. Concerning possible transportation management changes at these trails, more visitors are supportive of providing shuttle service to the trails than for limiting trail use or instituting parking fees.					
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Table of Contents

- Introduction 1
- Methodology..... 1
- Survey Findings 1
 - Transportation Characteristics..... 2
 - Hike Characteristics..... 4
 - Visitor Satisfaction 13
 - Trip Characteristics 19
 - Sources of Information 21
 - Attitudes on Transportation Management Options 23
 - Demographic Information..... 26
 - Conclusions 31
- Appendix A: Survey Instrument 32
- Appendix B: Other Responses..... 38

Table of Figures

Figure 1. Transportation Mode Used to Access Trailhead.....	2
Figure 2. Parking Location.....	3
Figure 3. Visitors Who Have or Have Not Hiked Trail Before	4
Figure 4. Visitors Who Were Aware of Wilderness Area Designation	7
Figure 5. Factors Affecting Hike Timing	8
Figure 6. Factors Affecting Trail Choice	9
Figure 7. Visitor Feelings about Hiking Specific Trail Today.....	10
Figure 8. Visitor Perceptions of Trail Crowdedness	11
Figure 9. Visitor Perceptions of Crowdedness at Pitkin by Time of Day.....	11
Figure 10. Likelihood of Future Return Visit to Trailhead.....	12
Figure 11. Satisfaction with Number of People Encountered on the Trail	13
Figure 12. Satisfaction with Parking Space Availability.....	14
Figure 13. Satisfaction with Physical Condition of the Trail.....	14
Figure 14. Satisfaction with Adequacy of Trail Markers	15
Figure 15. Satisfaction with Experience Arriving at the Trailhead.....	15
Figure 16. Satisfaction with Adequacy of Onsite Educational Information	16
Figure 17. Satisfaction with Presence of U.S. Forest Service Rangers and/or Trail Hosts	17
Figure 18. Satisfaction with Users' Adherence to Rules/Regulations.....	17
Figure 19. Satisfaction with Condition of Temporary Restroom Facilities	18
Figure 20. Number of Nights Stayed.....	19
Figure 21. Lodging Location	20
Figure 22. Sources of Information Consulted Prior to Visit	21
Figure 23. Most Helpful Information Sources Consulted Prior to Visit	22
Figure 24. Attitudes on Providing Shuttle Service from Vail Valley	23
Figure 25. Attitudes on Limiting the Number of People Who Can Use the Trail during Busy Times.....	24
Figure 26. Attitudes on Charging a Parking Fee at Trailhead Parking Lot.....	25
Figure 27. Total Group Size (People Only)	26
Figure 28. Total Number of Adults.....	26
Figure 29. Total Number of Children	27
Figure 30. Total Number of Dogs	27
Figure 31. Residential Location Reported by Visitors	28
Figure 32. Residential Locations of Bighorn Visitors by Zip Code (N = 54)	29
Figure 33. Residential Locations of Booth Visitors by Zip Code (N = 184)	29
Figure 34. Residential Locations of Gore Visitors by Zip Code (N = 139).....	30
Figure 35. Residential Locations of Pitkin Visitors by Zip Code (N = 112).....	30

Table of Tables

Table 1. Number of Survey Respondents by Trailhead.....	1
Table 2. Average Hike Duration	4
Table 3. Hike Destinations for Bighorn (N = 53).....	5
Table 4. Hike Destinations for Booth (N = 196)	5
Table 5. Hike Destinations for Gore (N = 139)	6
Table 6. Hike Destinations for Pitkin (N = 117).....	7
Table 7. Other Factors Affecting Hike Timing for Bighorn	38
Table 8. Other Factors Affecting Hike Timing for Booth.....	38
Table 9. Other Factors Affecting Hike Timing for Gore.....	38
Table 10. Other Factors Affecting Hike Timing for Pitkin.....	38
Table 11. Website/App Used to Choose Bighorn	38
Table 12. Website/App Used to Choose Booth	39
Table 13. Website/App Used to Choose Gore	39
Table 14. Website/App Used to Choose Pitkin	39
Table 15. Other Factors Used to Choose Bighorn.....	39
Table 16. Other Factors Used to Choose Booth.....	39
Table 17. Other Factors Used to Choose Gore	39
Table 18. Other Factors Used to Choose Pitkin	40
Table 19. Other Stay Locations for Bighorn.....	40
Table 20. Other Stay Locations for Booth	40
Table 21. Other Stay Locations for Gore.....	40
Table 22. Other Stay Locations for Pitkin.....	40
Table 23. Other App/Website Used to Obtain Information about Bighorn	41
Table 24. Other App/Website Used to Obtain Information about Booth	41
Table 25. Other App/Website Used to Obtain Information about Gore	41
Table 26. Other App/Website Used to Obtain Information about Pitkin.....	41
Table 27. Other Source Used to Obtain Information about Bighorn.....	41
Table 28. Other Source Used to Obtain Information about Booth.....	41
Table 29. Other Source Used to Obtain Information about Gore	42
Table 30. Other Source Used to Obtain Information about Pitkin	42
Table 31. Additional Feedback Received for Bighorn	42
Table 32. Additional Feedback Received for Booth.....	42
Table 33. Additional Feedback Received for Gore.....	42
Table 34. Additional Feedback Received for Pitkin.....	43

Introduction

On select days in August and September 2019, Town of Vail staff and volunteers administered surveys to trail users at four East Vail trailheads: Bighorn, Booth, Gore and Deluge, and Pitkin. The purpose of the survey was to gather information on characteristics related to transportation choices, visitor attitudes, and trip logistics to inform future management decisions for each trailhead and trail.

Methodology

Town of Vail staff and volunteers administered the surveys at each of the four trailheads to visitors upon completion of their visits (i.e., after they had completed their hikes). Surveys were administered on select days at select trailheads, pending staff and volunteer availability, during the following periods: August 15-24, 2019, and September 21-22, 2019. Survey administration stopped at each trailhead once a sufficient number of surveys (at least 100) were completed by visitors (Table 1). At Bighorn, survey administration continued throughout the entirety of the survey period in an attempt to reach a target of 100 completed surveys; however, due to the low number of visitors to the trailhead during the survey period, only 57 survey respondents completed surveys at Bighorn. The full survey instrument is included as Appendix A.

Table 1. Number of Survey Respondents by Trailhead

Trailhead	Number of Survey Respondents
Bighorn	57
Booth	199
Gore	144
Pitkin	123
TOTAL	523

Survey Findings

This section reports survey findings, grouped by trailhead site. Percentages shown in charts may not add up to exactly 100 percent due to rounding. Responses receiving three percent or fewer responses are not labeled in charts. The project team ran crosstabs for several survey questions to assess whether there were any unique trends among different groups of survey respondents. Notable findings from the crosstab analysis are included where appropriate in this report. Crosstabs that did not show a notable difference among groups are not included in this report. As noted above, due to the small sample size of 57 at Bighorn, survey results may not be as generalizable to all visitors.

Transportation Characteristics

Transportation Mode

Across all four trailheads, the majority of visitors (64 percent to 81 percent) arrived by personal car, truck, or motorcycle. Notably, 14 percent of visitors to Bighorn arrived by bicycle while bicycle mode share was minimal for the other three trailheads. Twenty-one percent of visitors to Booth and 12 percent of visitors to Gore arrived by rental car. Six percent of visitors to Booth and eight percent of visitors to Gore arrived on foot while eight percent of visitors took a Town of Vail bus to Pitkin. Figure 1 shows the full breakdown of transportation mode by trailhead.

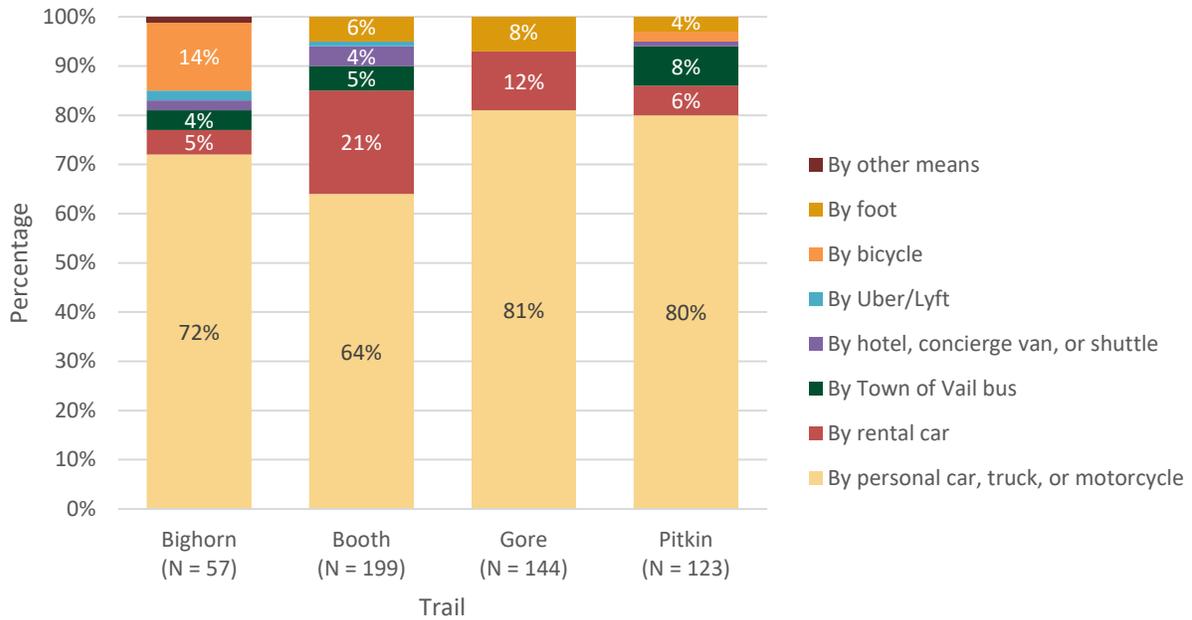


Figure 1. Transportation Mode Used to Access Trailhead

Parking Location

Among visitors who arrived via car, the majority at Pitkin, Bighorn, and Gore parked in a trailhead parking space (76 percent, 73 percent, and 65 percent, respectively). For Booth, 41 percent of visitors parked in a trailhead parking space while another 41 percent parked at Vail Mountain School. For Bighorn, a notable 18 percent reported parking at home (suggesting they walked, biked, used transit, or another mode to access the trailhead), and for Gore, a notable 23 percent reported parking on a side street near the trailhead. Figure 2 shows the full breakdown of parking location by trailhead.

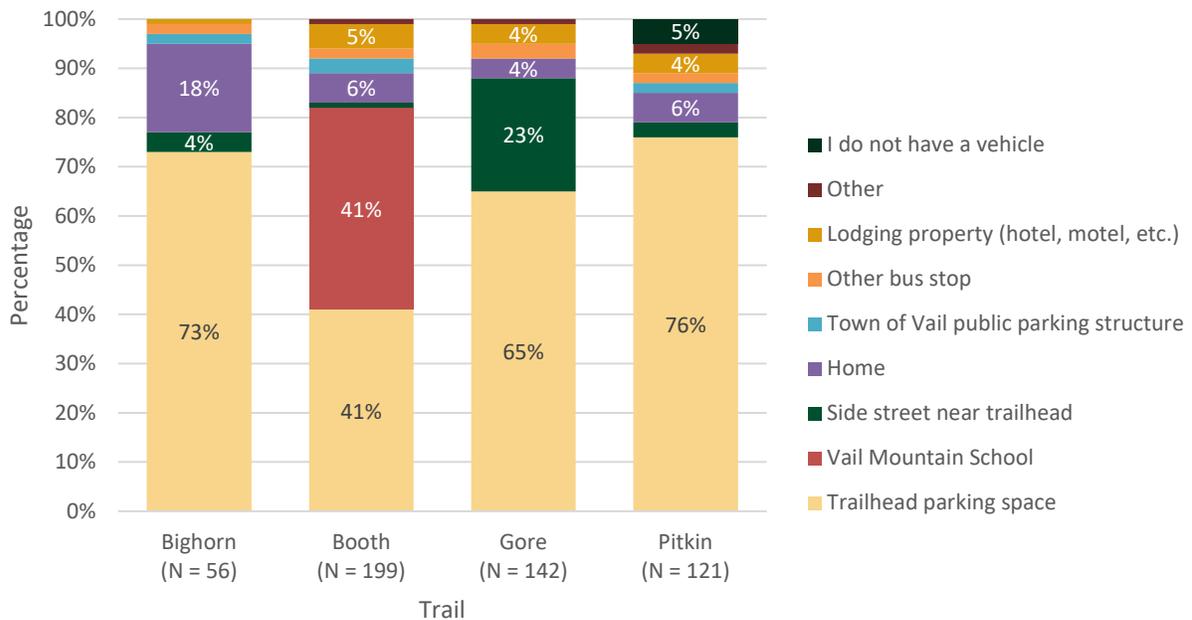


Figure 2. Parking Location

Hike Characteristics

Prior Visits

Across all trailheads, most visitors had not previously hiked the trail they visited before (Figure 3); 55 percent of Bighorn visitors, 66 percent of Booth visitors, 56 percent of Gore visitors, and 67 percent of Pitkin visitors had not previously hiked the trail.

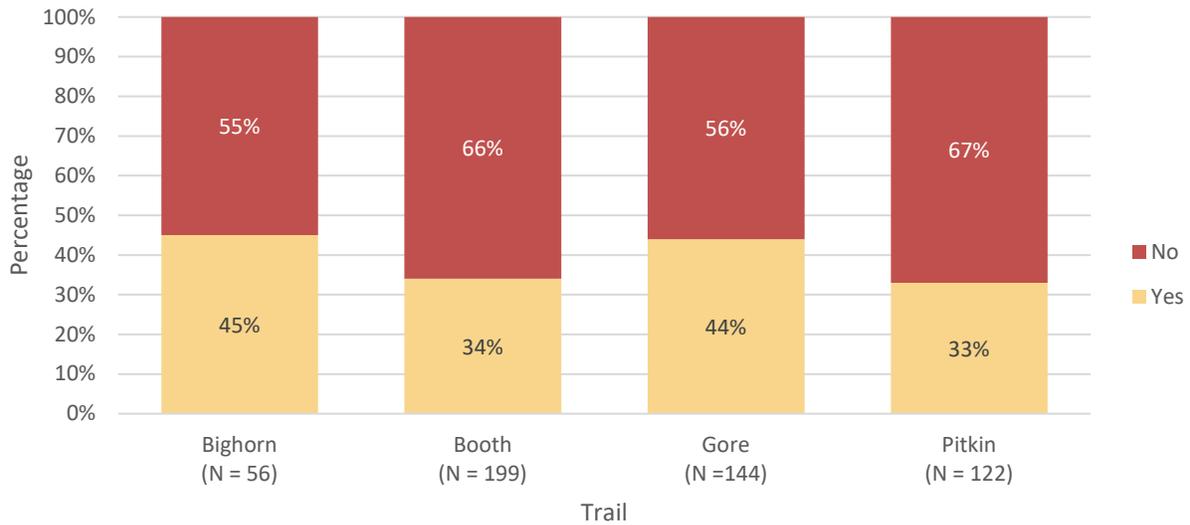


Figure 3. Visitors Who Have or Have Not Hiked Trail Before

Hike Duration

Visitors (excluding visitors who reported a hike duration of more than 24 hours, suggesting an overnight trip) reported an average hike duration of between 2 hours, 57 minutes (Booth) and 3 hours, 44 minutes (Pitkin). Table 2 shows the average hike duration for each trailhead.

Table 2. Average Hike Duration

Trail	Average Duration
Bighorn	3 hours, 18 minutes
Booth	2 hours, 57 minutes
Gore	3 hours, 9 minutes
Pitkin	3 hours, 44 minutes

Hike Destination

Bighorn

A plurality of Bighorn visitors (38 percent) reported having no particular destination on their hike. Another 30 percent reported Bighorn Cabin as their destination while an additional 11 percent reported a specified distance as their destination. Table 3 shows the full list of reported destinations by percentage of respondents.

Table 3. Hike Destinations for Bighorn (N = 53)

Destination	Percentage
No particular destination	38%
Bighorn Cabin	30%
Specified distance	11%
Flower beds	4%
Keller Mountain	4%
North Traverse Peak	4%
Creek	2%
Lost watch	2%
See the range	2%
Stream below first meadow	2%
Watering hole	1%

Booth

A majority of Booth visitors (74 percent) reported Booth Falls as their hike destination. Another 17 percent reported Booth Lake as their destination, and four percent reported having no particular destination. Table 4 shows the full list of reported destinations by percentage of respondents.

Table 4. Hike Destinations for Booth (N = 196)

Destination	Percentage
Booth Falls	74%
Booth Lake	17%
No particular destination	4%
Specified distance	1%
The top	1%
First set of trees, walking my old dog	1%
Booth Falls and Lake	1%
Peak pool	1%
Red Buffalo Pass	1%

Gore

A plurality of Gore visitors (32 percent) reported no particular destination on their hike. Twenty percent reported Gore Lake as their destination, 10 percent reported Deluge Lake, nine percent reported Gore Creek, eight percent reported a specified distance, and six percent reported Deluge Bridge. Table 5 shows the full list of reported destinations by percentage of respondents.

Table 5. Hike Destinations for Gore (N = 139)

Destination	Percentage
No particular destination	32%
Gore Lake	20%
Deluge Lake	10%
Gore Creek	9%
Specified distance	8%
Deluge Bridge	6%
Gore Falls	2%
Gore, Deluge, Snow Lakes	1%
Grave site	1%
River	1%
Snow Pass	1%
An eddy off the trail	1%
Deluge Grand Traverse	1%
Eccles Pass, Red Buffalo Pass, Gore Lake	1%
Frisco to Vail	1%
Gore Lake and Snow Lake	1%
Gore Trail	1%
Gore Creek Campgrounds	1%
Groves	1%
Red Buffalo Pass	1%

Pitkin

A majority (52 percent) of Pitkin visitors reported a hike destination of Pitkin Lake. Another 22 percent reported no particular destination while eight percent reported a specified distance and seven percent reported Pitkin Falls as their destination. Table 6 shows the full list of reported destinations by percentage of respondents.

Table 6. Hike Destinations for Pitkin (N = 117)

Destination	Percentage
Pitkin Lake	52%
No particular destination	22%
Specified distance	8%
Pitkin Falls	7%
The top	2%
Pitkin Bridge	2%
Waterfall Creek	1%
Pitkin Creek	1%
Peak V and W	1%
Mt. Solitude	1%
Meadow area	1%
Flat Body Lake	1%
East Partner Peak	1%
Deluge Lake	1%
Avalanche Debris Field	1%

Wilderness Area Designation

A majority of visitors at Bighorn (71 percent), Gore (72 percent), and Pitkin (64 percent) reported being aware that these trails were in designated wilderness areas. At Booth, only 50 percent of respondents reported being aware that the trail was in a designated wilderness area. Figure 4 shows the percentage breakdown of wilderness area designation awareness by trailhead.

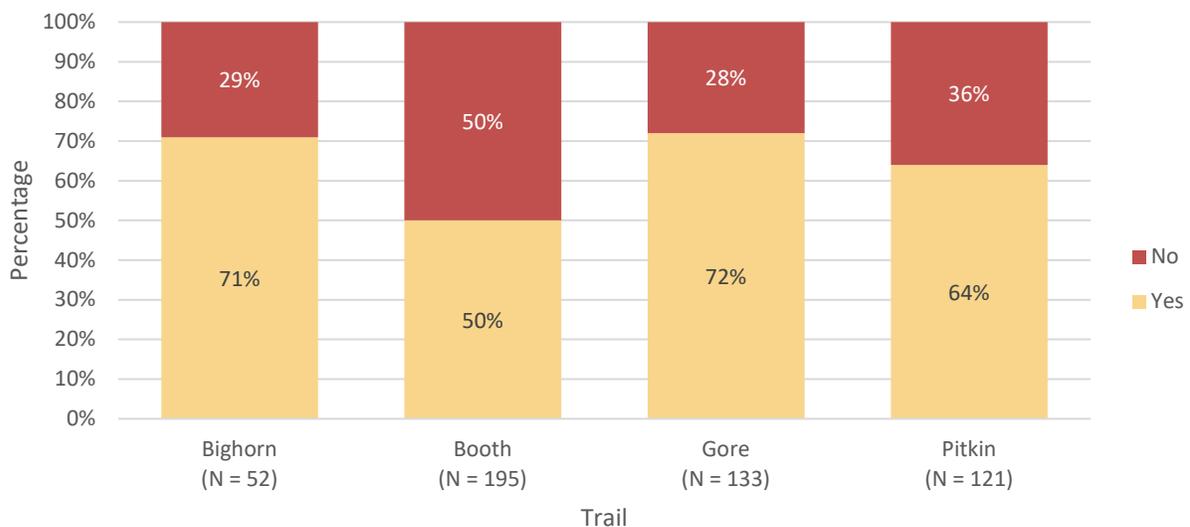


Figure 4. Visitors Who Were Aware of Wilderness Area Designation

Factors Affecting Hike Timing

Between one-third and one-half of visitors across all four trailheads reported that hiking being a good daytime activity was a factor in affecting the timing of their hike, making this the most significant factor affecting hike timing. Other factors with relatively high percentages of respondents across all four trailheads included having afternoon activities planned, making the morning available for hiking, avoiding crowds on the trail, and the weather. Figure 5 shows the percentages of visitors selecting each factor included on the survey by trailhead. Responses given for “other” are reported in Appendix B.

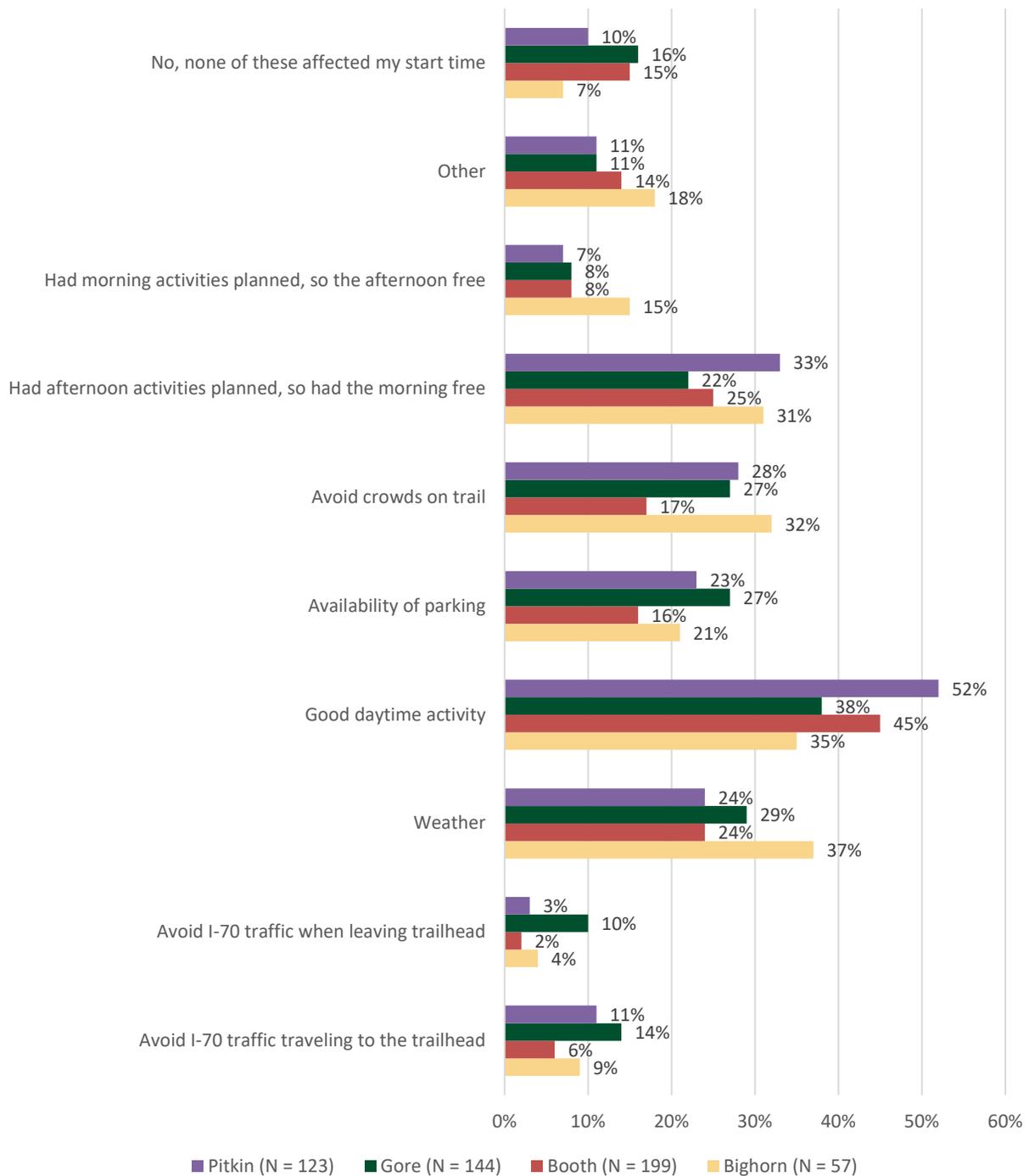


Figure 5. Factors Affecting Hike Timing

Factors Affecting Trail Choice

More than one-third of visitors across all four trailheads indicated convenience of trail location as a significant factor in their choice of trailhead for a hike. More than one-fourth of Booth visitors reported a recommendation for a website or app (26 percent), whereas visitors at other trailheads were less likely to cite this as a factor. In addition, 31 percent of Booth visitors mentioned a recommendation of a friend or family member as a factor in their trail choice. Nearly one-third of Pitkin visitors (32 percent) indicated level of hike difficulty as a factor in their trail choice. Relative to other trail visitors, Bighorn visitors were less likely to cite the recommendation of a family/friend or length of the trail as a factor in their trail choice. Gore visitors were equally likely to cite level of difficulty (26 percent), length of trail (25 percent), and recommendation of a family/friend (26 percent). Figure 6 shows the percentage of visitors selecting each factor included on the survey by trailhead. Responses given for “other” are reported in Appendix B.

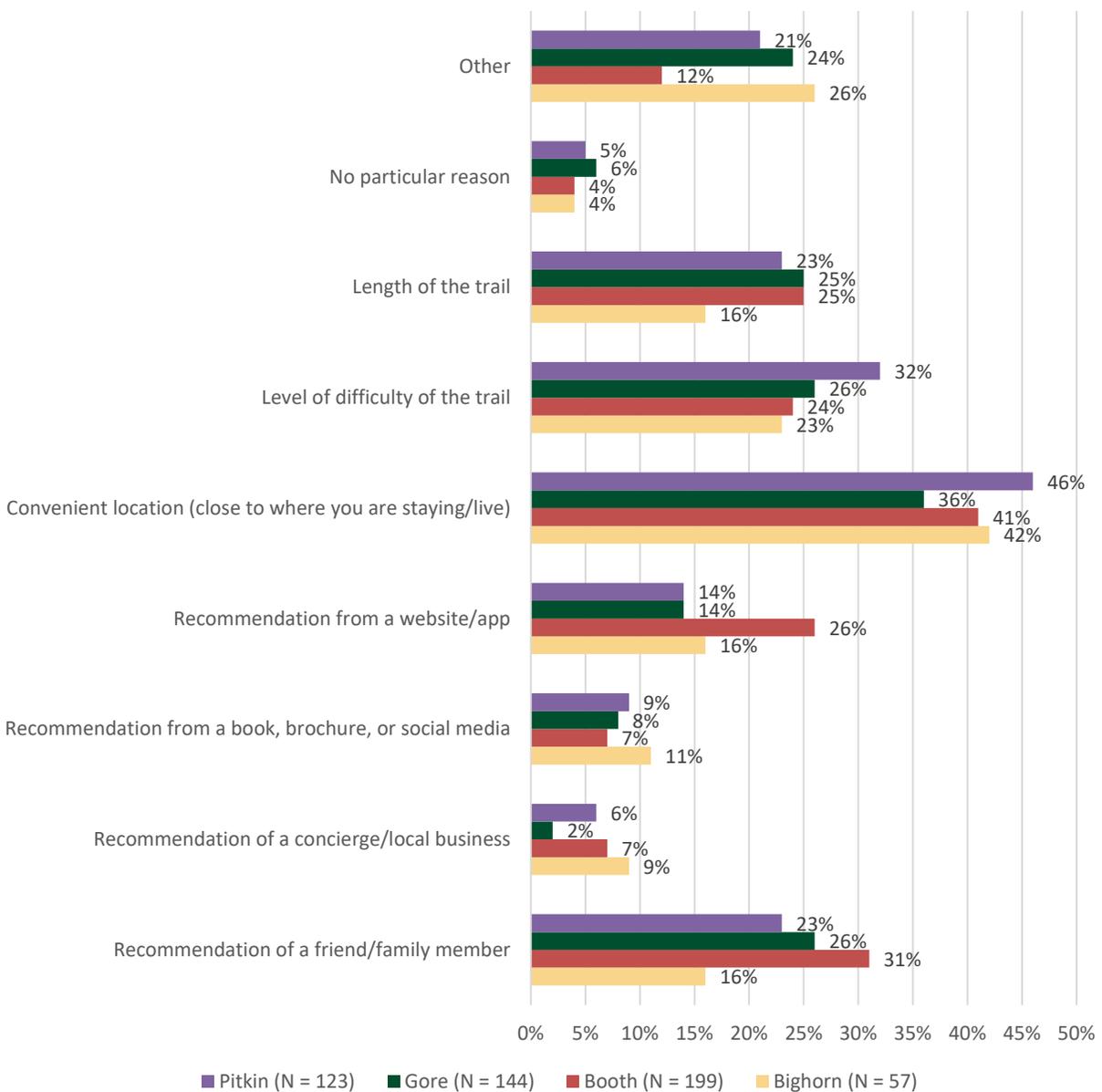


Figure 6. Factors Affecting Trail Choice

Visitor Feelings about Hiking Specific Trail Today

Majorities of visitors at Booth (72 percent) and Gore (61 percent) reported feeling strongly about hiking their chosen trail that day and would have hiked it even if they had learned the trail was crowded.

Bighorn visitors were evenly split 50 percent to 50 percent in terms of feeling strongly or not feeling strongly about their chosen hike while 55 percent of Pitkin visitors reported not feeling strongly about their hike choice. Figure 7 shows the full percentages by trailhead.

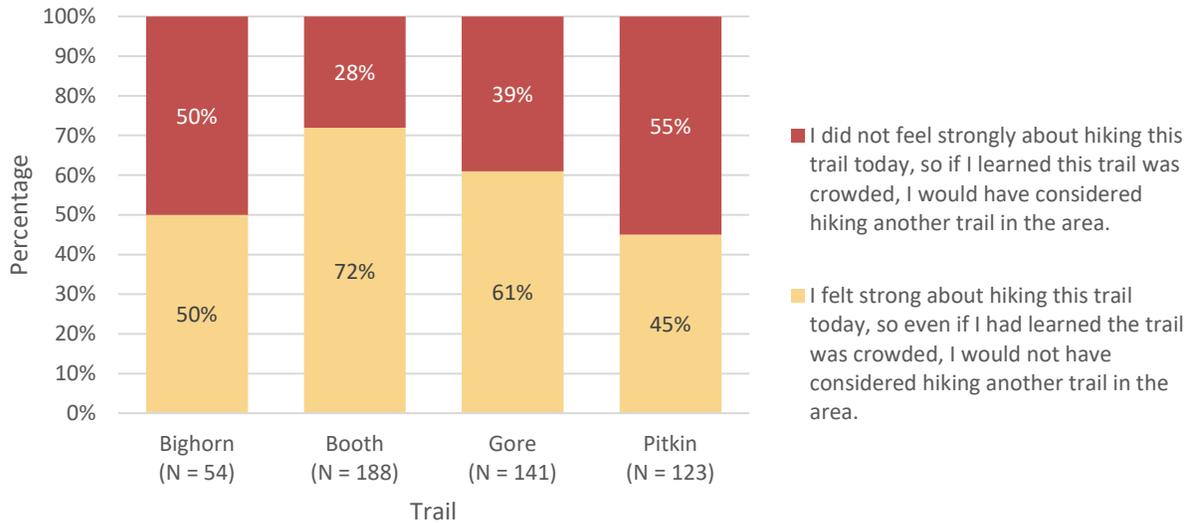


Figure 7. Visitor Feelings about Hiking Specific Trail Today

Perception of Trail Crowdedness

Majorities of visitors at Bighorn (76 percent), Gore (56 percent), and Pitkin (55 percent) reported that they perceived the trail to be not at all crowded during their visit. By contrast, at Booth, just 19 percent of visitors reported perceiving the trail as not at all crowded. Forty-five percent of Booth visitors perceived the trail as slightly crowded while another 31 percent perceived it as moderately crowded. Few visitors (fewer than five percent) at any of the trailheads indicated that conditions were extremely and/or very crowded. Figure 8 shows the full percentage breakdown of perceptions of trail crowdedness.

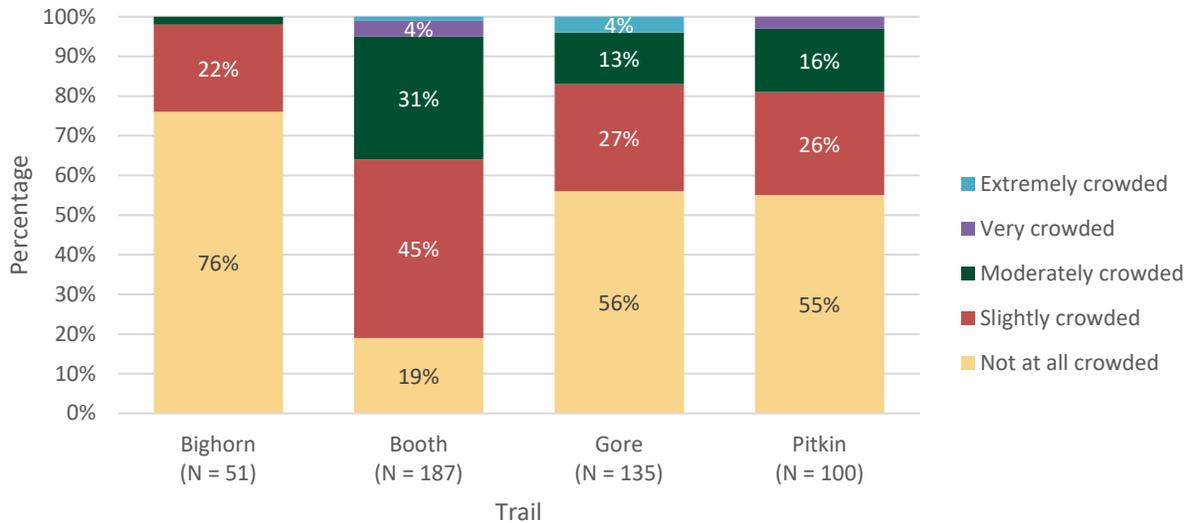


Figure 8. Visitor Perceptions of Trail Crowdedness

Notably, at Pitkin, visitors who visited in the afternoon were more likely to report the trail as being not at all crowded (66 percent) compared with visitors who visited in the morning (44 percent). Figure 9 shows the full percentage breakdown of perceptions of crowdedness at Pitkin by time of day.

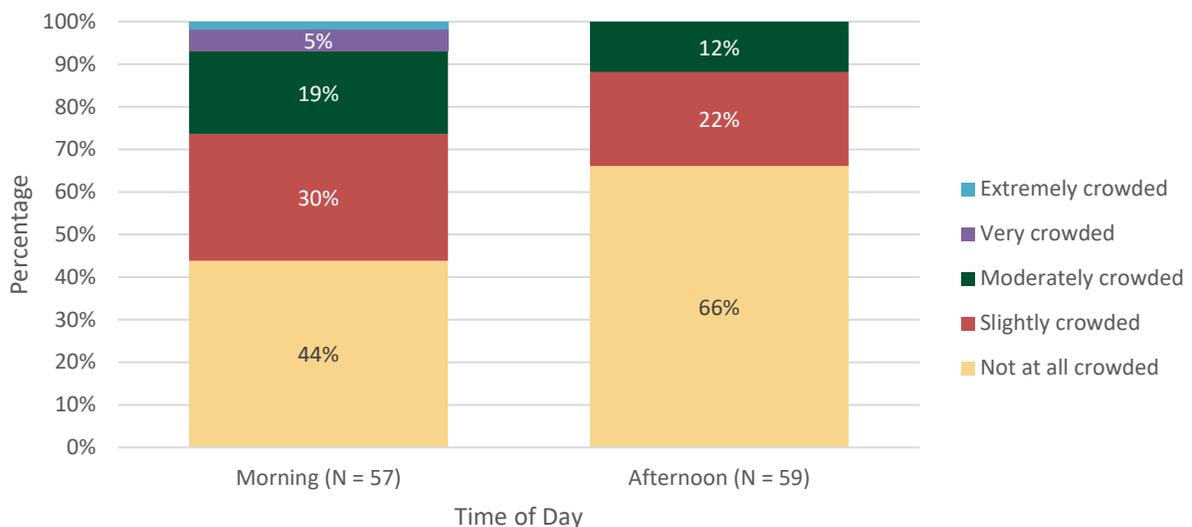


Figure 9. Visitor Perceptions of Crowdedness at Pitkin by Time of Day

Likelihood of Future Visits

Majorities of visitors at all four trailheads reported being very likely to visit again. Ten percent or less of visitors at all trails reported being not too likely to visit again while less than two percent of visitors at each trailhead reported being not at all likely to visit again. Figure 10 shows the full percentage breakdown of likelihood of a future return visit by trailhead.

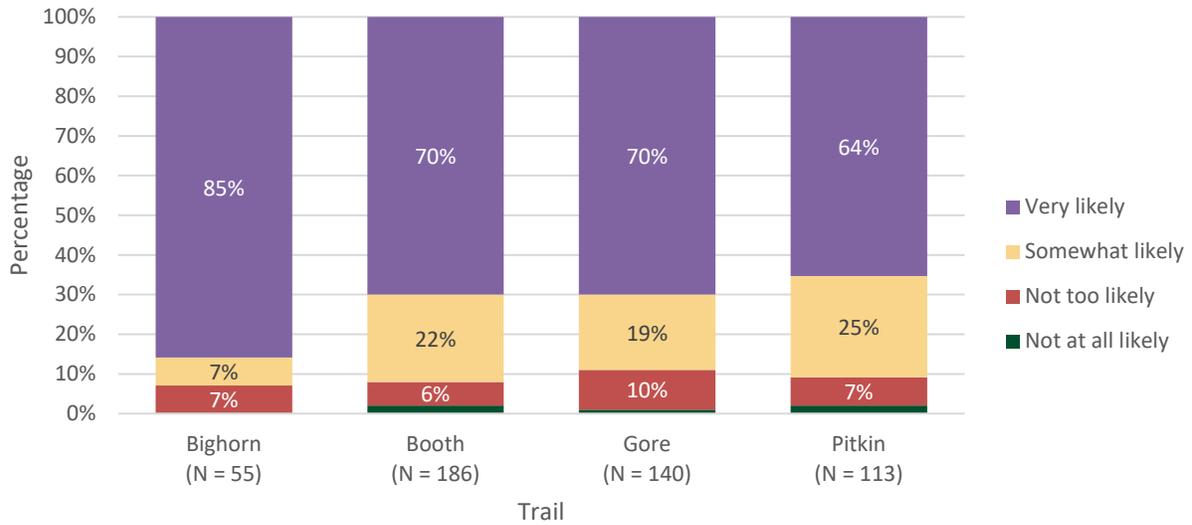


Figure 10. Likelihood of Future Return Visit to Trailhead

Visitor Satisfaction

Visitors were asked about their level of satisfaction with various aspects of their experience at the Vail trailheads, including number of people encountered on the trail, parking space availability, the physical condition of the trail, adequacy of trail markers, experience arriving at the trailhead, adequacy of onsite educational information, presence of U.S. Forest Service Rangers and/or trail hosts, users' adherence, to rules/regulations, and the condition of temporary restroom facilities.

In general, visitors expressed the highest levels of satisfaction with the physical condition of the trail (66 percent to 76 percent across all four trailheads) and their experience arriving at the trailhead (66 percent to 73 percent). Visitors to Bighorn reported tended to have higher levels of satisfaction across all aspects surveyed.

Visitor satisfaction across trailheads differed most in terms of number of people encountered on the trail, adequacy of trail markers, and the condition of temporary restroom facilities. Visitors across all four trailheads tended to be less satisfied with the parking space availability and the adequacy of onsite educational information. Detailed findings for each visitor experience attribute are presented below.

Satisfaction with Number of People Encountered on Trail

Majorities of visitors at Bighorn (82 percent), Gore (64 percent), and Pitkin (64 percent) reported being very satisfied with the number of people on they encountered on the trail. By contrast, just 32 percent of visitors at Booth reported being very satisfied with the number of people encountered on the trail, compared with 25 percent reporting being satisfied and 31 percent reporting being neither satisfied nor dissatisfied. Few visitors (six percent or fewer) were dissatisfied with the number of people encountered on the trail. Figure 11 shows the full satisfaction rating breakdown by trailhead.

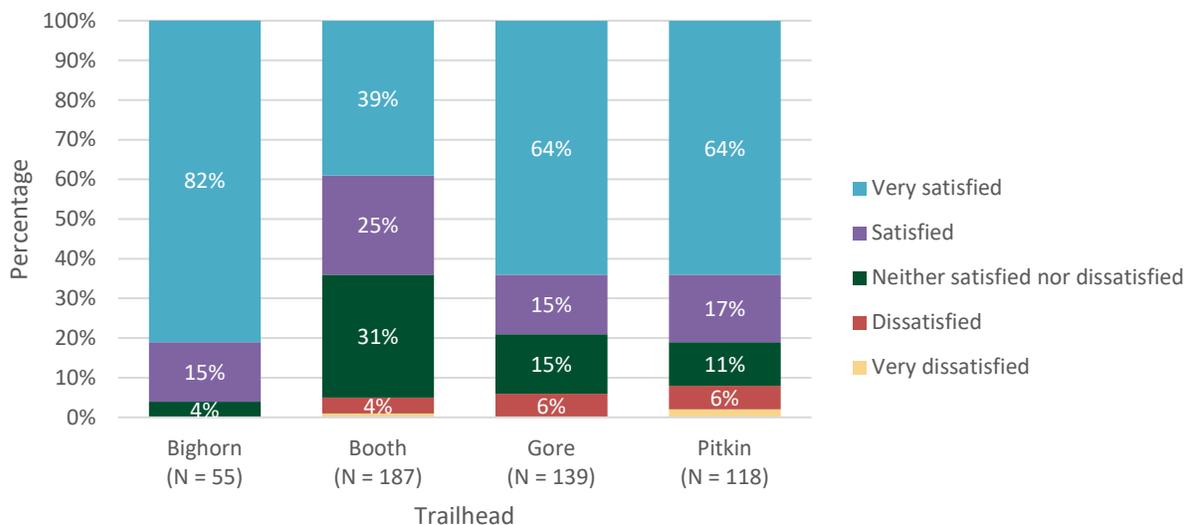


Figure 11. Satisfaction with Number of People Encountered on the Trail

Satisfaction with Parking Space Availability

Majorities of visitors at Bighorn (51 percent), Gore (52 percent), and Pitkin (50 percent) reported being very satisfied with parking space availability at their trailhead. By contrast, just 37 percent of Booth visitors reported being very satisfied with parking space availability while 21 percent reported being satisfied, 23 percent reported being neither satisfied nor dissatisfied, and 15 percent reported being dissatisfied. At Pitkin, though a majority reported being very satisfied or satisfied, a notable 17 percent reported being dissatisfied with parking space availability. Figure 12 shows the full satisfaction rating breakdown by trailhead.

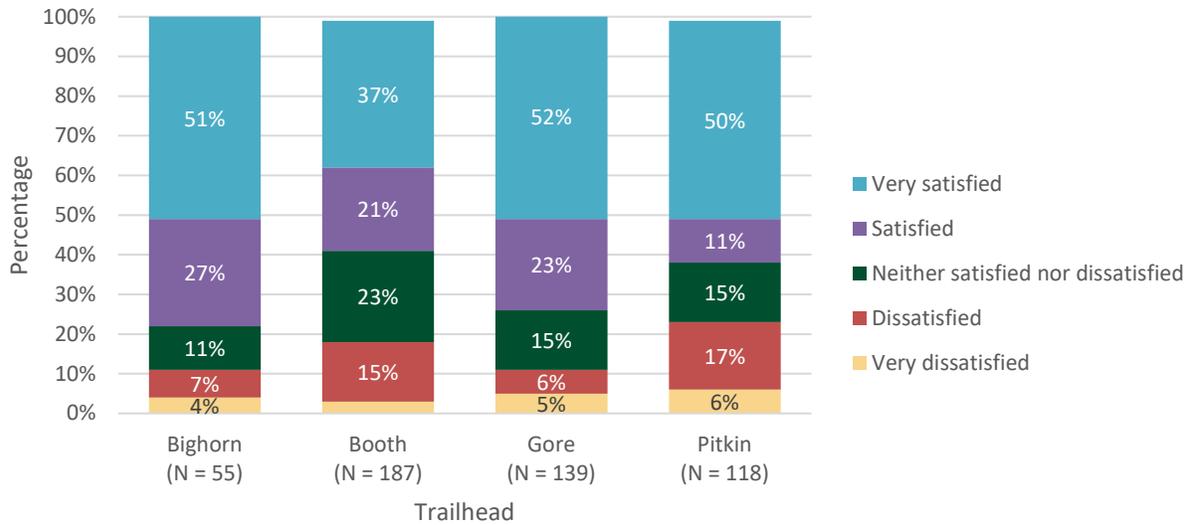


Figure 12. Satisfaction with Parking Space Availability

Satisfaction with the Physical Condition of the Trail

Large majorities of visitors at all four trailheads reported being very satisfied with the physical condition of the trailhead. Figure 13 shows the full satisfaction rating breakdown by trailhead.

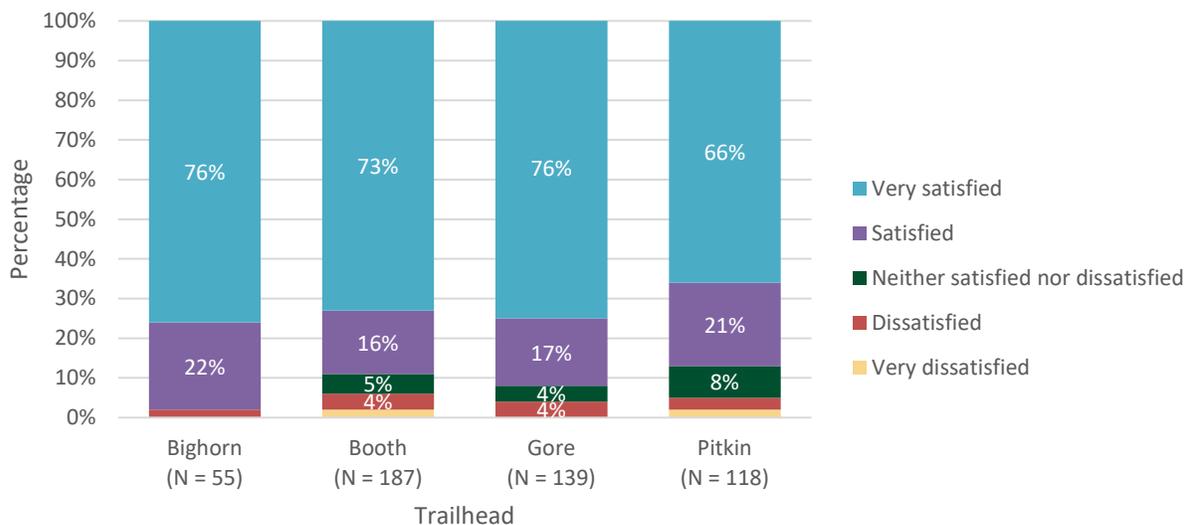


Figure 13. Satisfaction with Physical Condition of the Trail

Satisfaction with Adequacy of Trail Markers

Majorities of visitors at all four trailheads reported being very satisfied with adequacy of trail markers at each trailhead. However, these majorities were smaller at Booth (52 percent) and Pitkin (53 percent) compared with Bighorn and Gore. Notably, nine percent of visitors at Booth reported being dissatisfied with the trail markers, and notable percentages at Booth (15 percent), Gore (13 percent), and Pitkin (19 percent) reported being neither satisfied nor dissatisfied with the trail markers. Figure 14 shows the full satisfaction rating breakdown by trailhead.

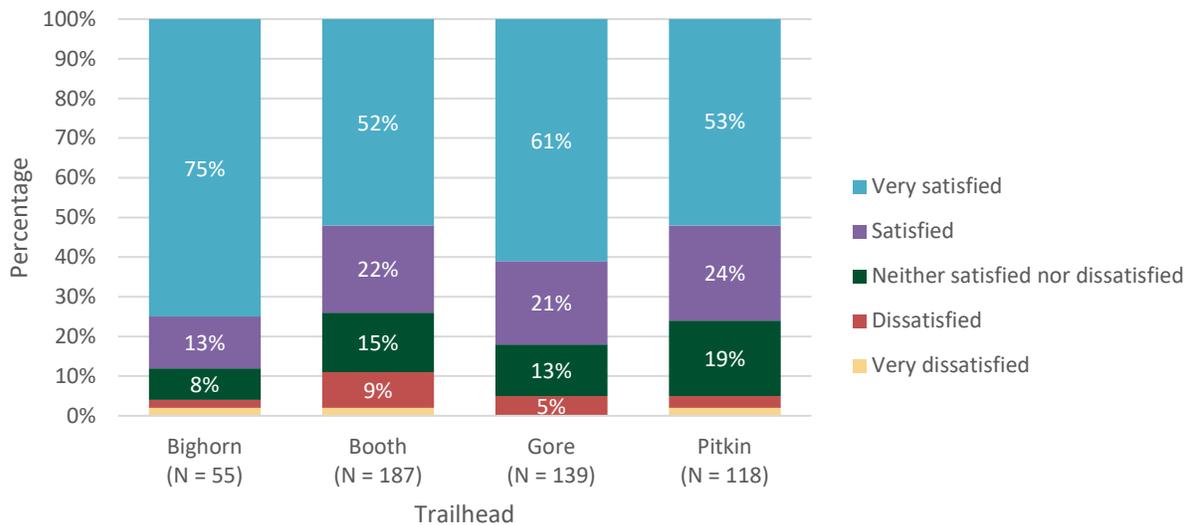


Figure 14. Satisfaction with Adequacy of Trail Markers

Satisfaction with Experience Arriving at the Trailhead

Majorities of visitors at all four trailheads reported being very satisfied with their experience arriving at the trailhead. Figure 15 shows the full satisfaction rating breakdown by trailhead.

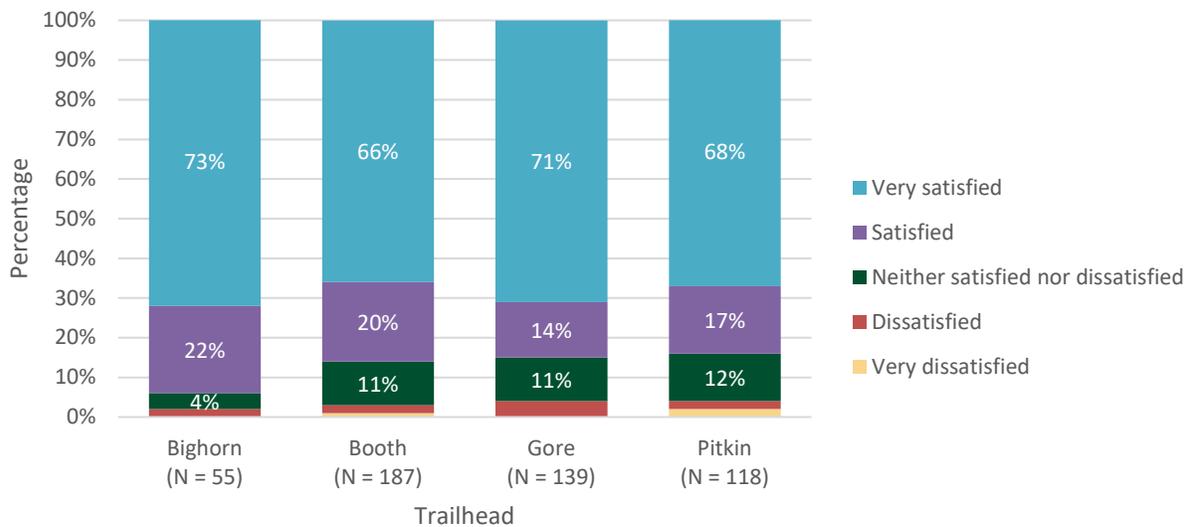


Figure 15. Satisfaction with Experience Arriving at the Trailhead

Satisfaction with Adequacy of Onsite Educational Information

Majorities of visitors at Bighorn (62 percent), Gore (61 percent), and Pitkin (57 percent) reported being very satisfied with onsite educational information at their trailhead. Notably, just 49 percent of visitors at Booth reported being very satisfied with onsite educational information. Nineteen percent of Bighorn visitors, 22 percent of Booth visitors, 12 percent of Gore visitors, and 21 percent of Pitkin visitors reported being neither satisfied nor dissatisfied with the onsite educational information at their trailhead. Figure 16 shows the full satisfaction rating breakdown by trailhead.

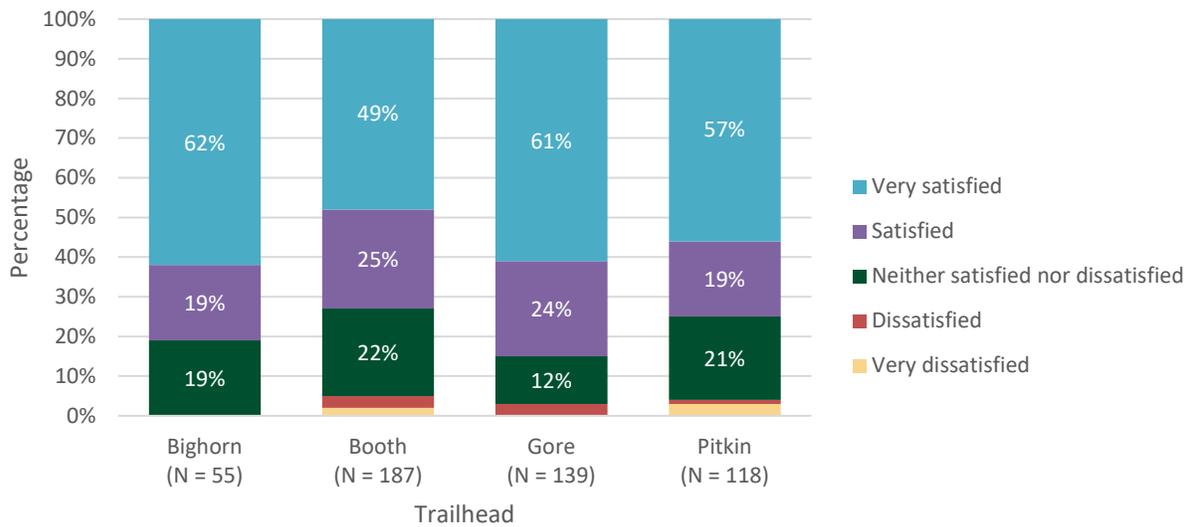


Figure 16. Satisfaction with Adequacy of Onsite Educational Information

Satisfaction with Presence of U.S. Forest Service Rangers and/or Trail Hosts

Majorities of visitors at all four trailheads reported being very satisfied with the presence of U.S. Forest Service rangers and/or trail hosts. Specifically, 74 percent of Bighorn visitors were very satisfied, whereas the majorities were somewhat smaller at Pitkin (59 percent) and Booth (58 percent). Notably, between 17 percent and 25 percent of visitors reported being neither satisfied nor dissatisfied with the U.S. Forest Service presence and six percent of visitors at Booth reported being very dissatisfied. Figure 17 shows the full satisfaction rating breakdown by trailhead.

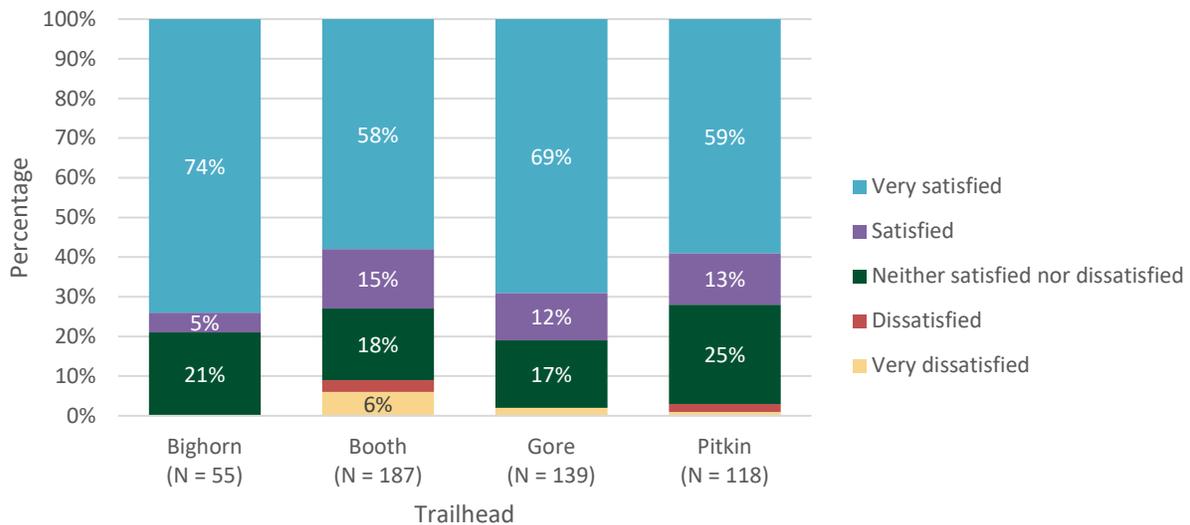


Figure 17. Satisfaction with Presence of U.S. Forest Service Rangers and/or Trail Hosts

Satisfaction with Users' Adherence to Rules/Regulations

Majorities of visitors at all four trailheads reported being very satisfied with users' adherence to rules/regulations. Notably, however, six percent of Bighorn visitors and seven percent of Booth visitors reported being dissatisfied while five percent of Gore visitors and seven percent of Pitkin visitors reported being very dissatisfied. Figure 18 shows the full satisfaction rating breakdown by trailhead.

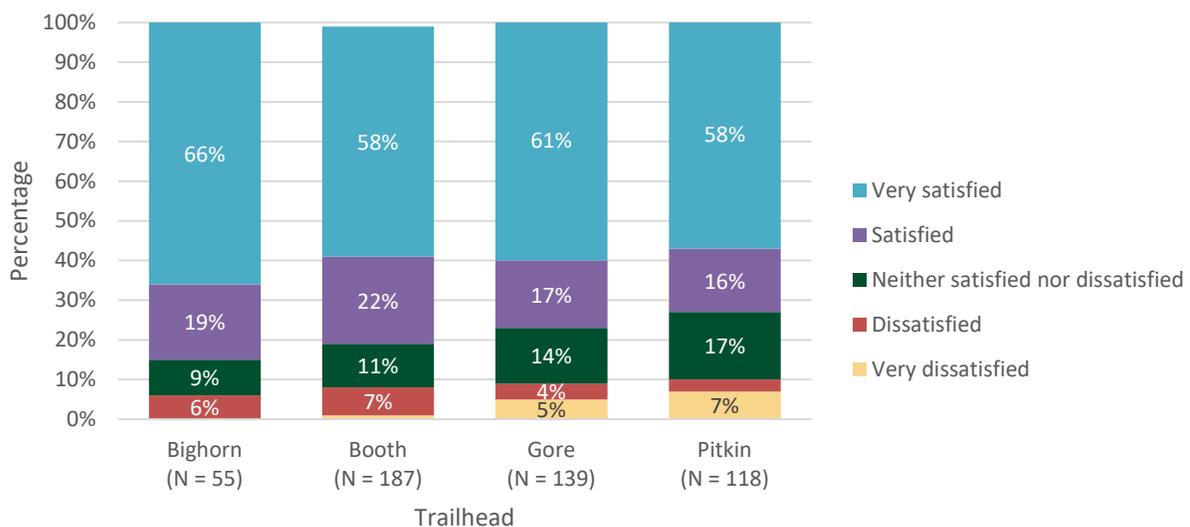


Figure 18. Satisfaction with Users' Adherence to Rules/Regulations

Satisfaction with Condition of Temporary Restroom Facilities

Majorities of visitors at Bighorn (68 percent) and Gore (69 percent) reported being very satisfied with the condition of temporary restroom facilities. However, just 44 percent of Booth visitors and 41 percent of Pitkin visitors reported being very satisfied, with nearly one-third of visitors reporting as satisfied and another fifth as neither satisfied nor dissatisfied. At Pitkin, five percent of visitors reported being very dissatisfied with the condition of the temporary restroom facilities. Figure 19 shows the full satisfaction rating breakdown by trailhead.

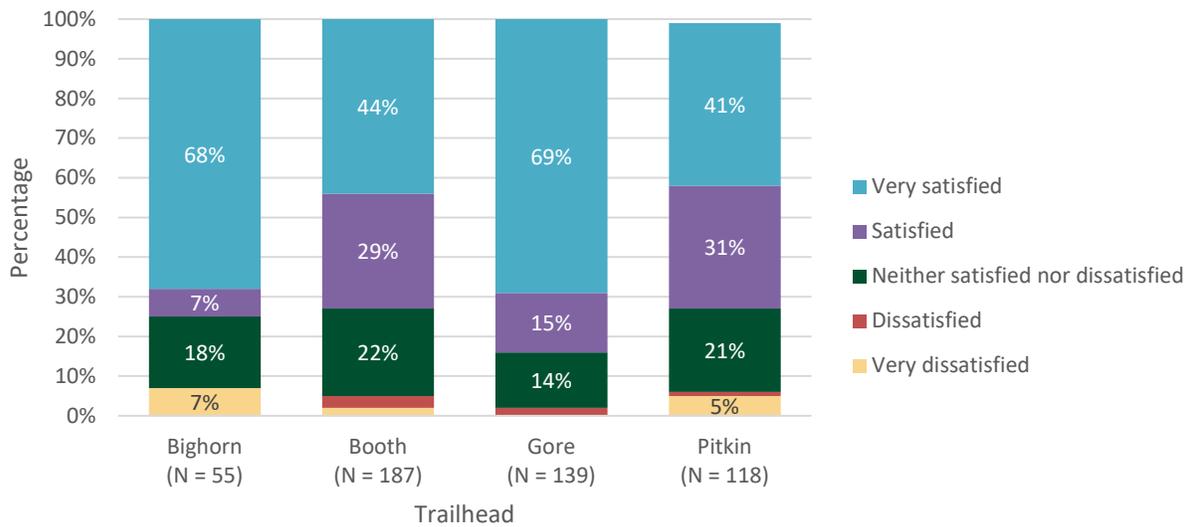


Figure 19. Satisfaction with Condition of Temporary Restroom Facilities

Trip Characteristics

Number of Nights Stayed

Visitors to Bighorn (45 percent), Gore (36 percent), and Pitkin (31 percent) were most likely to report staying no nights, suggesting a day trip or local visit to the trailhead. Visitors to Booth (38 percent), by contrast, were most likely to report staying three to six nights, suggesting visiting from further away or hiking as part of a trip. Notable percentages of visitors to Pitkin (30 percent) and Gore (24 percent) also reported staying three to six nights. Figure 20 shows the full percentage breakdown of nights stayed by trailhead.

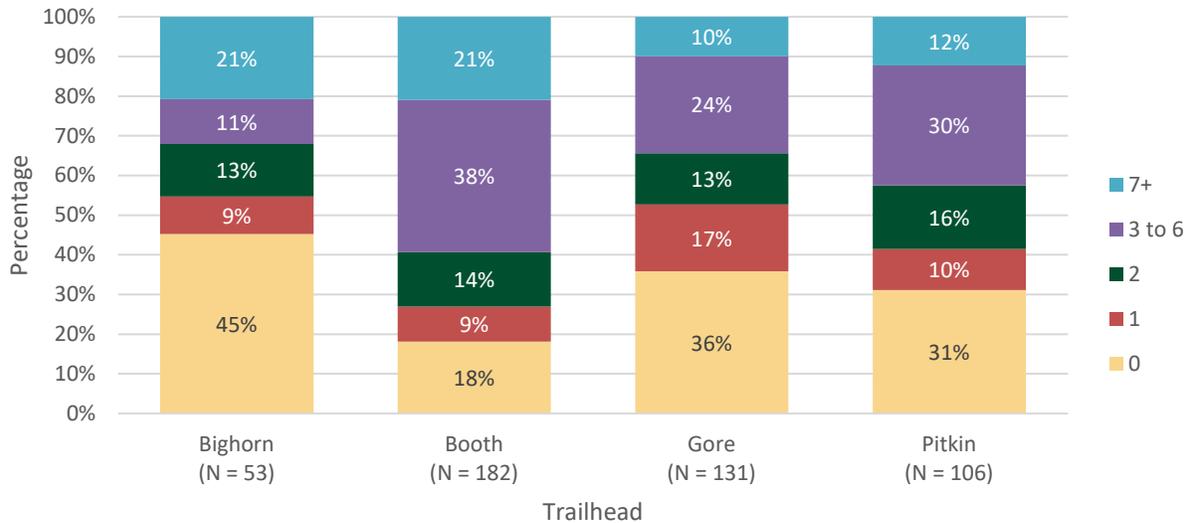


Figure 20. Number of Nights Stayed

Lodging

Of visitors who reported staying overnight, majorities at Bighorn (54 percent) and Booth (51 percent) reported staying in Vail on their trip, as did pluralities of visitors to Pitkin (47 percent) and Gore (41 percent). Notable percentages of visitors to Booth (18 percent), Gore (13 percent), and Pitkin (12 percent) reported staying in Avon/Beaver Creek. Notable percentages of visitors at Gore (18 percent) and Pitkin (15 percent) reported camping. Figure 21 shows the full percentage breakdown of lodging location responses by trailhead. Responses given for “other” are reported in Appendix B.

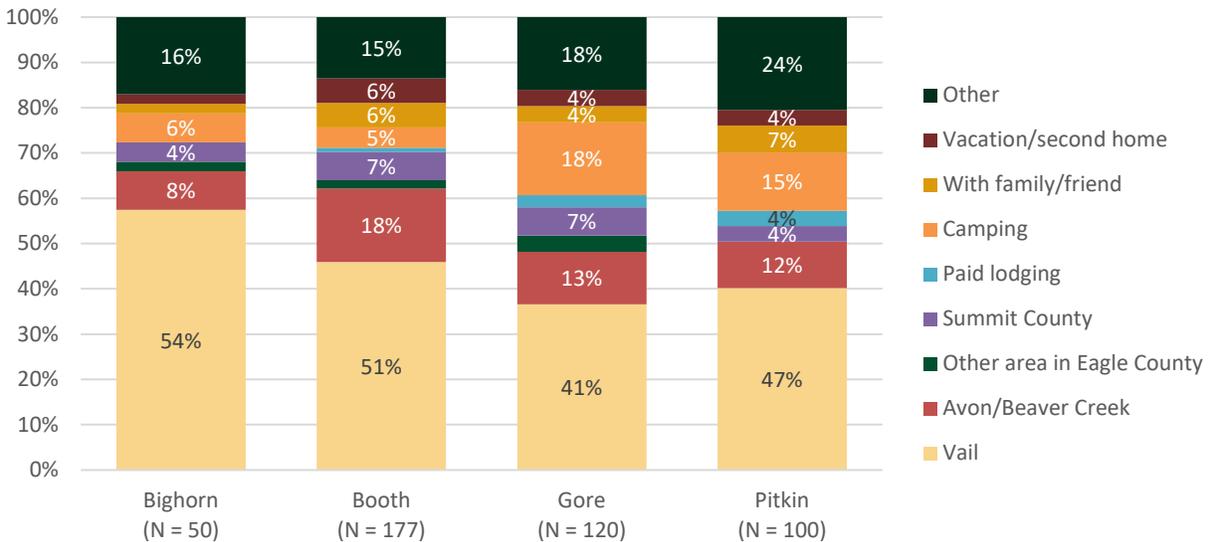


Figure 21. Lodging Location

Sources of Information

Notable sources of information consulted prior to visiting the trailheads included friends, relatives, or word of mouth in general; previous visits; the U.S. Forest Service website; and other apps or websites. Figure 22 shows the full percentage breakdown of sources consulted by trailhead. In general, the percentage of respondents consulting a particular source were within five percent or less across the four trailheads. Exceptions to this general trend include the 25 percent of visitors to Pitkin who did not obtain information prior to their visit; the 32 percent of visitors to Pitkin who relied on friends, relatives or word of mouth; and the 27% of Gore visitors who consulted the U.S. Forest Service website. Responses given for “other app/website” and “other” are reported in Appendix B.

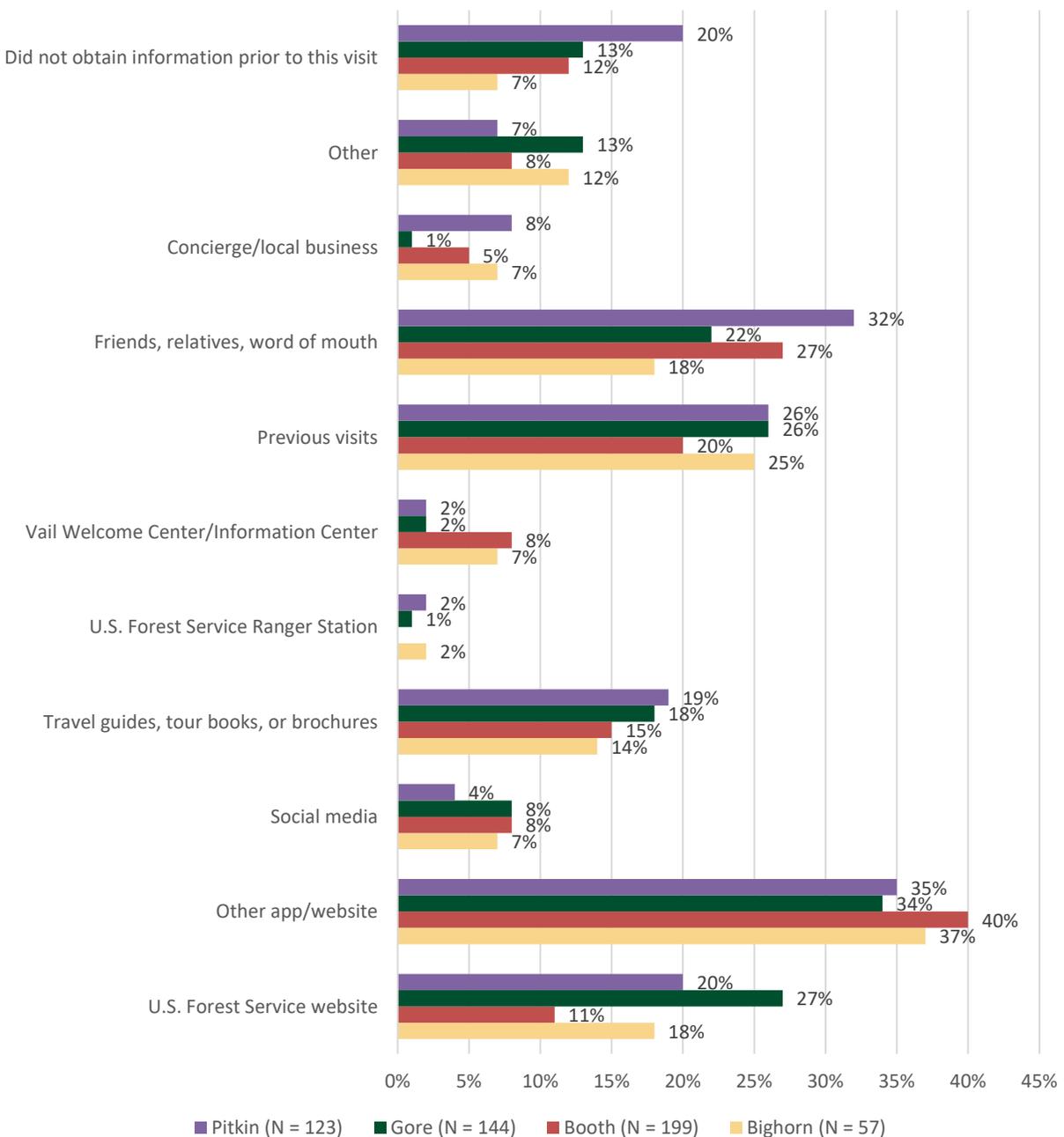


Figure 22. Sources of Information Consulted Prior to Visit

Other apps or websites received the greatest percentage share for all four trailheads as being the most helpful sources consulted prior to their visits. Sample sizes for this question were small across all four trailheads, and therefore these results may not be generalizable across visitors. In general, the percentage of respondents identifying a particular source as the most helpful were within five percent or less across the four trailheads. Exceptions to this general trend include the 19 percent of visitors to Gore who identified not obtaining information prior to the visit as the most helpful; the 17 percent of Gore visitors who rated concierge/local business as most helpful; the 20 percent of Pitkin visitors who rated a previous visit as the most helpful; the 14 percent of Pitkin visitors who rated a travel guide, tour book, or brochure as most helpful; and the seven percent of Booth visitors who rated the U.S. Forest Service website as most helpful. Appendix B shows the responses received for other apps or websites consulted by visitors. Figure 23 shows the full percentage breakdown of the most helpful sources as identified by visitors by trailhead.

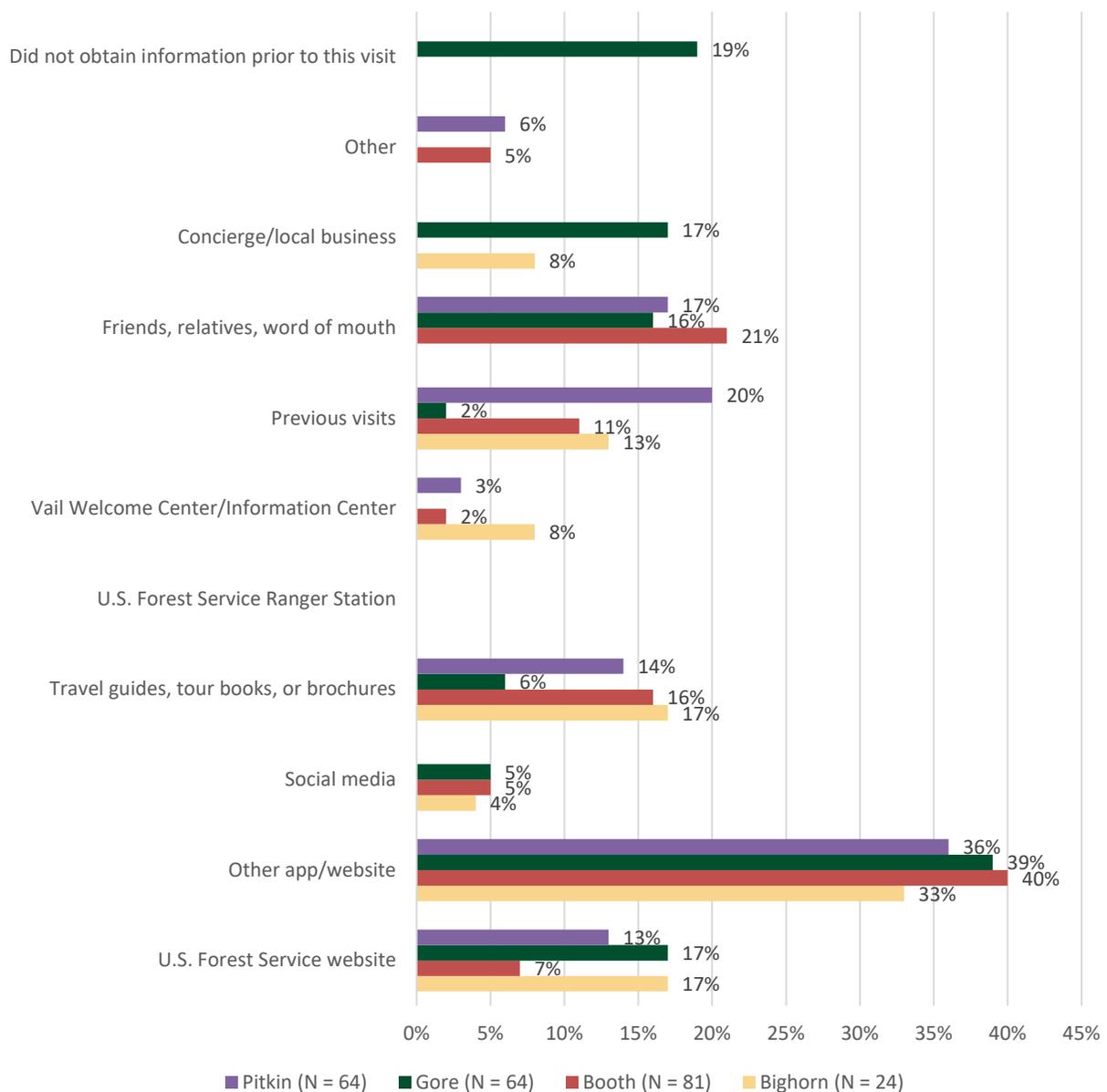


Figure 23. Most Helpful Information Sources Consulted Prior to Visit

Attitudes on Transportation Management Options

Respondents were asked the extent to which they favored or opposed a range of transportation management options using a five-point scale (strongly oppose, slightly oppose, neither support nor oppose, slightly support, or strongly support). Support was greatest for a potential shuttle service from Vail Valley to the East Vail trailheads, with 42 percent (Pitkin) to 57 percent (Booth) of visitors showing some level of support (strongly or slightly). Support was much lower for limiting the number of people who use the trailheads at busy times or for charging a parking fee. Only 24 percent (Booth) to 35 percent (Pitkin) of trail visitors supported (strongly or slightly) visitor limitations, and only 15 percent (Bighorn) to 22 percent (Gore) supported parking fees. In particular, concerning parking fees, there were differences across trailheads in the strength of opposition, with 39 percent (Pitkin) to 61 percent (Bighorn) of visitors expressing strong opposition. Detailed findings for each transportation management option surveyed are reported below.

Shuttle Service

When asked about potentially providing shuttle service from Vail Valley to the East Vail trailheads, support outweighed opposition at all four trailheads. A majority of visitors at Bighorn and Booth indicated some level of support, with 42 percent of Booth visitors indicating strong support. Notably, pluralities at Bighorn (31 percent), Pitkin (30 percent) and Gore (26 percent) also strongly support the shuttle. However, visitors at Pitkin and Gore are somewhat more undecided, as 36 percent and 30 percent, respectively, reported neither supporting nor opposing the potential service. Thirty-one percent of visitors at Bighorn reported being opposed (slightly or strongly) to the shuttle, whereas somewhat fewer visitors expressed opposition at each of the other sites (about one-fifth). Figure 24 shows the full percentage breakdown of attitudes on potential shuttle service by trailhead.

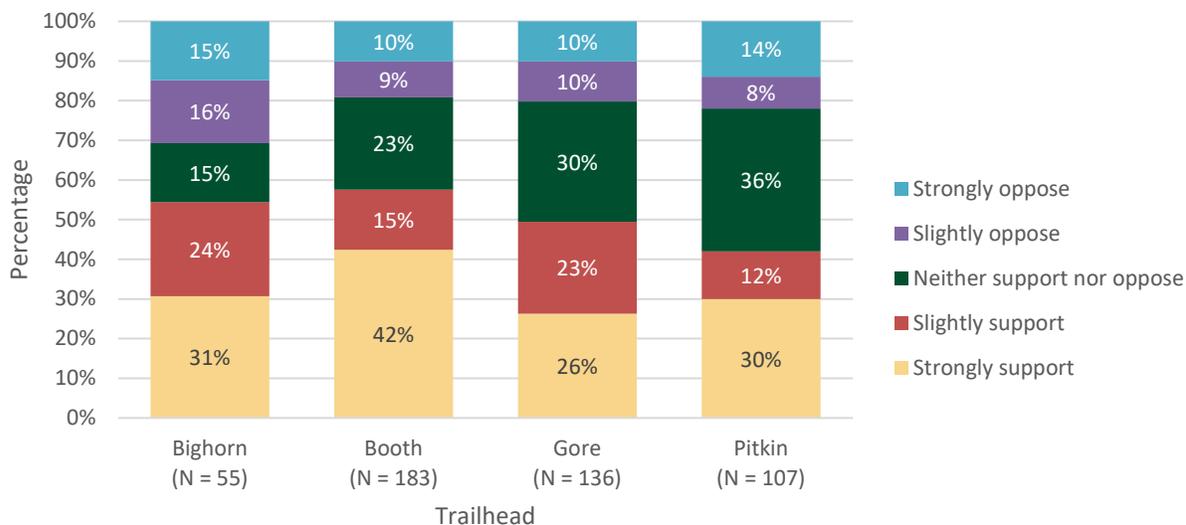


Figure 24. Attitudes on Providing Shuttle Service from Vail Valley

Limiting Trail Usage

Trail visitors were more likely to oppose limiting the number of people who can use the trail during busy times than they were to support such a measure. Opposition was strongest at Bighorn, where 28 percent of visitors strongly opposed the proposal while another 30 percent slightly opposed it. At Booth, 20 percent strongly opposed it and another 28 percent slightly opposed it, with an additional 28 percent neither supporting nor opposing it. At Gore, the plurality of visitors (34 percent) neither supported nor opposed it, though 16 percent reported strongly opposing the potential limits while another 24 percent slightly opposed it. Visitors to Pitkin were most divided on the question, with nearly one-fourth of visitors slightly opposing, another one-fourth neither supporting nor opposing, and another one-fourth slightly supporting the potential limits. Figure 25 shows the full percentage breakdown of attitudes on trail usage limits by trailhead.

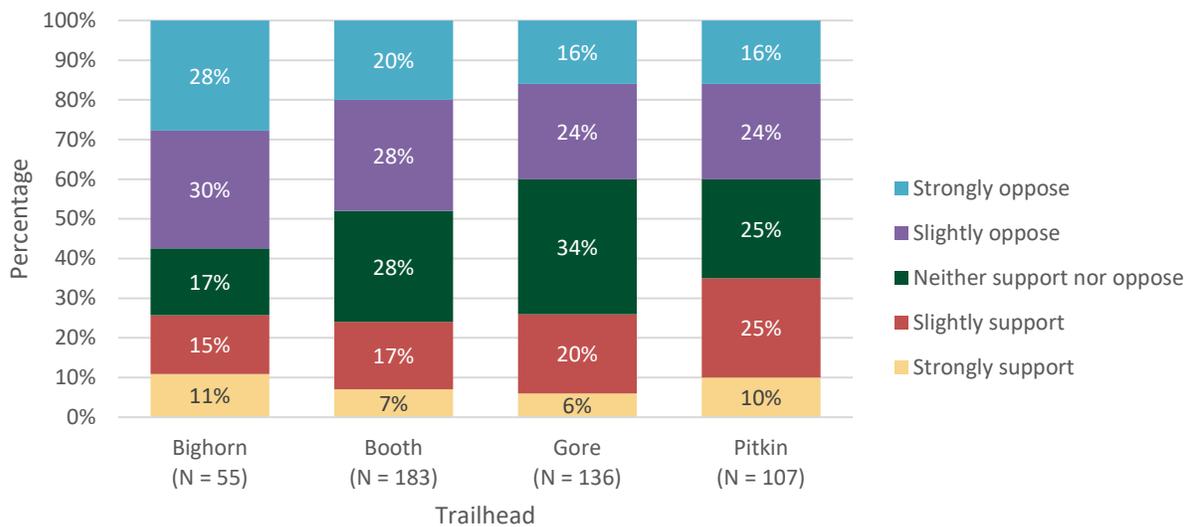


Figure 25. Attitudes on Limiting the Number of People Who Can Use the Trail during Busy Times

Parking Fees

A majority of trail visitors at all four trailheads expressed some level of opposition to charging parking fees at trailhead parking lots. At Bighorn, a majority of visitors (61 percent) reported strongly opposing potential parking fees. Similarly, at Gore, 50 percent of visitors strongly opposed the proposal. At Booth, 44 percent reported being strongly opposed while another 18 percent reported being slightly opposed. At Pitkin, 39 percent reported being strongly opposed and another 27 percent reported being slightly opposed to the proposal. Figure 26 shows the full percentage breakdown of attitudes on potential parking fees by trailhead. Support (strong or slight) ranged from 15 percent to 22 percent across all four trailheads.



Figure 26. Attitudes on Charging a Parking Fee at Trailhead Parking Lot

Demographic Information

Group Size

About one-half of respondents at each trailhead reported a total group size of two. Compared to the other trailheads, Bighorn was less likely to have group sizes of three or more. Figure 27 shows the full percentage breakdown of group sizes by trailhead.

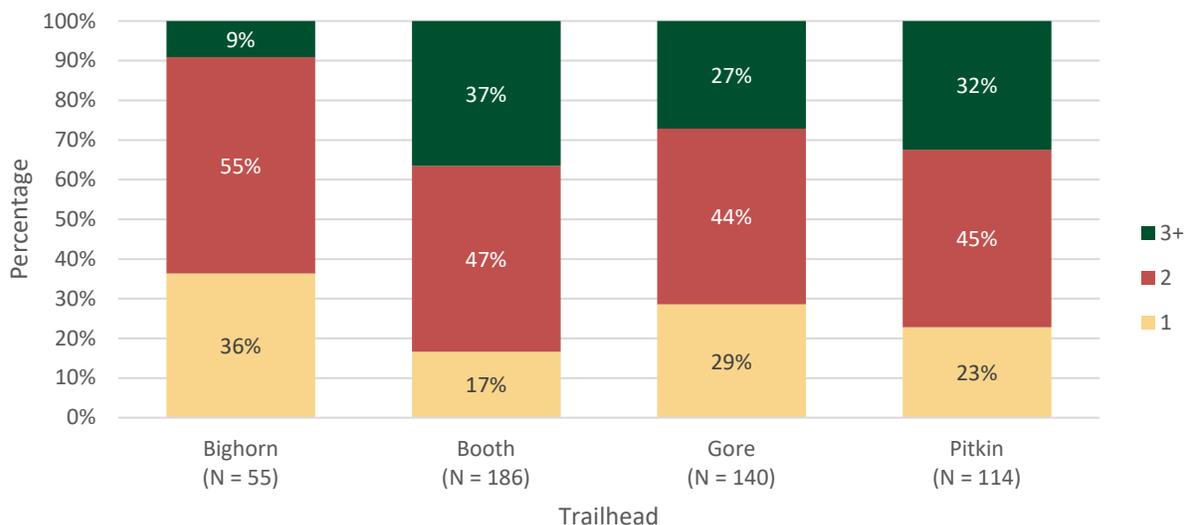


Figure 27. Total Group Size (People Only)

About one-half of groups, whether hiking with children and/or dogs, included two adults. At Booth, an additional third of groups (32 percent) were comprised of three or more adults. Pitkin had a similar share of groups with three or more adults (29 percent). At Bighorn, 36 percent of groups included one adult, as did 31 percent of groups at Gore. Figure 28 shows the full percentage breakdown of the number of adults in a group by trailhead.

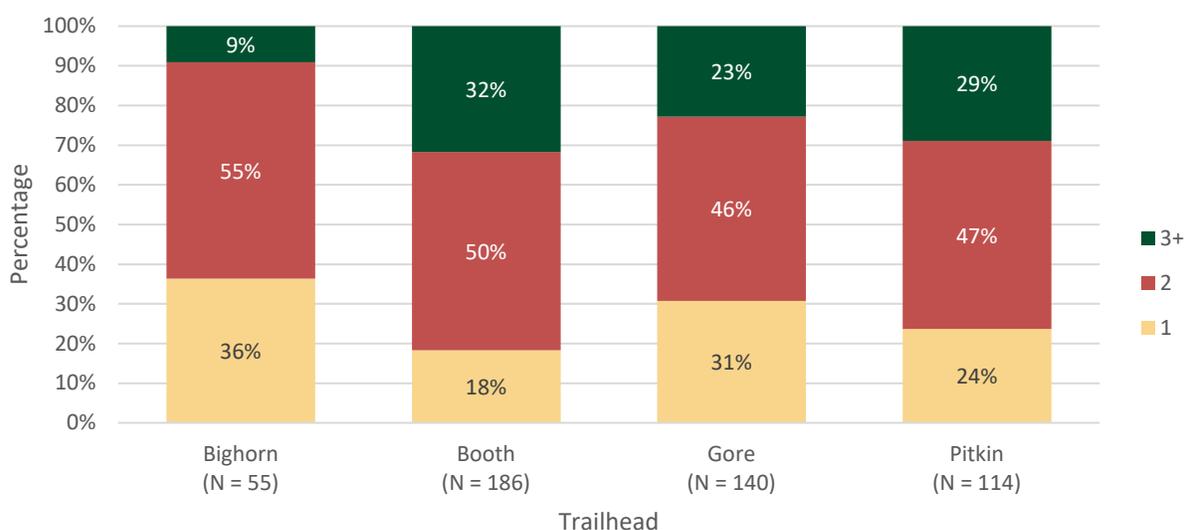


Figure 28. Total Number of Adults

Large majorities of groups at every trailhead (89 percent or more) did not include any children under age 18. Visitors at Gore and Booth were most likely to have children in their groups. Figure 29 shows the full percentage breakdown of number of children included in a group.

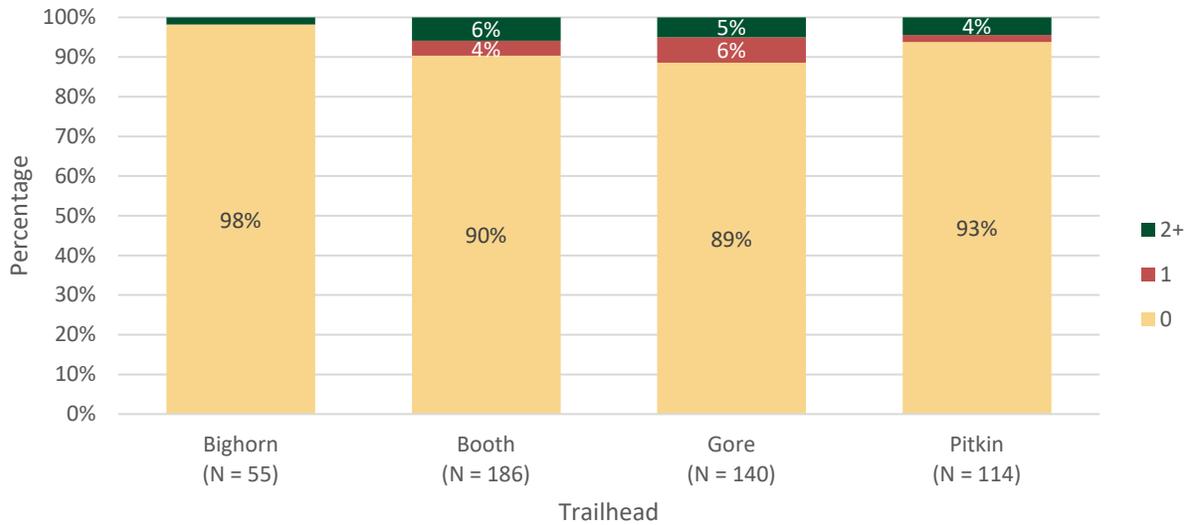


Figure 29. Total Number of Children

Similarly, large majorities of groups (at least 78 percent) did not include any dogs, though a larger number of groups did include at least one dog compared with including children. Figure 30 shows the full percentage breakdown of number of dogs included in groups by trailhead.

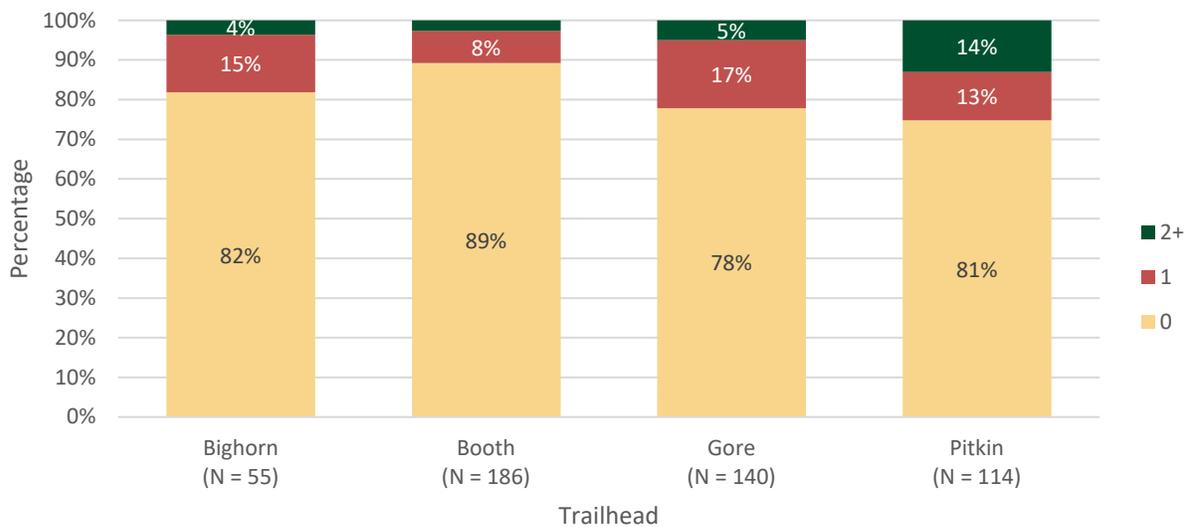


Figure 30. Total Number of Dogs

Residential Location

A majority of visitors (59 percent) to Booth reported a home location outside of Colorado. For Gore, a majority of visitors (54 percent) reported a home location in Colorado, but not in a local area (defined as a zip code of 80443, 81631, 81632, 81657, or 81658). Survey respondents at Bighorn reported the largest share of local visitors at 38 percent. Figure 31 shows the full percentage breakdown of local, in-state (excluding local areas), and out-of-state visitors by trailhead.

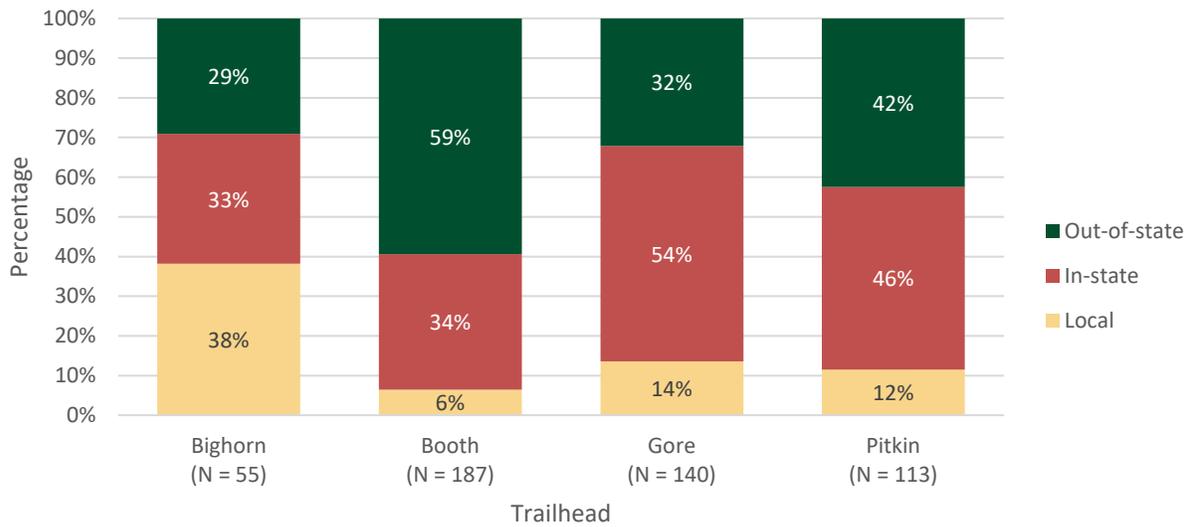


Figure 31. Residential Location Reported by Visitors

Figure 32 through Figure 35 show the residential locations of visitors' zip codes by trailhead, with larger circles indicating larger number of visitors from that zip code.

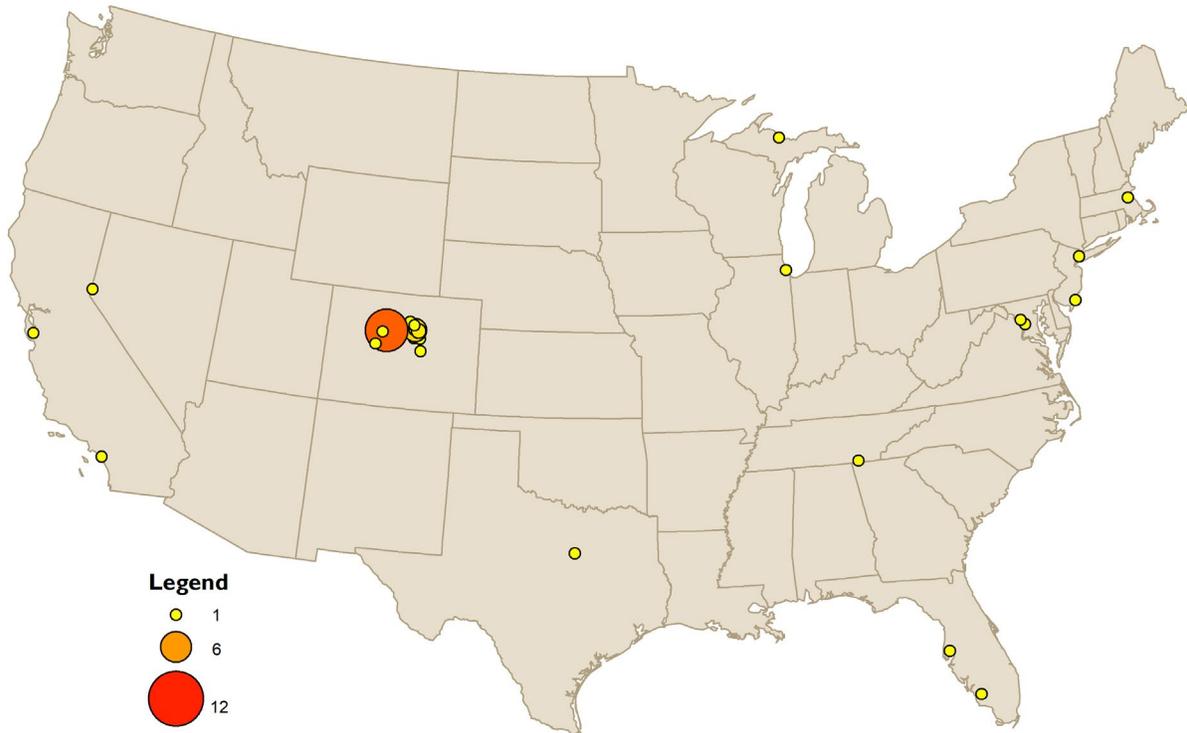


Figure 32. Residential Locations of Bighorn Visitors by Zip Code (N = 54)

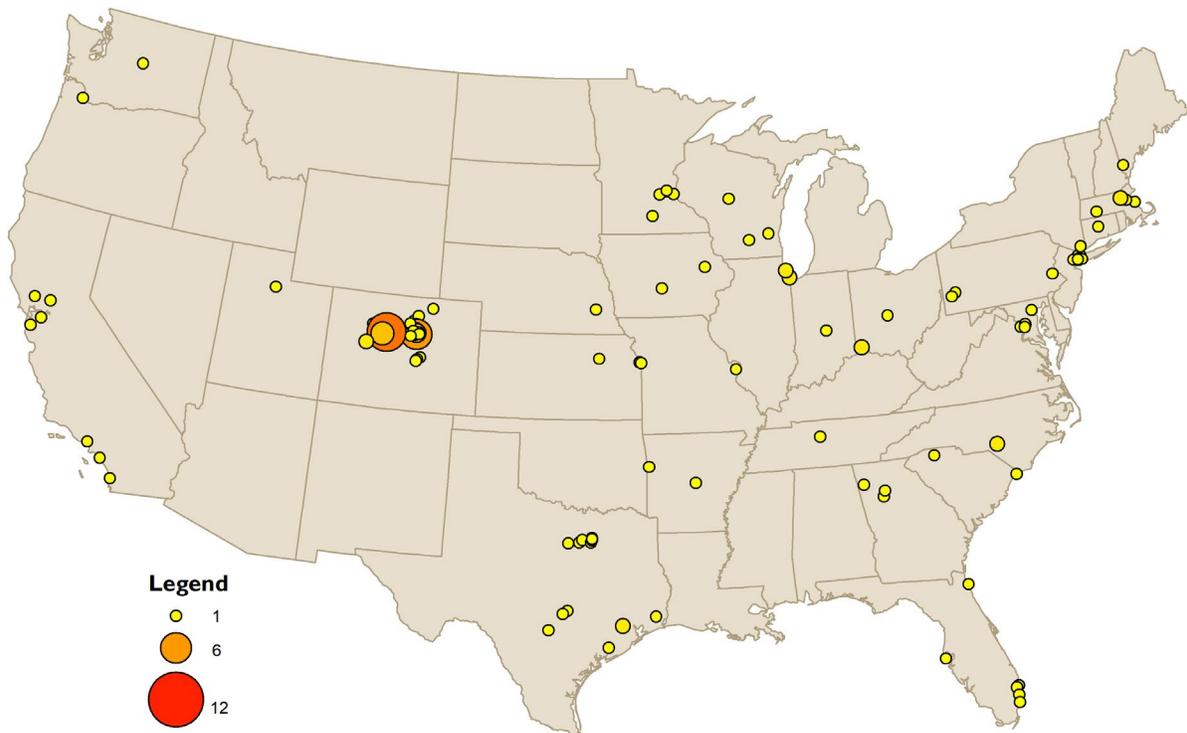


Figure 33. Residential Locations of Booth Visitors by Zip Code (N = 184)

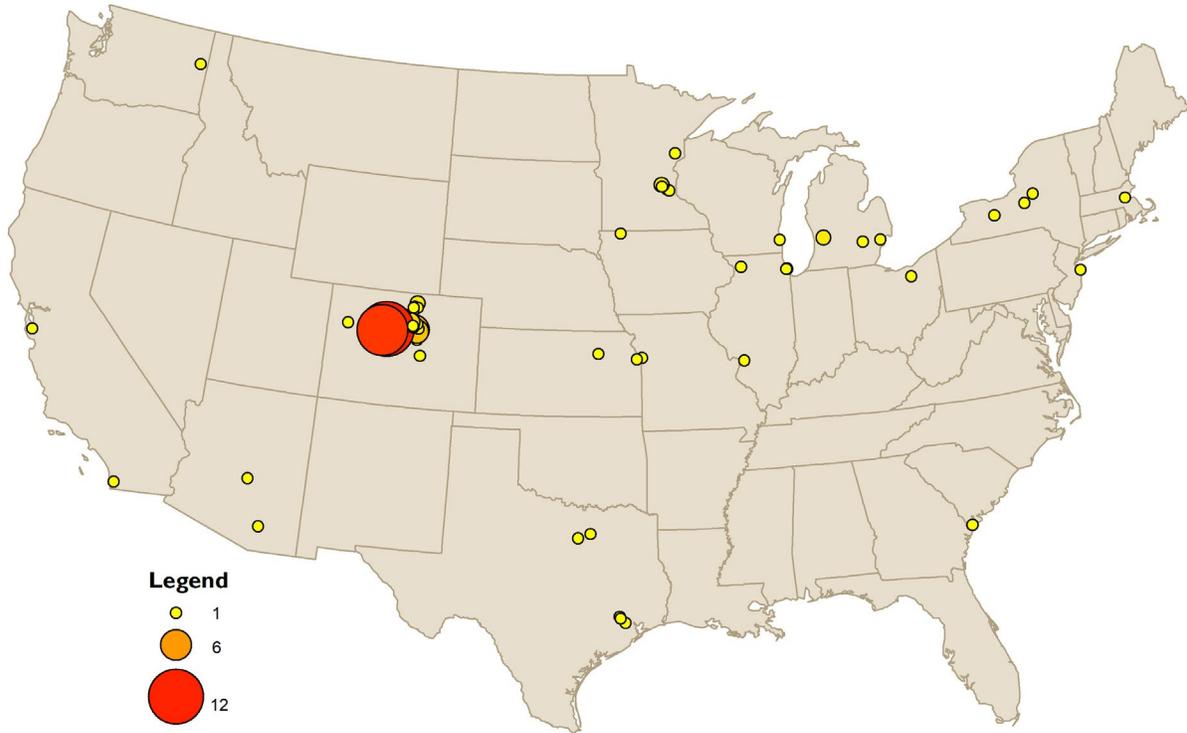


Figure 34. Residential Locations of Gore Visitors by Zip Code (N = 139)

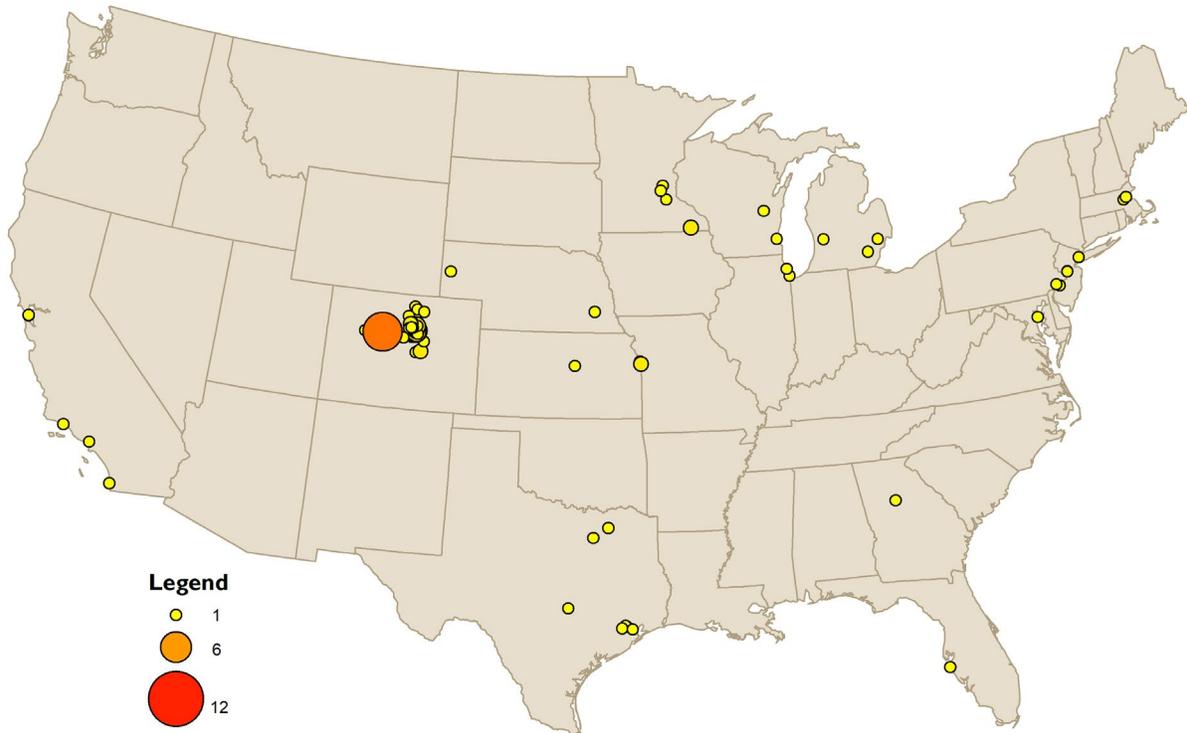


Figure 35. Residential Locations of Pitkin Visitors by Zip Code (N = 112)

Conclusions

In general, the results above show that visitors on the East Vail trails are generally similar across the four trailheads. However, visitors to Booth are unique when compared to visitors on the other three trails, most notably with regard to:

- Fewer visitors knowing they were in a designated wilderness area
- More visitors wanting to hike the trail even if they knew it was going to be crowded
- More visitors feeling moderately or slightly crowded than not at all crowded
- Similarly, fewer visitors feeling very satisfied with the number of people encountered on the trail
- Fewer visitors feeling very satisfied with parking space availability
- More visitors spending multiple nights in the area
- More visitors being from out of the state

With regards to possible transportation management changes at these trails, more visitors are supportive of providing shuttle service to the trails (more so for Booth) than for limiting trail use or instituting parking fees. Additionally, more visitors at Bighorn were very satisfied with existing conditions than at the other trails, and more visitors were local to the area.

Appendix A: Survey Instrument



VAIL HIKER SURVEY 2019

Date: _____

Trailhead – **circle** one:

Timeframe: _____ AM _____ PM

BOOTH GORE PITKIN BIGHORN

1. How did you arrive at this trailhead today?

- By personal car, truck, or motorcycle
- By rental car
- By Town of Vail Bus
- By hotel / concierge van / shuttle
- By Uber / Lyft

- By bicycle
- By foot
- Other *please specify:*

2. Where is your personal (or rental) vehicle currently parked?

- Trailhead parking spaces
- Vail Mountain School (*for Booth trail*)
- Side street near the trailhead
- Home
- Town of Vail public parking structure
- Other bus stop *please specify:*

- Lodging property (e.g., hotel, motel, campground, etc.)
- Other *please specify:*

- I do not have a vehicle.

3. Have you hiked this trail before today? (*check one*)

- No** (this is my first time) – GO TO QUESTION 4
- Yes** →

Not including this visit, approximately how many times have you hiked any of the East Vail trails in the last three years? (*check one*)

- 1 to 5 times
- 6 to 10 times
- More than 10 times

4. How long did you hike the trail? _____ minutes / hours

5. What was your destination on this hike? _____

6. Prior to starting your hike today, were you aware that this trail is in a designated Wilderness Area?

- Yes**, aware
- No**, not aware

7. What factor(s) affected the timing of your hike? (*check ALL that apply*)

- Avoid I-70 traffic traveling to trailhead
- Avoid I-70 traffic when leaving trailhead
- Weather
- Good daytime activity
- Availability of parking
- Avoid crowds on trail

- Had afternoon activities planned, so had the morning free
- Had morning activities planned, so had the afternoon free
- Other *please specify:*

- No, none of these affected my start time

8. What factor(s) explain why you chose to hike this particular trail today? (check ALL that apply)

- | | |
|--|---|
| <input type="checkbox"/> Recommendation of a friend / family member | <input type="checkbox"/> Convenient location (i.e., close to where I am staying/where I live) |
| <input type="checkbox"/> Recommendation of a concierge / local business | <input type="checkbox"/> Level of difficulty of the trail |
| <input type="checkbox"/> Recommendation from a book / brochure / social media | <input type="checkbox"/> Length of the trail |
| <input type="checkbox"/> Recommendation from a website/app
<i>please specify:</i> _____ | <input type="checkbox"/> No particular reason |
| | <input type="checkbox"/> Other <i>please specify:</i> _____ |

9. Which of the following statements comes closer to your view? (check ONE)

- | | |
|--|---|
| <input type="checkbox"/> I felt strongly about hiking this trail today; so even if I had learned the trail was crowded, I would not have considered hiking another trail in the area | <input type="checkbox"/> I did not feel that strongly about hiking this trail today; so if I learned this trail was crowded, I would have considered hiking another trail in the area |
|--|---|

10. How many total nights are you spending away from home on this trip? _____ nights
If "0" nights, GO TO QUESTION 12. If ONE OR MORE nights away from home:

11. Where are you staying on this trip? (check ALL that apply)

- | | |
|---|---|
| <input type="checkbox"/> Vail | <input type="checkbox"/> Camping |
| <input type="checkbox"/> Avon / Beaver Creek | <input type="checkbox"/> With Family / Friend |
| <input type="checkbox"/> Other area in Eagle County | <input type="checkbox"/> Vacation / Second Home |
| <input type="checkbox"/> Summit County | <input type="checkbox"/> Other <i>please specify:</i> _____ |
| <input type="checkbox"/> Paid Lodging | |

12. Prior to your visit, what information sources, if any, did you use to obtain information about the East Vail trails? Of the sources you used, which ONE was most helpful?

	Sources Used (check ALL that apply)	Most Helpful (check ONE)
U.S. Forest Service website	<input type="checkbox"/>	<input type="checkbox"/>
Other app/website (<i>please specify</i>): _____	<input type="checkbox"/>	<input type="checkbox"/>
Social media (e.g., Facebook, Instagram)	<input type="checkbox"/>	<input type="checkbox"/>
Travel guides/tour books/brochures	<input type="checkbox"/>	<input type="checkbox"/>
US Forest Service Ranger Station		
Vail Welcome Center / Information Center	<input type="checkbox"/>	<input type="checkbox"/>
Previous visits	<input type="checkbox"/>	<input type="checkbox"/>
Friends / relatives / concierge/word of mouth	<input type="checkbox"/>	<input type="checkbox"/>
Concierge / local business		
Other (<i>please specify</i>): _____	<input type="checkbox"/>	<input type="checkbox"/>
Did not obtain information prior to this visit	<input type="checkbox"/>	

13. Recreation experience / trail facilities – please rate your satisfaction or dissatisfaction with the item using a scale of 1 to 5 where 1 means very dissatisfied and 5 means very satisfied.

	SATISFACTION RATING					
	Very Dissatisfied	Somewhat Dissatisfied	Neither Dissatisfied nor Satisfied	Somewhat Satisfied	Very Satisfied	Not Applicable
Number of People Encountered on the Trail	1	2	3	4	5	N/A
Parking Space Availability	1	2	3	4	5	N/A
Physical Condition of Trail (e.g., erosion or widening)	1	2	3	4	5	N/A
Adequacy of Trail Markers	1	2	3	4	5	N/A
Travel Experience Arriving at the Trailhead	1	2	3	4	5	N/A
Adequacy of Onsite Educational Information and Information on Rules / Regulations	1	2	3	4	5	N/A
Presence of US Forest Service Rangers and/or Trail Hosts	1	2	3	4	5	N/A
Users adherence to rules / regulations (regarding dogs, etc.)	1	2	3	4	5	N/A
Condition of Temporary Restroom Facilities	1	2	3	4	5	N/A

14. How crowded did you feel while hiking today?

- | | |
|---|--|
| <input type="checkbox"/> Not at all crowded | <input type="checkbox"/> Very crowded |
| <input type="checkbox"/> Slightly crowded | <input type="checkbox"/> Extremely crowded |
| <input type="checkbox"/> Moderately crowded | |

15. Please rate your level of support or opposition for the following TRANSPORTATION MANAGEMENT OPTIONS for managing visitor use of the Vail trail where you hiked today.

	Strongly support	Slightly Support	Neither support or oppose	Slightly Oppose	Strongly oppose
Provide a shuttle service from Vail Village to this trailhead	1	2	3	4	5
Limit the number of people who can use certain trails during busy times (e.g., during peak periods)	1	2	3	4	5
Charge a parking fee at the trailhead parking lot	1	2	3	4	5

16. How likely are you to visit this trail in the future? (check one)

- Very likely
- Somewhat likely
- Not too likely
- Not at all likely

Appendix B: Other Responses

What factor(s) affected the timing of your hike today?

Table 7. Other Factors Affecting Hike Timing for Bighorn

Response	Count
Response unrelated to time of day	5
Scheduling around other commitments	2
Weather	2
Avoid I-70 traffic [unspecified whether to/from trailhead]	1

Table 8. Other Factors Affecting Hike Timing for Booth

Response	Count
Response unrelated to time of day	8
Scheduling around other commitments	4
Tired - short hike	2
Avoid crowds on trail	1
Good daytime activity	1
Had afternoon activities planned, so had the morning free	1
Adjusting to time zone	1

Table 9. Other Factors Affecting Hike Timing for Gore

Response	Count
Response unrelated to time of day	6
Response unclear	4
Scheduling around other commitments	2
Weather	2
Time of year	1
Tired - short hike	1

Table 10. Other Factors Affecting Hike Timing for Pitkin

Response	Count
Response unrelated to time of day	8
After breakfast	2
Good daytime activity	1
Had planned to hike other trail, but it was closed	1
Tired - short hike	1

What factor(s) explain why you chose to hike this particular trail today?

Table 11. Website/App Used to Choose Bighorn

Response	Count
All Trails	7
Artemis	1
Trail Run app	1

Table 12. Website/App Used to Choose Booth

Response	Count
All Trails	34
Google Search	5
Trip Advisor	2
Multiple (All Trails, Google Search)	1
Multiple (All Trails, Trip Advisor)	1
VacationIdea.com	1
Online (unspecified)	1

Table 13. Website/App Used to Choose Gore

Response	Count
All Trails	9
Google Search	3
REI Hiking Project	2
Women Hikers	1
13ers.com	1

Table 14. Website/App Used to Choose Pitkin

Response	Count
All Trails	7
REI Trail Run app	1
REI Hiking Project	1
Cotrex	1

Table 15. Other Factors Used to Choose Bighorn

Response	Count
Response unclear	10
Hiked before/Like the trail/Beautiful trail	3
Less crowded	2

Table 16. Other Factors Used to Choose Booth

Response	Count
Hiked before/Like the trail/Beautiful trail	13
Response unclear	5
All Trails	2
Convenient location (close to where you are staying/live)	1
Google Search	1
Personal knowledge	1

Table 17. Other Factors Used to Choose Gore

Response	Count
Hiked before/Like the trail/Beautiful trail	14
Response unclear	7
Less crowded	4
Convenient location (close to where you are staying/live)	3
All Trails	1
Fishing	1

Level of difficulty of the trail	1
Recommendation from a book, brochure, or social media	1

Table 18. Other Factors Used to Choose Pitkin

Response	Count
Response unclear	10
Recommended by local/volunteer	5
Hiked before/Like the trail/Beautiful trail	4
Fishing	3
All Trails	1
Less crowded	1
No particular reason	1

Where are you staying on this trip?

Table 19. Other Stay Locations for Bighorn

Response	Count
Home	6
Other area in Colorado	2
Denver	1
Vail	1
Other state	1

Table 20. Other Stay Locations for Booth

Response	Count
Home	14
Other area in Eagle County	5
Denver	2
Summit County	2
Other area in Colorado	2
Unclear response	1

Table 21. Other Stay Locations for Gore

Response	Count
Denver	5
Home	5
Other area in Colorado	5
Other area in Eagle County	2
Summit County	2
Vail	1
Avon/Beaver Creek	1

Table 22. Other Stay Locations for Pitkin

Response	Count
Home	13
Other area in Colorado	4
Vail	3

Denver	2
Summit County	2
Other area in Eagle County	1

Prior to your visit, what information sources, if any, did you use to obtain information about the East Vail trails?

Table 23. Other App/Website Used to Obtain Information about Bighorn

Response	Count
Response unclear	9
All Trails	8
Google Search	1

Table 24. Other App/Website Used to Obtain Information about Booth

Response	Count
All Trails	46
Google Search	11
Response unclear	9
Trip Advisor	1
Multiple (All Trails and Google Search)	1
Multiple (All Trails and Trip Advisor)	1

Table 25. Other App/Website Used to Obtain Information about Gore

Response	Count
All Trails	27
Response unclear	10
Cannot recall	1
Google Search	3

Table 26. Other App/Website Used to Obtain Information about Pitkin

Response	Count
All Trails	30
Response unclear	10

Table 27. Other Source Used to Obtain Information about Bighorn

Response	Count
Response unclear	3
All Trails	2
Travel guides, tour books, or brochures	2

Table 28. Other Source Used to Obtain Information about Booth

Response	Count
All Trails	7
Google Search	3
Response unclear	3
Concierge/local business	2
Previous visits	1

Table 29. Other Source Used to Obtain Information about Gore

Response	Count
All Trails	4
Other app/website	4
Google Search	3
Previous visits	3
Response unclear	2
Concierge/local business	1
Travel guides, tour books, or brochures	1

Table 30. Other Source Used to Obtain Information about Pitkin

Response	Count
All Trails	5
Response unclear	2
Travel guides, tour books, or brochures	2
Trip Advisor	1

If you have additional feedback you would like to share, please use the space below.

Table 31. Additional Feedback Received for Bighorn

Response	Count
Enjoys the trail/great hike/beautiful	11
Maintenance and safety	2
Related to rules for dogs	2
Construction	2
Don't limit cars	1
Against charging for parking	1
Increase parking time/more spaces	1
Parking shortage	1
Prefers other trail	1
Reduce noise	1

Table 32. Additional Feedback Received for Booth

Response	Count
Enjoys the trail/great hike/beautiful	23
Better mapping/signage/distance markers	12
Other response	6
Thank you	5
Maintenance and safety	3
Related to rules for dogs	2
Support for parking control	2
Warnings about wildlife	2
More information online	1
Extend parking lot	1
Other hikers not friendly	1
Provide more information	1

Table 33. Additional Feedback Received for Gore

Response	Count
Enjoys the trail/great hike/beautiful	16
Thank you	7
Other response	7
Better mapping/signage/distance markers	5
Increase parking time/more spaces	4
Against charging for parking	2
Maintenance and safety	2
Parking could be a problem on weekends	2
Provide more/clearer information	2
Related to rules for dogs	2
Crowded	1
Don't limit access. Support for shuttle	1
Parking is not a problem	1
Support for parking control	1

Table 34. Additional Feedback Received for Pitkin

Response	Count
Enjoys the trail/great hike/beautiful	11
Better mapping/signage/distance markers	5
Maintenance and safety	5
Increase parking time/more spaces	4
Related to rules for dogs	3
Thank you	1
Other response	1