

I-70 User Study

Winter Research Results - 2019

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AN OVERVIEW OF KEY FINDINGS

The results from the 2019 I-70 User Study Program are presented in the attached report. This overview presents a summary of key findings from the study that are further documented in the report that follows. The full report provides a discussion of research results using a series of graphs and charts and presents analyses from the wide-ranging research effort on parking and travel patterns in the I-70 corridor.

The 2019 research was designed to allow comparisons to past research. Surveys were conducted at the T-Rex and Woolly Mammoth lots on dates in late January and early to late February 2019, approximately the same weekends that were surveyed in 2017, 2014, and 2012. The research also incorporates survey results from the RRC Front Range Snowsports Enthusiasts Panel. The Panel data provide input from a broad sample of Front Range winter visitors to mountain resorts, and it included survey questions that allow for comparison to results from the 2017 and 2014 panels.

Notable findings from the intercept survey of T-Rex and Woolly Mammoth lot users include:

- Intercept surveys were conducted on three weekends at the Woolly Mammoth parking lot in Morrison. Interviews were conducted starting early on study day mornings (5:45 AM) and continuing through late morning. Additionally, some surveys were conducted during late afternoons to gather input from returning travel parties, primarily snowsports enthusiasts.
- The Dinosaur Lot users are predominantly male and young adults, with Denver Zip codes most represented. The largest share of lot users come from the Denver ZIP Codes (35%), but Jefferson (24%), Arapahoe (13%), and Adams (11%) counties are also strongly represented. The geographic origins of lot users have remained similar over time, although Boulder residents are notably less represented, and growth in users from Denver and Jefferson Counties is evident. P. 7 – 8.
- Overall, vehicle occupancy results are similar to 2017 and we believe increased carpooling is occurring before getting to Morrison. The 2019 results point to a similar share of drivers arriving at the lot alone compared to 2017 – 53% this year, 56% in 2017. However, the data show notable shifts from the results in 2014 when 70% reported arriving alone suggesting the conclusion that some carpooling is being initiated before arriving at the Morrison lots. P. 9.
- Respondents cited an average of approximately 3 different motivations for carpooling, highlighting that there are multiple reasons why carpooling appeals to lot users. As in all past years of the study, a most frequently identified motivation for carpooling was to “save on gas” (67%). However, this year, social/fun (67%) was also high, up from 55% in 2017. Other important motivations this year were to reduce environmental impact (45%) and reduce traffic congestion (41%). It is notable that this year and in 2017, approximately 35% of respondents mentioned “save on resort parking.” This category is up sharply from 2014 when only 16%

identified this reason as a motivation. Clearly, one of the benefits of parking charges at the resorts is to increase carpooling. P. 9 – 10.

- Respondents estimated using the Dinosaur Lots for roughly half of their winter mountain trips (an average of 60%) similar to past years. Meanwhile, approximately a quarter of respondents use the Dinosaur Lots for every single one of their trips to the mountains (25%). P. 10 – 11.
- Trip destinations are relatively spread out with no one location attracting a majority of respondents. Keystone was most cited (13%), followed closely by Arapahoe Basin and Copper Mountain (12%), Winter Park (9%), and Vail, Breckenridge, and Loveland (8%). These use patterns showed some notable shifts from 2017 that might be explained through discussions with resort operators on some of their efforts to encourage various transportation initiatives. For example, reports of Arapahoe Basin were up sharply as a destination, while Keystone and Winter Park were down. Full results of these findings from the past five years are presented in the report that follows. P. 13 – 14.
- Results indicate that the Dinosaur lots are used by day visitors to the mountains, and those staying overnight. While less than a quarter of respondents (22%) plan to leave their vehicles for one or more nights, there are major differences in these results by day of the interview. As might be expected, lot users arriving Friday stay in the mountains longer and are especially likely to stay overnight (78%), compared to Saturday and Sunday when the lots are most used by day visitors (86% and 91% respectively). As explained later in this report, parking lots have been filling earlier and are especially likely to receive heavy use overnight on Fridays. This has contributed to earlier filling of the lots and complaints and frustrations about parking capacity and finding lots full at various times. P. 15.
- Sixty-nine percent of those interviewed in the lots indicated that they use I-70 traffic information sources (up from 64% in 2017). However, certain groups were especially likely to use traffic information sources. Passholders are more likely than non-passholders to use information sources (+14 %age points), and respondents who have made 21 or more trips to the mountains are nearly twice as likely to use traffic information sources as those who have made five or fewer trips. Clearly, there are opportunities to further inform and grow the population of knowledgeable and up-to-date drivers in the corridor. P. 17.
- Sources of information used by parking lot users. Google Maps was the most used source of information identified this year; this category was asked for the first time in 2019 and it eclipsed all other sources. Approximately 20% indicated they use CoTrip.org, 13% use the CDOT email alerts, 8% use CDOT text alerts and 11% use GoI70.com, with progressively smaller shares of respondents using other sources. This year, notably more respondents indicated using CDOT email and text messages (40% taken together) up from 18% in 2017. WAZE App (11%) was tracked for the first time; it has clearly made inroads as a source of information. P. 18.
- Commercial bus and van service usage was up slightly at the T-Rex/Woolly Mammoth lots over 2017. While a small part of overall use, these modes saw increases. However, when asked

about likelihood of taking a ski van or bus in the future, results were little changed from 2017 and 2014. About 17% said “very likely,” 44% said “somewhat likely” and 40% said “not at all likely.” There is a significant segment that is interested at some level (over half) but the fact that the interest has not changed over time is interesting. Instead, use of carpooling has continued to increase and it is clearly a preferred alternative to buses/vans for a large segment of travelers. P. 19.

- Seventy percent of respondents surveyed in the lots were aware of the Passenger Vehicle Traction Law. Of those that were aware, a large share (87%) report checking their tires for compliance; put another way, this represents an estimated 61% of survey respondents checking their tires. P. 19 – 20.

The Front Range Snowsports Enthusiasts Panel generated even more insights around behaviors and perceptions as they relate to I-70 corridor travel:

- A notable 67 % of panel respondents reported that the frequency of their skiing/snowboarding had been reduced because of I-70 congestion. When asked to elaborate on the specific ways in which their snowsports activity had been reduced, comments centered around several major themes: avoidance of skiing/riding altogether, skiing/riding at locations other than those along the I-70 corridor, skiing/riding during the week instead of on the weekends, skiing/riding fewer days, and taking overnight trips instead of day trips. P. 28.
- A vast majority of respondents make an effort to avoid the high congestion times on I-70 (95 %), up from 94 % in 2017 and 90 % in 2014, and 94 % in 2012. A consistently high percentage of respondents continue to say that they are making efforts to avoid high congestion times. On average, panel respondents use a combination of three different strategies to avoid congestion on I-70. In 2019, the most common types of strategies involved arriving early at the resort and/or leaving early or late, staying overnight near the resort, and avoiding weekend travel (whether it be on Saturday or Sunday specifically, or weekends altogether). P. 31.
- Respondents who own a pass or lift ticket pack behave differently than those without one. As was the case in 2017 and 2014, holders of multiday products including passes are more likely to arrive early and leave early. There are other differences in behavior of pass holders that suggest opportunities to capitalize on this segment of snowsports enthusiasts and to use the passes for communications purposes, as well as to potentially influence different types of behavior in the future. The data show passholders use the digital communications sources for I-70 information more heavily. In other words, they can be kept informed of conditions more easily if there are emergencies or other circumstances to communicate. In another example, the fact that the data show passholders relatively likely to leave resorts earlier would potentially be considered a positive for spreading out congestion on I-70. However, as an increasing majority of skiers/riders have passes, the afternoon peaks in traffic have occurred earlier. It may be time to look for methods to encourage a segment of these travelers to actually stay later to soften the early afternoon peak. This is but one example of the findings

from the survey that could be further explored if there is a desire to consider how the data might be used to encourage new initiatives or communications strategies. P. 37.

- Over one-third of panel respondents have used the Dinosaur Lots for carpooling. When asked to comment on their experience, respondents are generally positive, noting the convenience and ease of the lots for carpooling, and their appreciation for the availability of the lots. However, there were increasing concerns this year about capacity of the lots and finding them full or close to full. Suggestions for looking for additional land for expansion or new lots were suggested by some. A complete set of verbatim comments are provided under separate cover. P. 38.
- Open-ended comments provide insights that expand upon the quantitative results from the Intercept and Panel Surveys. The 2019 research provided a number of opportunities for snowsports participants to comment on various aspects of travel in the I-70 corridor. In general, over the years of research, the comments have become more specific in terms of complaints, with numerous expressions of frustration and even capitulation; for many, none of the strategies for trying to deal with traffic are working. These findings are presented in several word clouds at the conclusion of the report. However, to fully understand the breadth of comments that were received in 2019, it is useful to review the full set of verbatim comments provided under separate cover.

INTRODUCTION AND METHODOLOGY

During mid-winter 2019, the I-70 Coalition commissioned a study to investigate parking patterns at the three Dinosaur parking lots in Morrison, CO. The study follows up on studies conducted in 2012, 2014, and 2017. Seasonal timing of the surveys and overall study methodology were designed to closely mirror past studies to identify changes and potential trends over time. The survey data provide updated insights regarding carpooling patterns and I-70 user behavior based on benchmarking to past studies.

Figure 1.
Map of Dinosaur Lots



The research involved two primary sources of data collection:

1. **On-site intercept surveys**, conducted with a random sampling of lot users to understand carpooling motivations and travel behaviors. Surveyors interviewed users of the two lots (Wooly Mammoth and T-Rex) over three weekends (eight total days) in late January and February. In addition, surveys were collected on two Friday afternoons. A total of 461 interviews were completed, which has a % confidence interval of approximately 4.5 percentage points calculated for questions at 50% response.
2. **Online panel survey using the RRC Associates Colorado Snowsports Enthusiasts Panel.** Questions investigated the opinions and behaviors of Front Range skiers and riders as they relate to I-70 travel.

Each of these methods of data collection will be discussed in turn throughout the report.

INTERCEPT SURVEY RESULTS

The following discussion provides an overview of the Wooly Mammoth and T-Rex survey results. It addresses the following topics:

- Demographics of lot users
- Carpooling behaviors and motivations
- Trip characteristics
- Traffic information source awareness and usage
- Ski/van bus usage
- Awareness of the Passenger Safety Law

Results from the intercept research are presented in overall summary form and in many cases are also segmented by year, day of week, or respondent demographics, particularly where notable differences exist.

Demographic Profile

Overall, responses indicate that Dinosaur Lot users represent a predominantly male, young adult profile. Specifically, males (63%) significantly outnumber females (37%), which skews slightly less male than 2017, 2014, and 2012. The bulk of respondents are between the ages of 25-34 (41%), with an average age of 34.1 years. The largest share of lot users come from the Denver ZIP Codes (36%), but Jefferson (24%), Arapahoe (13%), and Adams (11%) Counties are also strongly represented. Proportions are similar to those observed in 2017, 2014, and 2012, although there was an increase in representation from Adams County (+5 ppts) and a notable decrease from Boulder county (-7 ppts from 2017 and -9 ppts from 2014).

Figure 2.
Respondent Demographics: Age and Gender

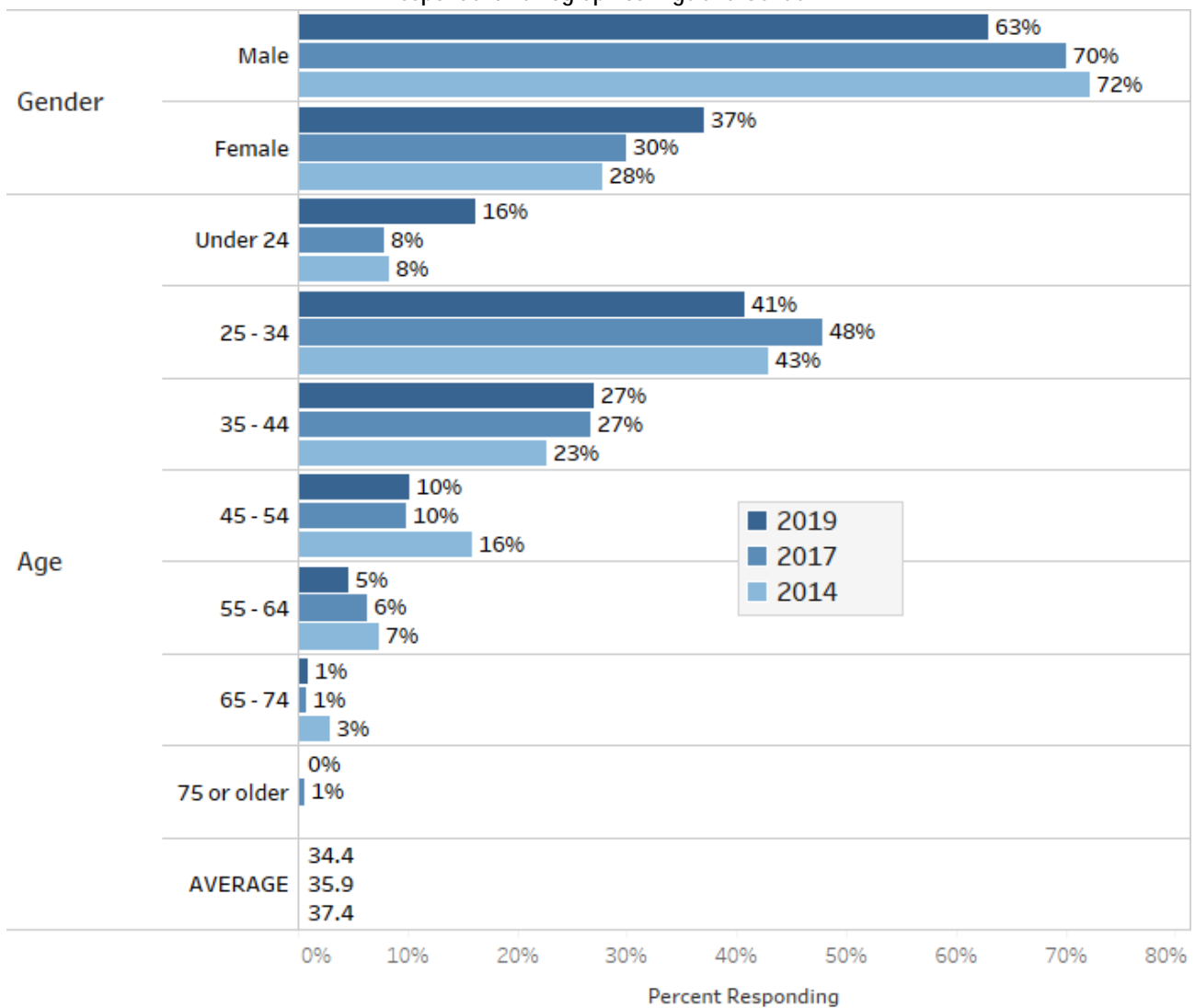
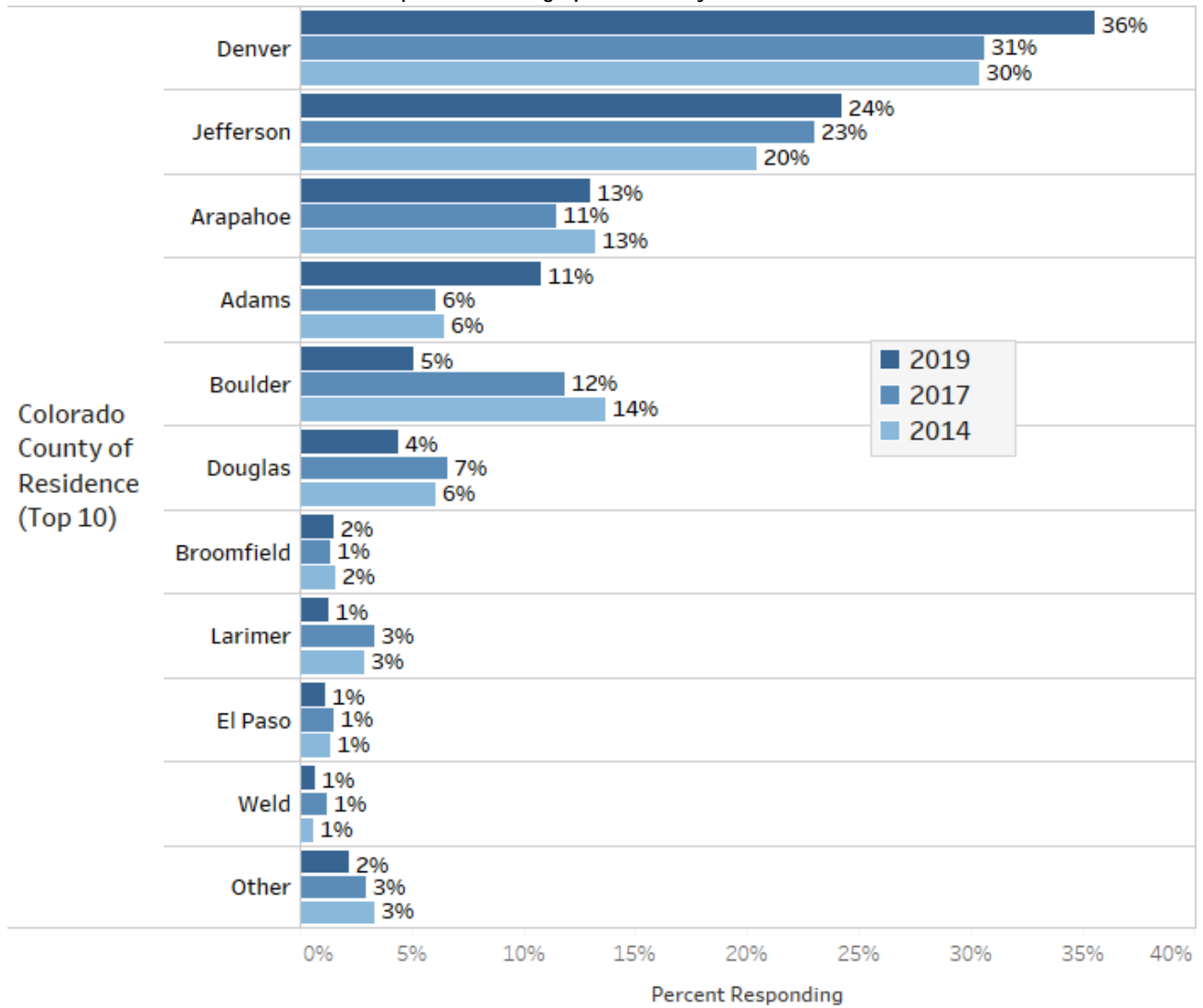


Figure 3.
Respondent Demographics: County of Residence

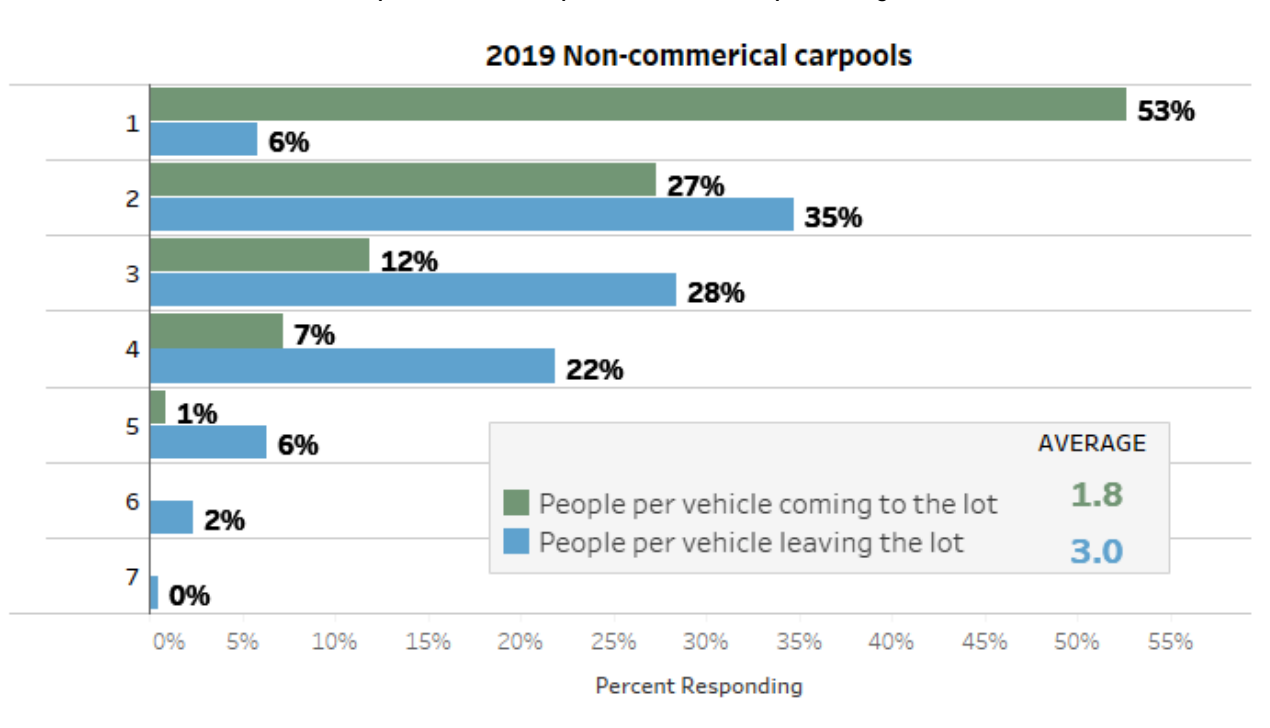


Carpooling Behaviors and Motivations

Number of people per vehicle. Results suggest that a typical winter weekend morning at the lots involves between two and three vehicles meeting, with one departing from the lots while the remaining vehicle(s) stay parked. On average, there were 1.8 persons per vehicle on trips to the lots, with more than half of respondents driving alone (53%) or with one other person (27%). In contrast, there was an average of 3.0 persons per non-commercial vehicle on trips leaving the lots, with 94% of vehicles containing two or more people.

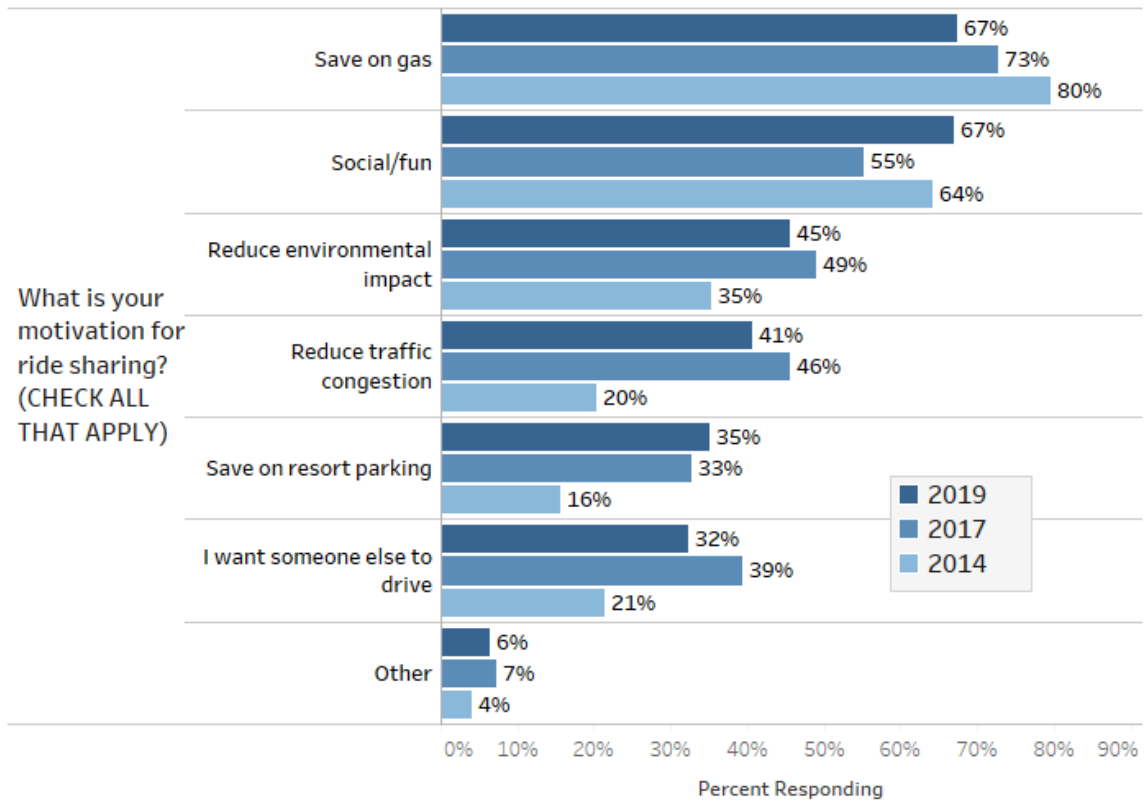
- Overall, results are similar to prior years of the survey, with averages nearly identical to those observed in 2017. The 2017 results had pointed to a smaller share of drivers arriving at the lot alone than in 2014 (56% in 2017 vs. 70% in 2014), and this trend continued with 53% reporting they were driving alone.

Figure 4.
Persons per Vehicle on Trips to the Lots vs. Trips Leaving the Lots



Motivations for carpooling. As in 2017 and 2014, the most frequently identified motivation for carpooling was to “save on gas” (67%). Social/fun (67%), reduce environmental impact (45%), and reduce traffic congestion (41%) were also of high importance. Respondents cited an average of 2.9 different motivations, highlighting that there are multiple reasons why carpooling appeals to lot users. As compared to 2017, respondents were less likely to cite a desire to save gas and more likely to carpool to carpool for social/fun reasons as well as to “save on resort parking.” The increase in responses reporting that saving on resort parking costs in recent years is notable; parking fees have clearly helped to motivate some drivers to carpool.

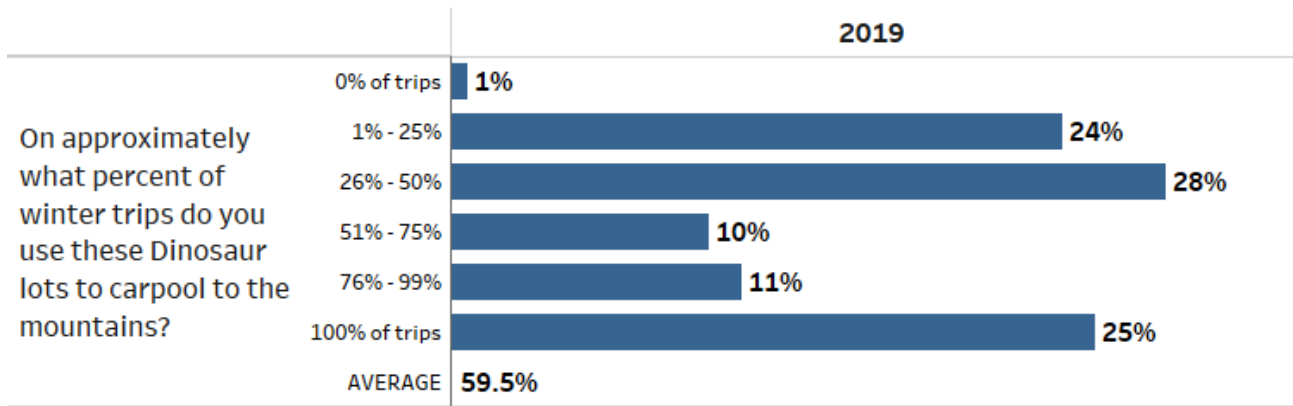
Figure 5.
Carpooling Motivations (Select All That Apply)



There were some differences in motivations for ride sharing noted when results are assessed by destination. Visitors to Breckenridge were the most likely to cite saving on resort parking as a reason for carpooling than visitors to other mountain destinations. Those traveling Copper or Vail were more likely to cite “Reduce traffic congestion” as a motivator, while those going to Winter Park were less likely to cite “Save on gas” and more likely to ride share for “Social/fun” reasons.

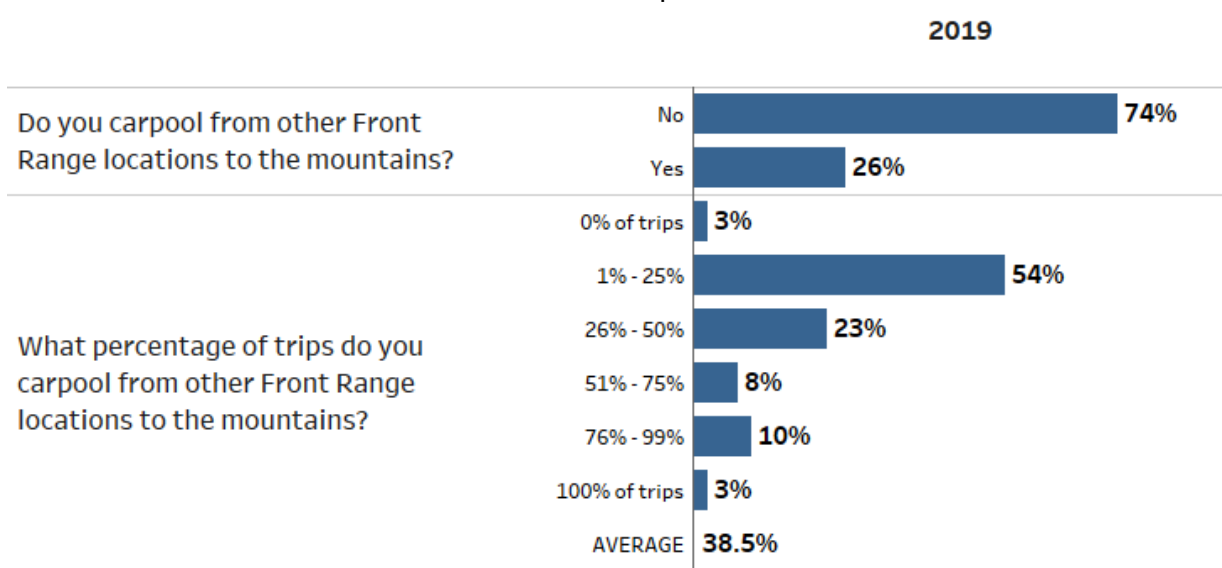
Share of trips using the Dinosaur Lots. Respondents estimated the share of winter trips on which they use the Dinosaur Lots for carpooling to the mountains. Results show that respondents use the Dinosaur Lots for over half of their trips (an average of 60%). This is similar but slightly up from 2017 and 2014 when respondents estimated that they use the Dinosaur Lots for an average of 58% and 54% of their trips respectively. Meanwhile, a notable quarter of respondents use the Dinosaur Lots for every single one of their trips to the mountains.

Figure 6.
Use of Dinosaur Lots



Use of other carpool locations. A quarter of respondents (26%) use other Front Range locations to carpool to the mountains (up from 20% in 2017). Among respondents who carpool from other locations, they use these other locations an average of 39% of the time.

Figure 7.
Use of Other Carpool Locations



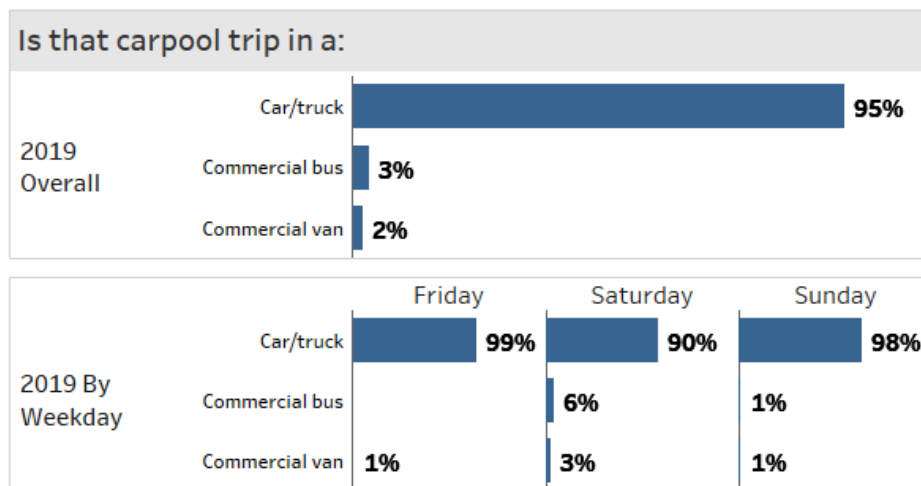
Source: RRC Associates

Trip Characteristics

The trip characteristics of lot users were probed at the Dinosaur Lots. Respondents were asked to provide a variety of information about their trip, including vehicle type, destination, and estimated return time.

Vehicle type. A majority of respondents utilized cars/trucks for their transportation from the lots (95%), up somewhat from 2017 (92%). The remaining 5% used commercial vehicles (buses or vans). Of the three days of the week in which surveying took place, Saturday is the most common day for commercial vehicle usage—particularly commercial buses.

Figure 8.
Vehicle Type Leaving from the Parking Lot Today



Trip purpose. By far, skiing/snowboarding at a resort was cited as the most common purpose for the trip (90%), similar to 2017 (89%) and 2014 (85%). While skiing/snowboarding at a resort is still the predominant use of the lots, others use the lot for other types of recreation trips (7%), shopping (2%), work/business (1%), and “other” purposes (5%).

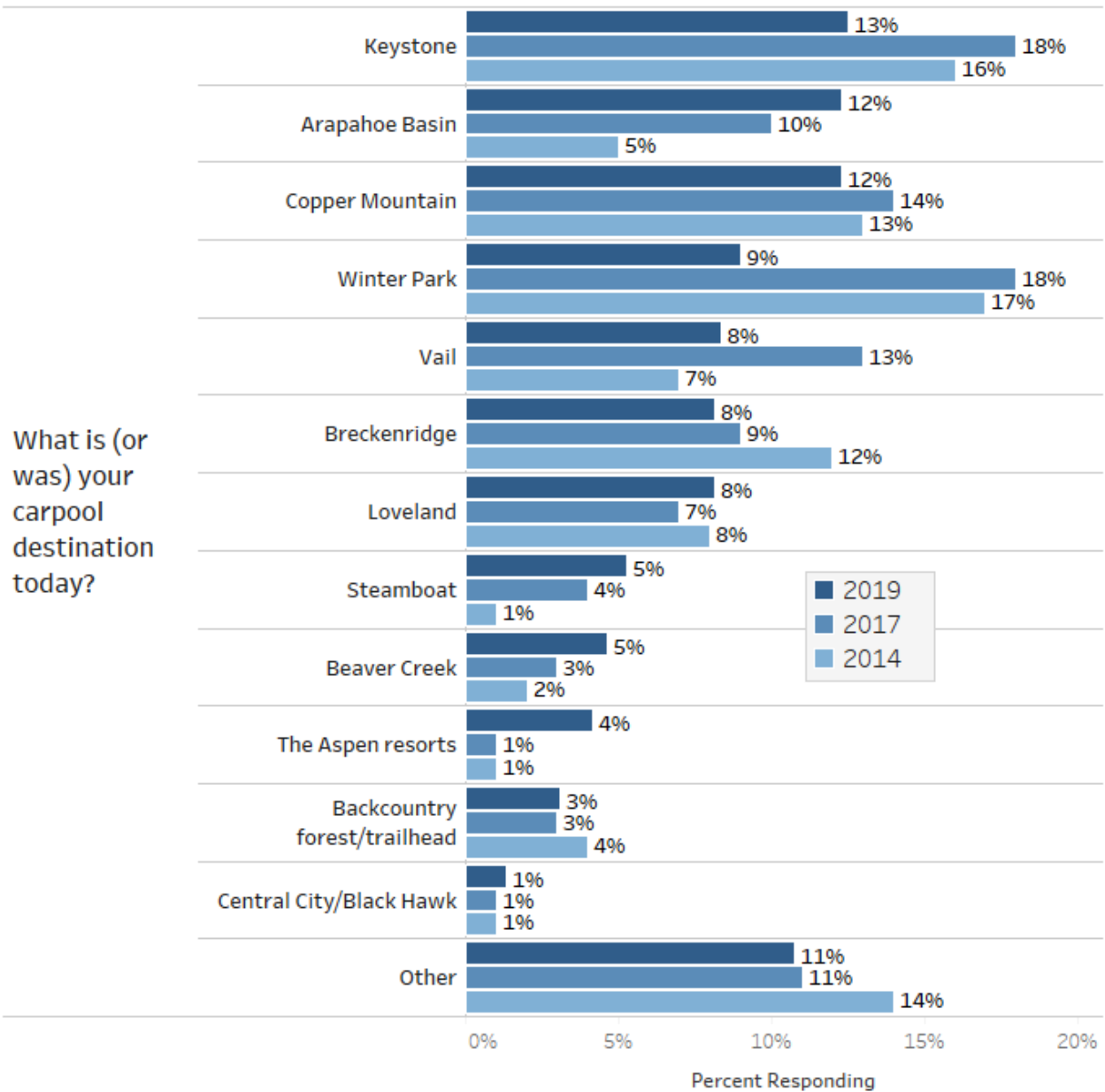
Trip purpose varies slightly by day of the week. For example, a higher share of respondents use the lots for work/business on Fridays than on Saturday or Sunday. “Other recreation” includes backcountry skiing, snowshoeing, snowmobiling, and biking, as well as other miscellaneous activities.

Figure 9.
Purpose of Trip

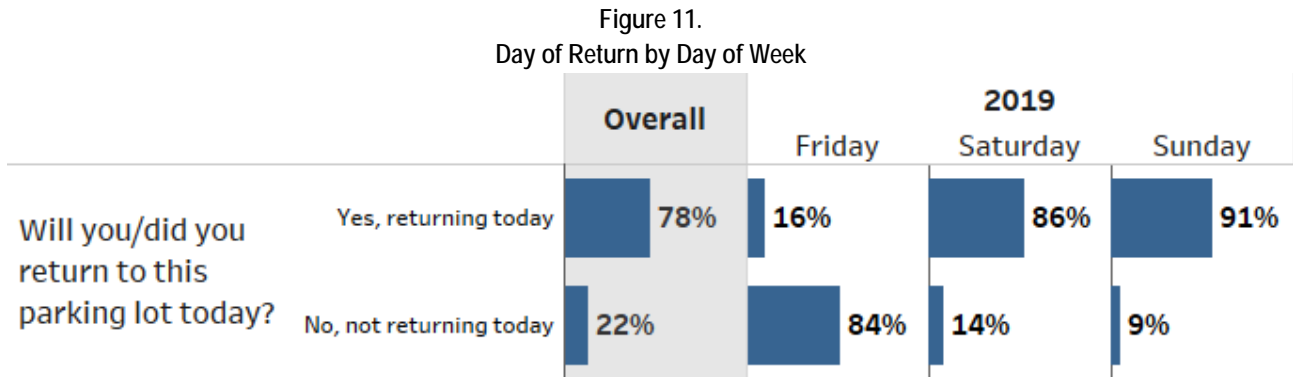
		Overall	Friday	2019 Saturday	Sunday
What will be (or was) the purpose of your carpool trip? (CHECK ALL THAT APPLY)	Skiing/snowboarding at a resort	90%	81%	91%	93%
	Other recreation	7%	14%	7%	5%
	Shopping	2%	3%	1%	3%
	Work/business	1%	7%	0%	
	Other	5%	4%	7%	4%

Trip destinations. As observed in past years, trip destinations remain relatively spread out, with no single location attracting a majority of respondents. Keystone, Arapahoe Basin and Copper Mountain were most cited (13%, 12%, and 12% respectively) but there were relative shifts in share. Keystone was down and Arapahoe Basin was up. Winter Park, the largest reported destination, was down notably in 2019. Results invite some further probing with resort operators; are some resorts encouraging carpooling from new sites or conducting other types of communications that may have shifted behavior?

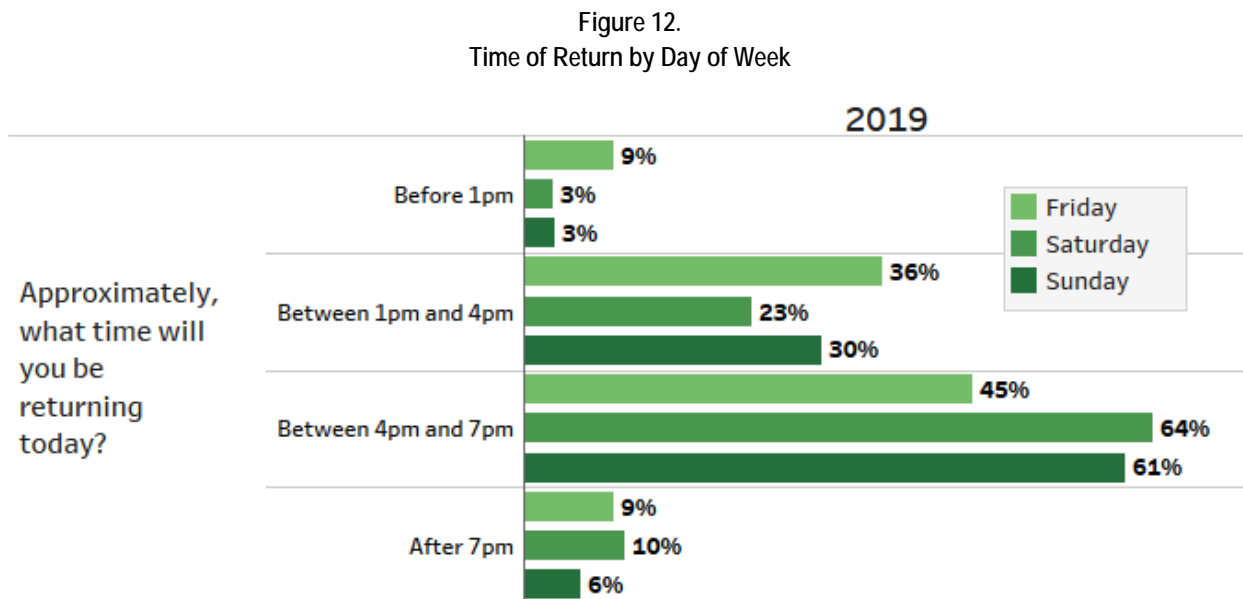
Figure 10.
Trip Destination



Will you return to the parking lot today? Overall, more than three quarters of respondents (78%) planned to return to the parking lot on the day they were surveyed. Results varied significantly by day of week. The majority of people interviewed on Friday were taking overnight trips (84%), while respondents on Saturday and Sunday were predominately taking day trips (86% and 91% respectively).

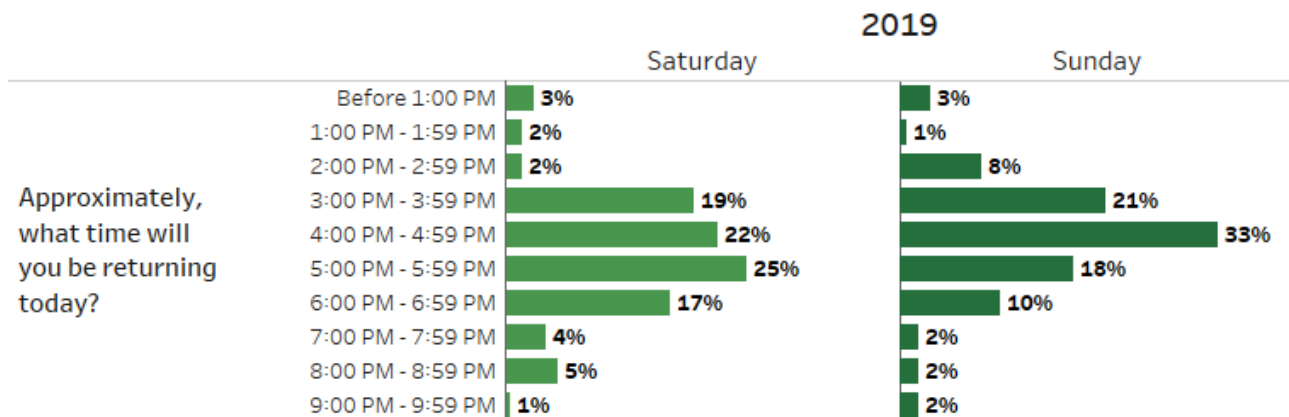


(If returning today) return time: The majority of day visitors planned to return between 4:00 PM and 7:00 (between 54% and 74%, depending on day of week). Lot users on Saturdays were slightly more likely to return later than Sunday lot users. While planned time of return is similar to 2017, lot users were less likely to return later in the evening in 2019. A notably reduced share of respondents planned to return after 7:00 PM, which represents a shift back to levels observed in 2014 (8% in 2019 vs. 21% in 2017 vs. 11% in 2014).



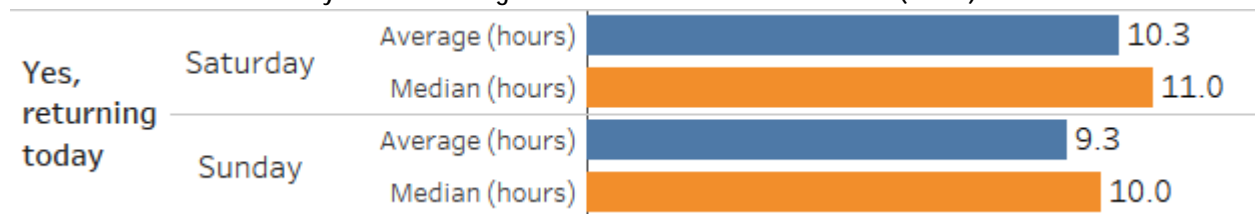
Viewed in hourly increments, Saturday return times among day trip respondents peak between 5 and 6 PM. Sunday has an earlier and more pronounced peak between 4 and 5 PM.

Figure 13.
Detailed Time of Return by Day of Week



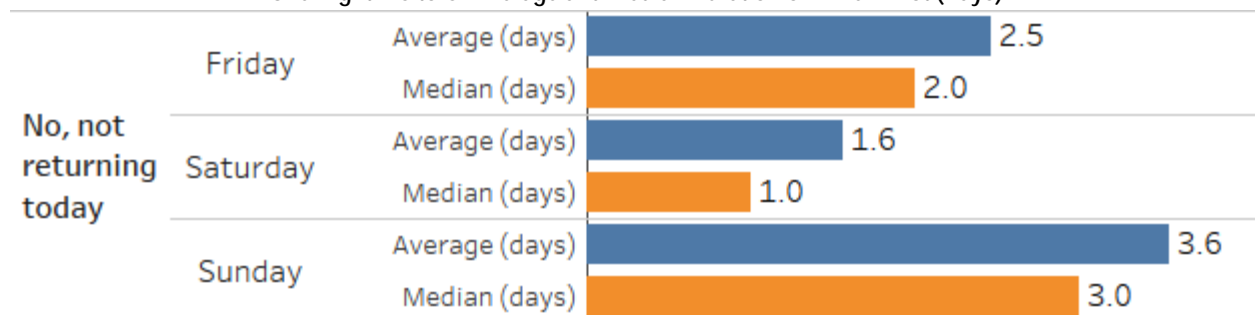
Day visitors anticipated spending an average of 10.3 hours in the lot on Saturdays, and 9.3 hours in the lot on Sundays, which is consistent with the earlier return times observed on Sundays.

Figure 14.
Day Visitors: Average and Median Duration of Time in Lot (Hours)



(If not returning today) date returning to lot. Overnight visitors planned to return anywhere from the next day to a week later. As in 2017, overnight visitors planned to stay a median of two nights in the mountains. As might be expected, lot users arriving Friday stay in the mountains longer on average than those who arrive on Saturdays, though not as long as overnight visitors arriving on Sundays.

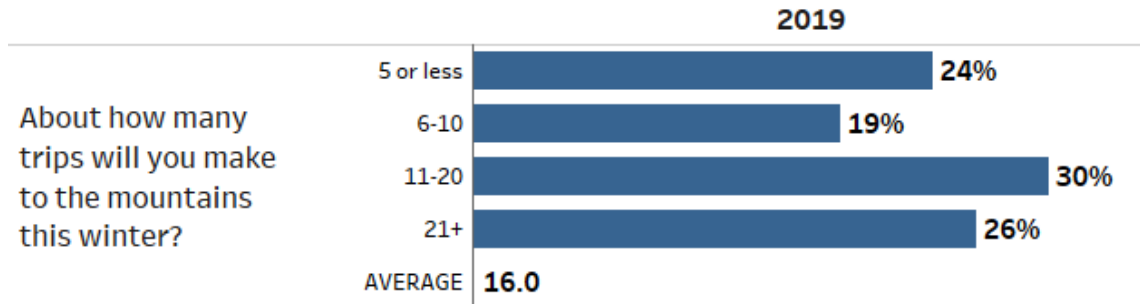
Figure 15.
Overnight Visitors: Average and Median Duration of Time in Lot (Days)



Estimated number of trips to the mountain this season. Overall, results show that Dinosaur Lot users are frequent mountain travelers. Respondents estimated taking an average of 16.0 trips to the mountains this winter. This is down slightly from 17.8 in 2017 and up from 15.7 in 2014, but

there is overall consistency over the past five years. Results show that 19% of respondents reported 6-10 trips, 30% said 11-20 trips, and 26% said 21+ trips.

Figure 16.
Number of Trips this Winter

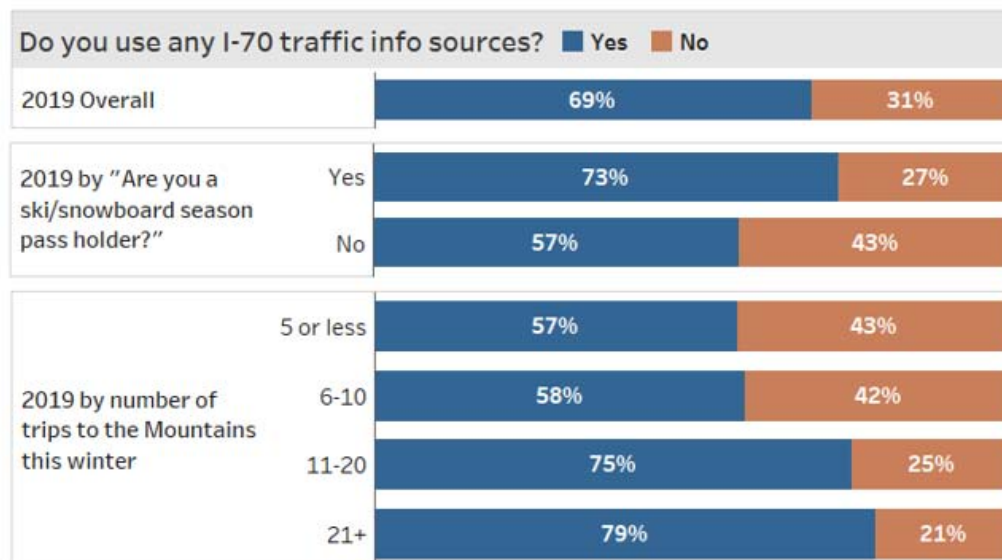


Traffic Information Source Awareness and Usage

Use of traffic information sources. Overall, 69% of respondents indicated that they use I-70 traffic information sources, which is up slightly from the 64% and 67% that reported using I-70 traffic information sources in 2017 and 2014 respectively.

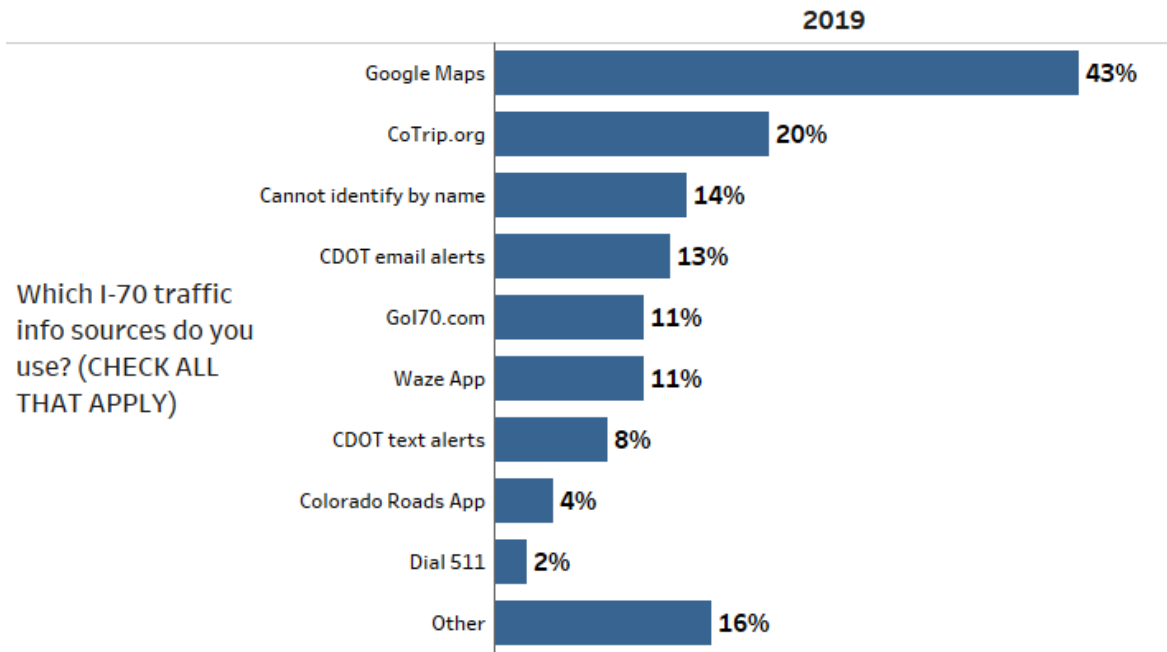
Respondents who have made more winter trips to the mountains, along with passholders, are more likely to use traffic information sources. Given that this is a more active group of skiers/riders, it would make sense they are more engaged in the available sources of information for traveling the I-70 corridor. The data suggest that communicating transportation information directly to passholders is a viable and proven strategy for increasing awareness. Clearly, the resort operators should be encouraged to assist in such efforts.

Figure 17.
Use of I-70 Traffic Information Sources



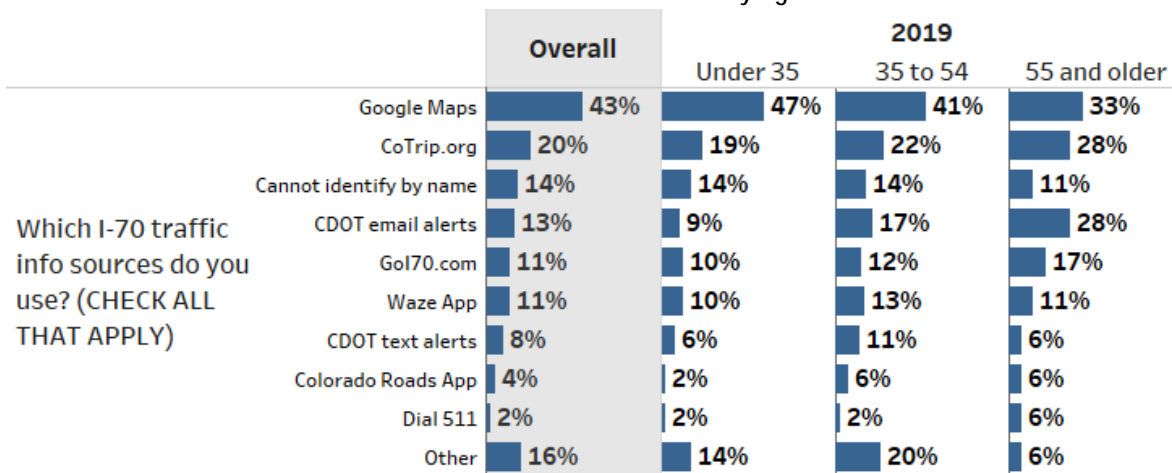
Sources used. Among users of I-70 information sources, 43% indicated they use Google Maps, which was by far the most cited option. 20% use CoTrip.org, 13% use CDOT email alerts, and 11% use GoI70.com and Waze, with progressively smaller shares of respondents using other sources.

Figure 18.
I-70 Traffic Information Sources



While Google maps was the favored traffic information sources by respondents of all ages, those under 35 more likely to use it relative to older respondents. Young respondents were also less likely to use the majority of other sources. Older respondents, those over 55, were more likely to use CoTrip.org, CDOT email alerts, and GoI70.com relative to younger age groups.

Figure 19.
I-70 Traffic Information Sources by Age

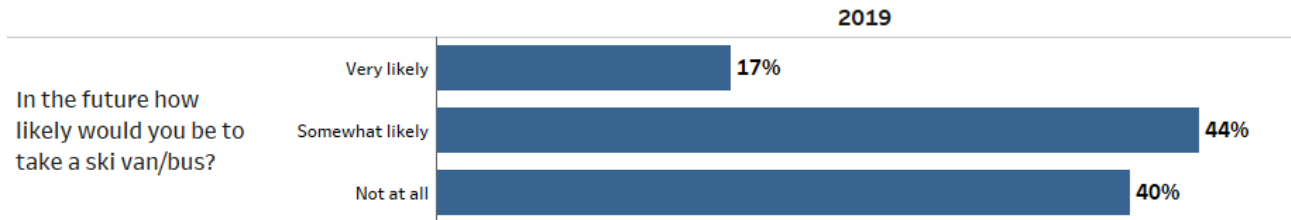


Source: RRC Associates

Ski Van/Bus Usage

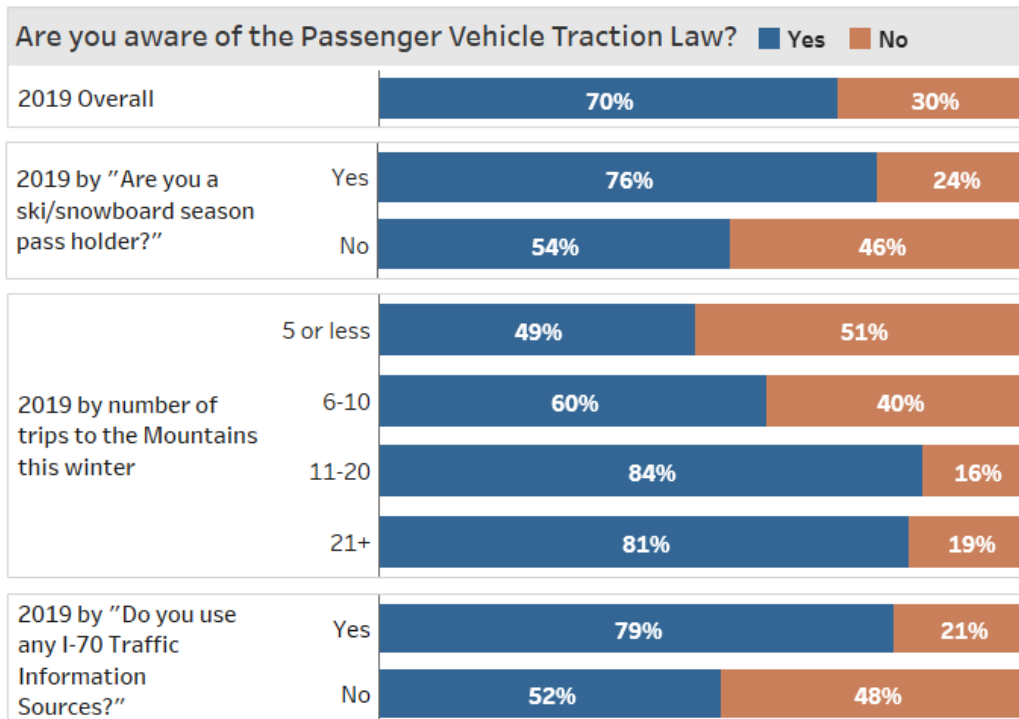
Likelihood of taking a ski van/bus in the future. Respondents were asked to indicate their likelihood of taking a ski van/bus in the future. Interest was moderate, with 17% “very likely” to take a ski van/bus, 44% “somewhat likely,” and 40% “not at all likely.” Levels of interest this year were consistent with levels of interest in 2017 (19% “Very likely”), and up from the 13% observed in 2014.

Figure 20.
Likelihood to Take a Ski Van/Bus



Passenger Vehicle Traction Law. A new question was asked in 2019 to better understand awareness of the new passenger vehicle law. The majority of respondents, 70%, indicated that they are aware. Awareness was higher among passholders, those taking 11 or more trips to the mountains this winter, and users of I-70 traffic information sources. Seventy-nine percent of people that use traffic information sources are aware of the law compared to 52% that are not aware of the law.

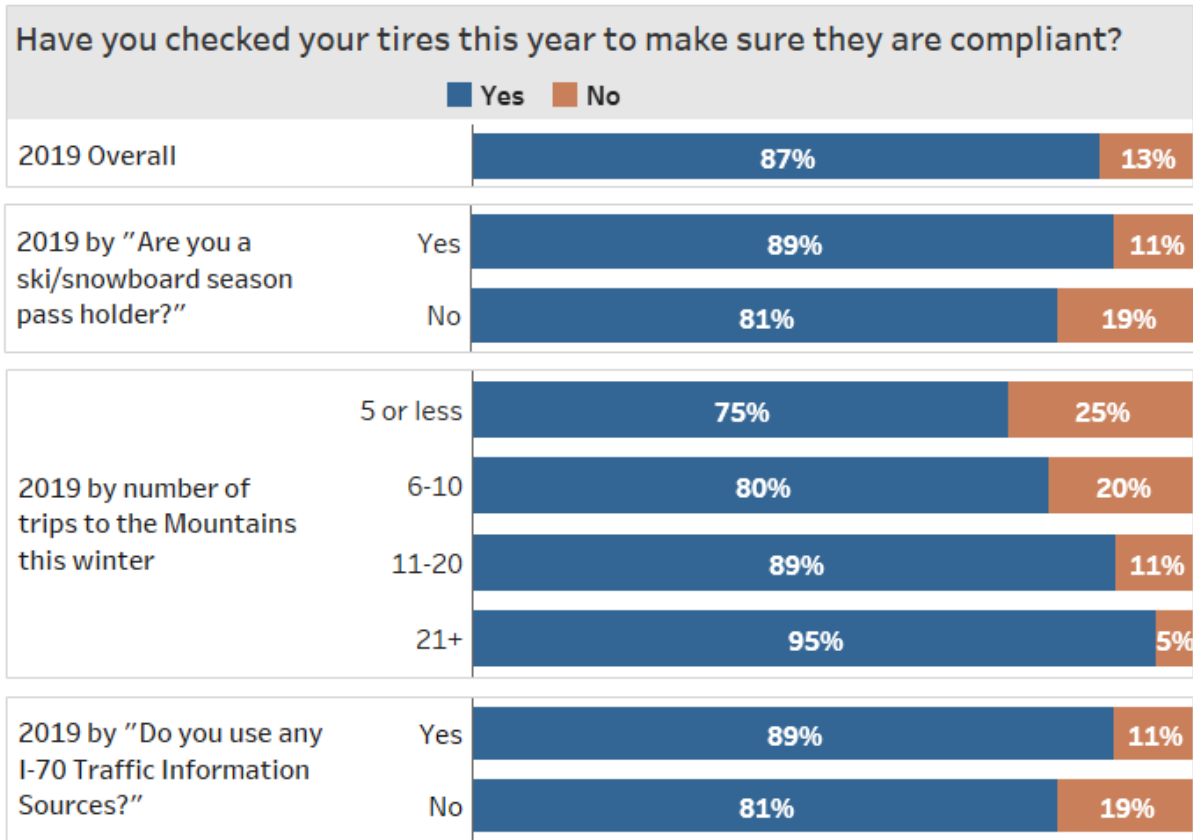
Figure 21.
Awareness of the Passenger Vehicle Traction Law



Among those that were aware of the law, 87% indicated that they had checked their tires this year

for compliance. This represents about 61% if all survey respondents that say they have checked their tire to ensure they are compliant. Passholders were more likely to have checked their tires, as were frequent mountain travelers and users of I-70 traffic information sources.

Figure 22.
Tire Compliance



VEHICLE COUNTS

Counts of parked vehicles on selected winter dates. In 2019, as in 2017 and 2014, interviewers conducted periodic counts of the T-Rex and Woolly Mammoth lots. The T-Rex lot was almost always near or above its reported capacity of 156 spaces, with a few exceptions occurring on one Friday afternoon and Sunday afternoons. At its observed peak at 8:30 AM on Saturday, January 26th at 8:30 AM, T-Rex had 214 vehicles, 137% of its reported capacity. Clearly, demand exceeds capacity and is resulting in cars parking in tight and marginal locations, especially at T-Rex.

Table 6.
Counts of Parked Vehicles in the T-Rex Lot

Date	Weekday	Time of Count	T-Rex
1/26/2019	Saturday	5:30 AM	100%
		5:45 AM	104%
		8:00 AM	121%
		8:30 AM	137%
1/27/2019	Sunday	6:35 AM	115%
		8:30 AM	120%
2/8/2019	Friday	2:45 PM	90%
		5:00 PM	103%
2/9/2019	Saturday	5:10 AM	116%
		8:37 AM	112%
		3:15 PM	102%
		5:15 PM	105%
2/10/2019	Sunday	5:20 AM	99%
		8:40 AM	107%
		3:15 PM	84%
		5:02 PM	60%
2/22/2019	Friday	5:52 PM	103%
		3:05 PM	105%
2/23/2019	Saturday	5:00 PM	103%
		9:00 AM	92%
		3:00 PM	106%
2/24/2019	Sunday	7:00 PM	113%
		3:00 PM	72%
		7:00 PM	50%

Though not full as often as T-Rex, Woolly Mammoth was often near its maximum capacity, especially on Saturday mornings, including February 9th at 5:10 AM when it was already at 94% of capacity. At 8:30 AM the previous Saturday, January 26th, Woolly Mammoth was completely full at 110% of its reported capacity.

Table 6.
Counts of Parked Vehicles in the Woolly Mammoth Lot

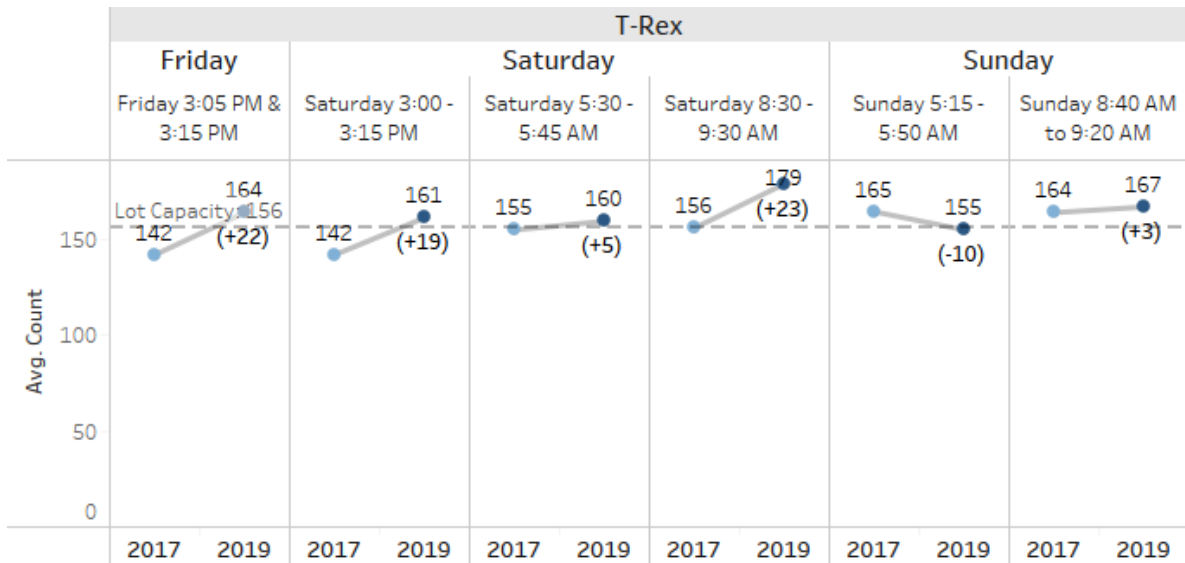
Date	Weekday	Time of Count	Woolly Mammoth Lot
1/26/2019	Saturday	5:30 AM	75%
		8:30 AM	110%
1/27/2019	Sunday	8:30 AM	97%
		8:45 AM	97%
2/8/2019	Friday	5:15 PM	55%
2/9/2019	Saturday	5:10 AM	94%
		8:10 AM	99%
		3:15 PM	82%
		7:00 PM	79%
2/10/2019	Sunday	5:20 AM	51%
		8:15 AM	85%
		3:15 PM	68%
		5:12 PM	44%
2/22/2019	Friday	5:00 PM	71%
2/23/2019	Saturday	5:00 AM	56%
		3:00 PM	94%
		7:00 PM	96%
2/24/2019	Sunday	5:00 AM	51%
		9:00 AM	59%
		3:00 PM	84%
		7:00 PM	69%

Interestingly, traffic congestion on the weekend of Jan. 26/27 in 2019 was reported to be some of the worst ever experienced by Summit County communities. Despite the heavy use of carpooling, a variety of problems, including sheer volume of travelers, combined to create difficulties.

See this Summit Daily article for more information: <https://www.summitdaily.com/news/what-ruined-sundays-commute-in-summit-county-events-snowfall-and-google-maps-to-blame/>

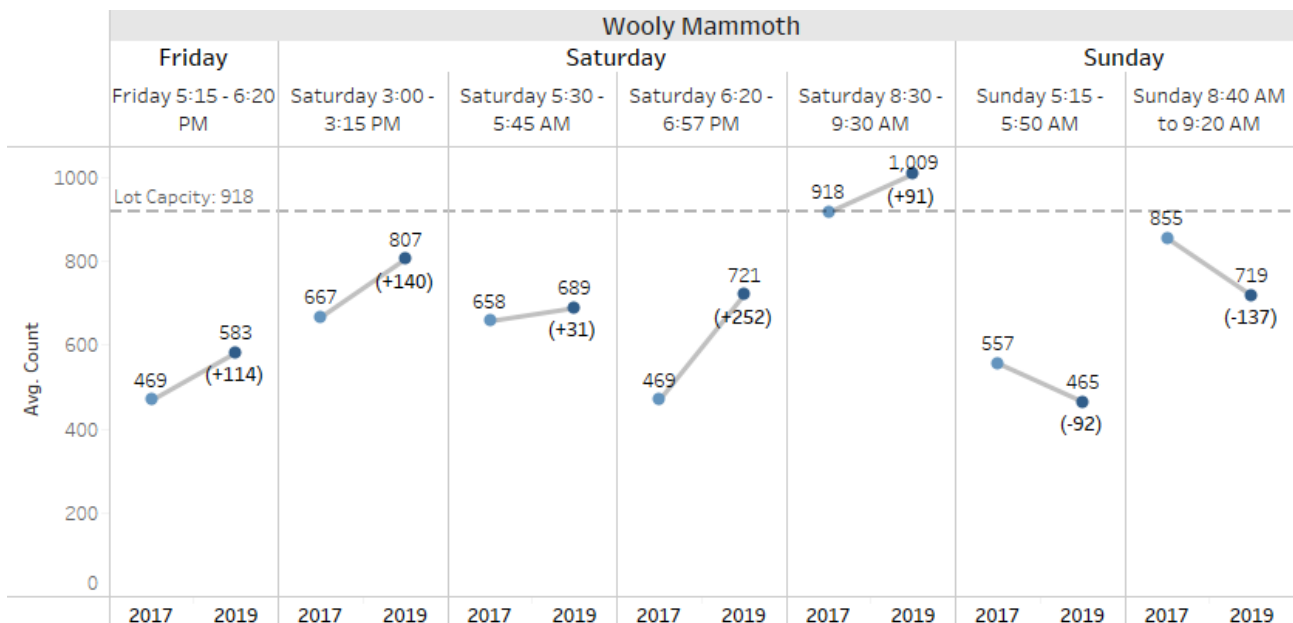
Counts of parked vehicles: 2019 vs. 2017. In order to compare 2019 lot counts to those from 2017, a handful of the most comparable times and days of week were selected by lot. Nearly all comparable counts of the T-Rex lot indicate a consistent overall increase in the number of parked vehicles, with one exception very early on a Sunday morning.

Figure 23.
T-Rex Lot Counts: 2019 vs. 2017



Of comparable counts done at Woolly Mammoth, 2019 saw increases in the number of vehicles on Fridays and Saturdays. Sunday counts were down from 2017.

Figure 24.
Woolly Mammoth Lot Counts: 2019 vs. 2017



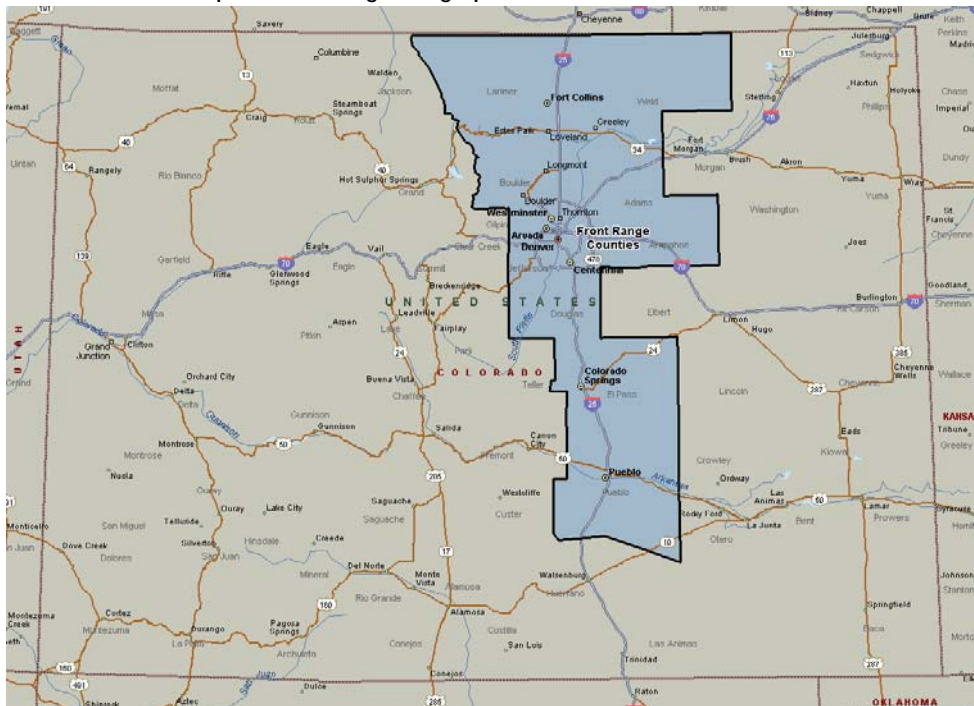
THE FRONT RANGE SNOWSPORTS ENTHUSIASTS PANEL

Study Background

As a part of the 2019 I-70 User Study, a series of customized questions was posed to a random sampling of Front Range skiers/riders via a Front Range Panel. RRC Associates has tracked behavior and opinions of Front Range for over 17 years. The Front Range is defined for survey purposes as individuals residing in one of the counties listed in the Figure below. The panel is made up of individuals who have opted to participate in ongoing snowsports-related research projects during the 2018/19 season. As a part of the 2018/19 season panel survey effort, Front Range skiers and snowboarders were asked a series of questions about traffic-related topics on I-70. This survey was fielded during late February 2019. Results, which are based on 544 completed surveys, were analyzed by age, income, household composition, area of residence within the Front Range, pass or pack ownership, and year (where available). Segmented results are shared throughout this section of the report in cases where they had a bearing on response patterns. It should be noted that while Front Range Panel respondent demographics resemble those observed in the Morrison lots in some ways (such as a similar male to female ratio and similar levels of pass-ownership), there are important differences. Panel Respondents tend to be older (average age 49 vs. 34 in the lots); in general, respondents interviewed at the Dinosaur lots skew younger and represent a subset of the broader population of Front Range skiers.

Figure 25.

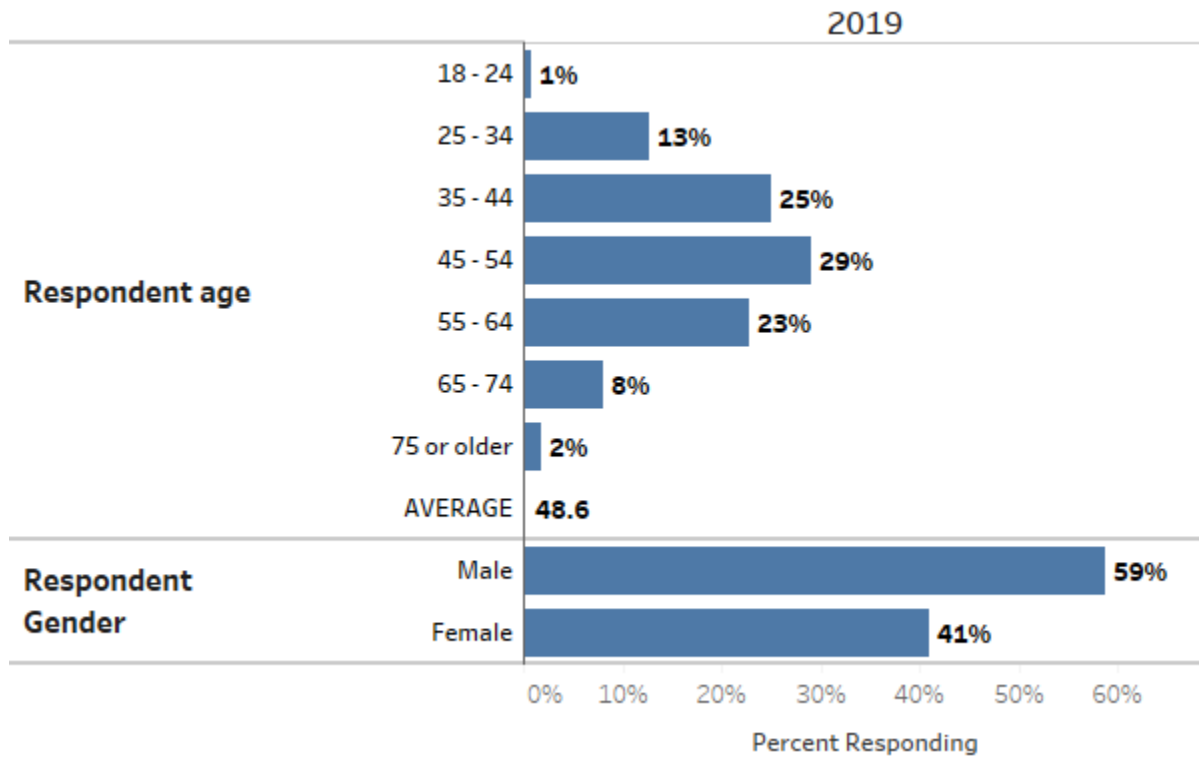
Map of Front Range Geographic Area Included in the Panel



Demographic Profile

Members of the Front Range Snowsports Enthusiasts Panel are generally representative of skiers and snowboarders in the Front Range as a whole. Fifty-nine percent of panel survey respondents are male, which resembles the typical 60:40 male to female ratio observed across snowsports. The demographics of the 2019 panel are very similar to the profile of the 2017 and 2014 panels.

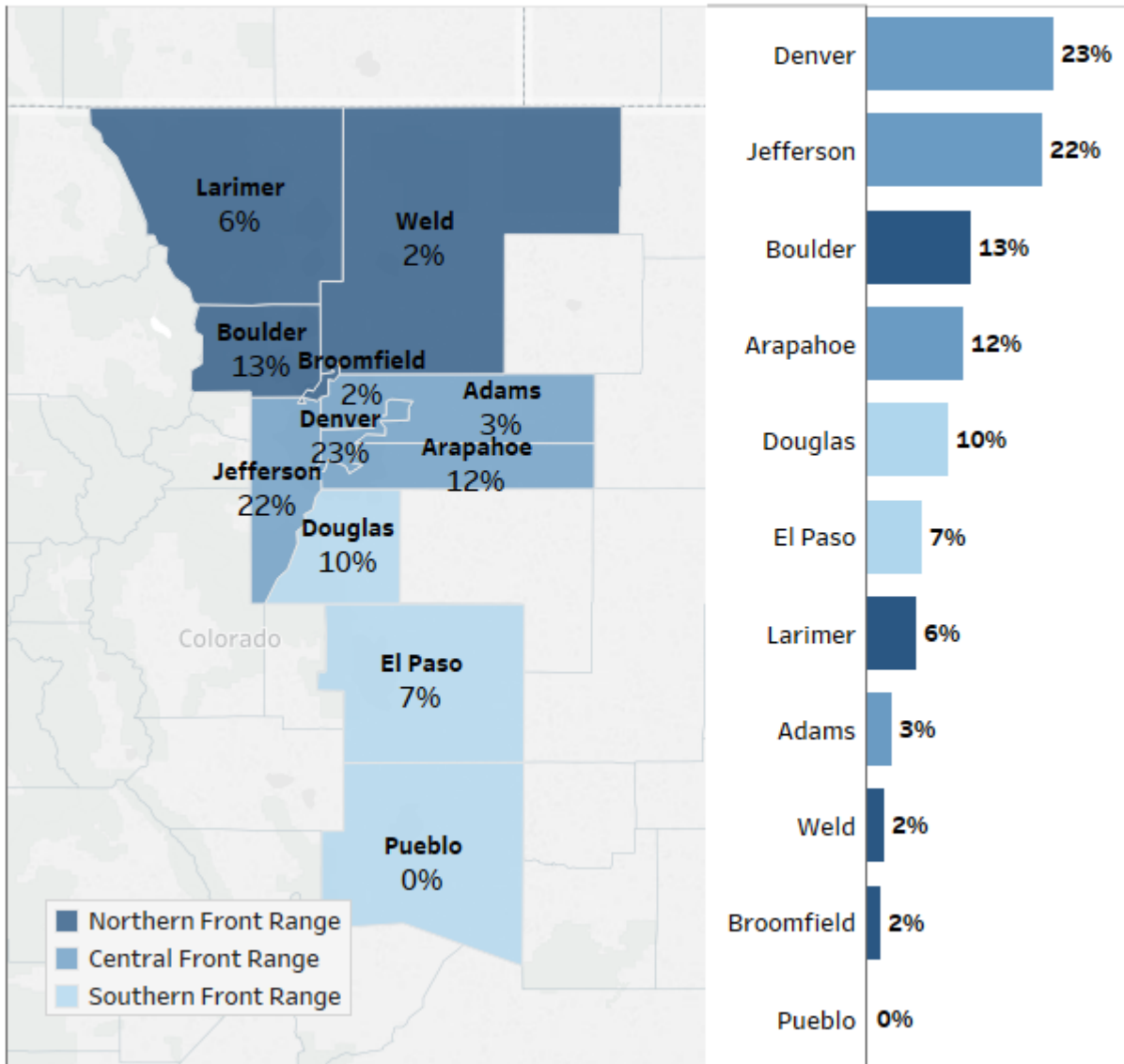
Figure 26.
Respondent Demographic Profile



Panel member respondents are broadly distributed across the Front Range, however, Denver Metro Counties (Denver, Jefferson, Arapahoe and Douglas) collectively account for two-thirds of panel membership (67%). Boulder County accounts for 13% of responses and El Paso County (the Colorado Springs area) accounts for 7%. Throughout this section of the report, results are often segmented by Northern (23%), Central (60%), or Southern (17%) Front Range residence.

Figure 27.
County of Residence

2019

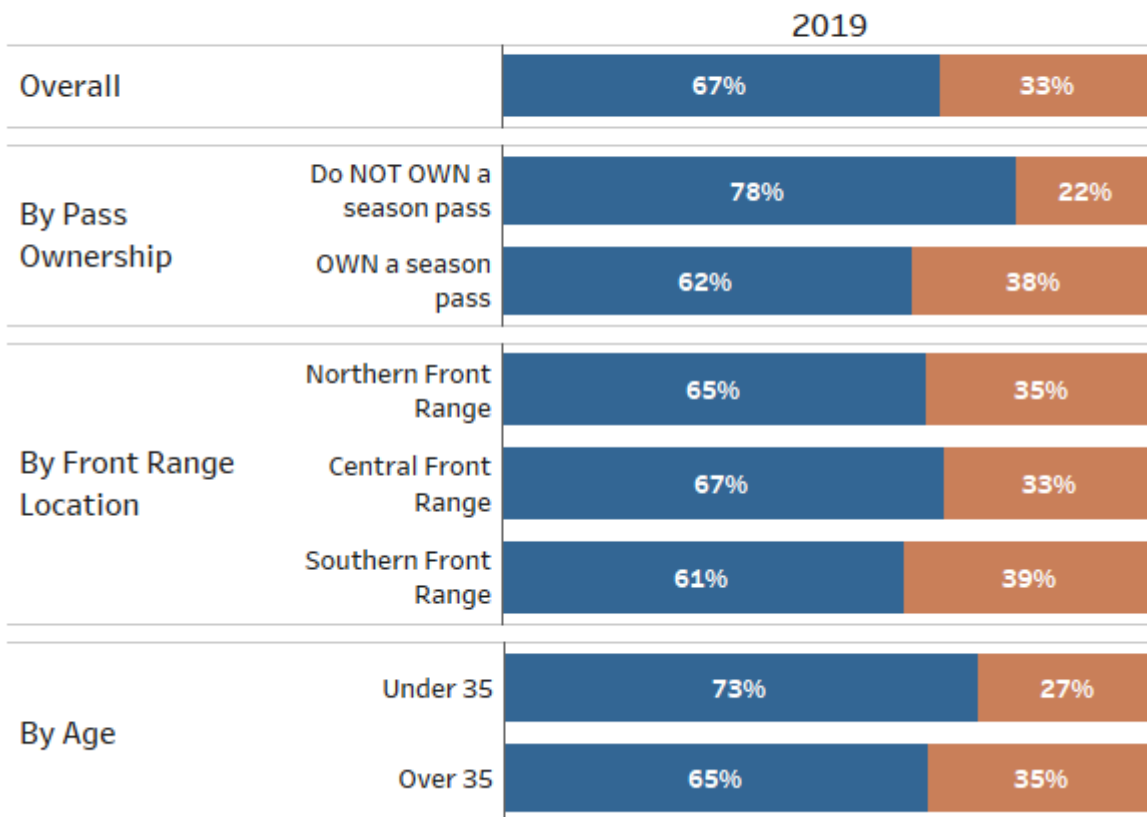


Impact of Congestion on Skiing/Snowboarding

As in 2017, respondents were asked if the frequency of their skiing/snowboarding has been reduced because of I-70 congestion. A notable 67% of all respondents reported “yes,” it had, very similar to results in 2017 (69% said “yes”). Respondents who do not own a season pass were more likely to be deterred from skiing/snowboarding (78%) than their pass-holding counterparts (62%). Furthermore, respondents who live in the Central Front Range were slightly more likely to reduce the frequency of their snowsports activity (67%) than those in the Northern (65%) or Southern Front Range (61%), presumably because of access to ski areas not located along the I-70 corridor. Younger respondents, those under 35, were also more likely to report decreased snowsports activity relative to those over 35.

Figure 28.
Reduced Skiing due to I-70 Congestion:
Overall and by Pass Ownership and Front Range Location

Has the frequency of your skiing/snowboarding been reduced as a function of I-70 congestion this season? ■ Yes ■ No



QUALITATIVE INSIGHTS

All comments are provided under separate cover and should be evaluated for the breadth and depth of respondent opinions. However, some key insights garnered from the robust set of open-ended comments will be presented throughout this section of the report.

Respondents were asked, “Do you have any comments on the I-70 traffic avoidance efforts you have been using in the recent past, if any?”

Several themes emerged from the comments, including:

- Avoid skiing/riding altogether
 - *“Best method is to not go skiing.”*
 - *“I don't know what to say except myself and my family have basically giving up on snow sports because of travel on i-70. I haven't been in years and used to snowboard 50 times a year. It's pathetic.”*
 - *“I largely avoid I-70 all together. It is a mess and dramatically reduces my interest in skiing in Colorado.”*
 - *“I-70 is SO TERRIBLE that as a lifelong skier and Colorado Native, I'm giving up my pass in 2019-2020 and taking up alternate winter sports that don't involve I-70.”*
- Skiing/riding at locations other than those along the I-70 corridor
 - *“All these efforts to avoid traffic are very time consuming. I have been shying away from skiing I70 resorts and going to Monarch, Wolf Creek, Crested Butte and out of state resorts.”*
 - *“Backcountry skiing in the front range to avoid I-70*
 - *“I avoid I-70 completely and ski other places because traffic sucks so bad. As a life long CO resident and skier I have given up on I-70.”*
- Skiing/riding during the week instead of on the weekends
 - *“Avoiding weekends to ski seems to be keeping me sane.”*
 - *“Don't ever ski on weekends or holidays due to traffic.”*
 - *“I find myself in the last few years taking more week days off to go up to ski to avoid the weekend traffic. I used to be primarily a weekend warrior. To make matters worse, I don't ski near as much as I used to or would like to because of the weekend traffic.”*

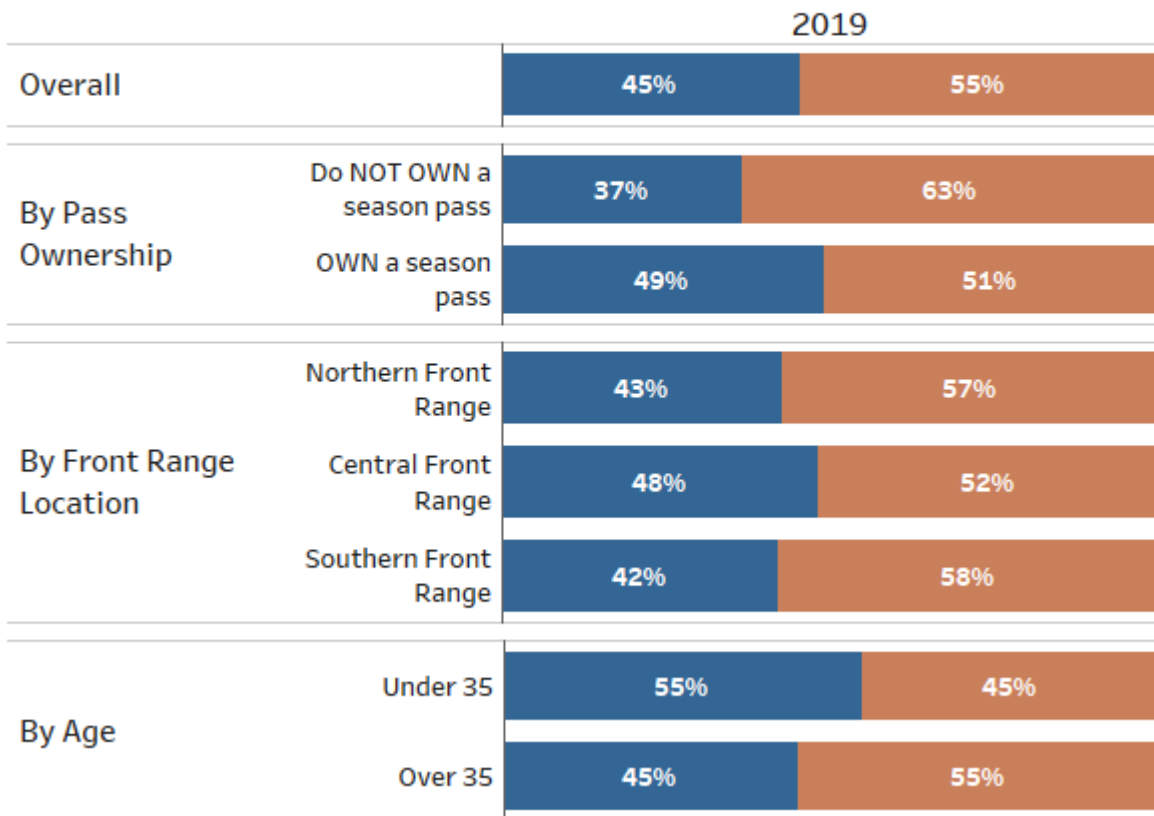
Skiing/riding fewer days

- *“I used to snowboard about 20 days a year. Now I'm down to 1-2 days a year. This change is largely because I don't want to mess w/ the traffic and hassle of getting to the resorts.”*
- *“It seems there are no times left when traffic isn't horrendous. It's very discouraging. I have significantly reduced my days playing in the hills simply because my tolerance is divebombing for this waste of time. That kills me because I love playing as much as possible.”*

Respondents were asked to indicate if they are taking more overnight skiing/snowboarding trips because of the I-70 congestion. Overall, nearly half (45%) reported that they were taking more overnight trips, up from 37% in 2017. In particular, season pass holders (49%) and those under 35 (55%) were more likely to increase the number of their overnight trips.

Figure 29.
 Are you taking more overnight skiing/snowboarding trips as a function of I-70 congestion?
 Overall and by Pass Ownership, Front Range Location, and Household Composition

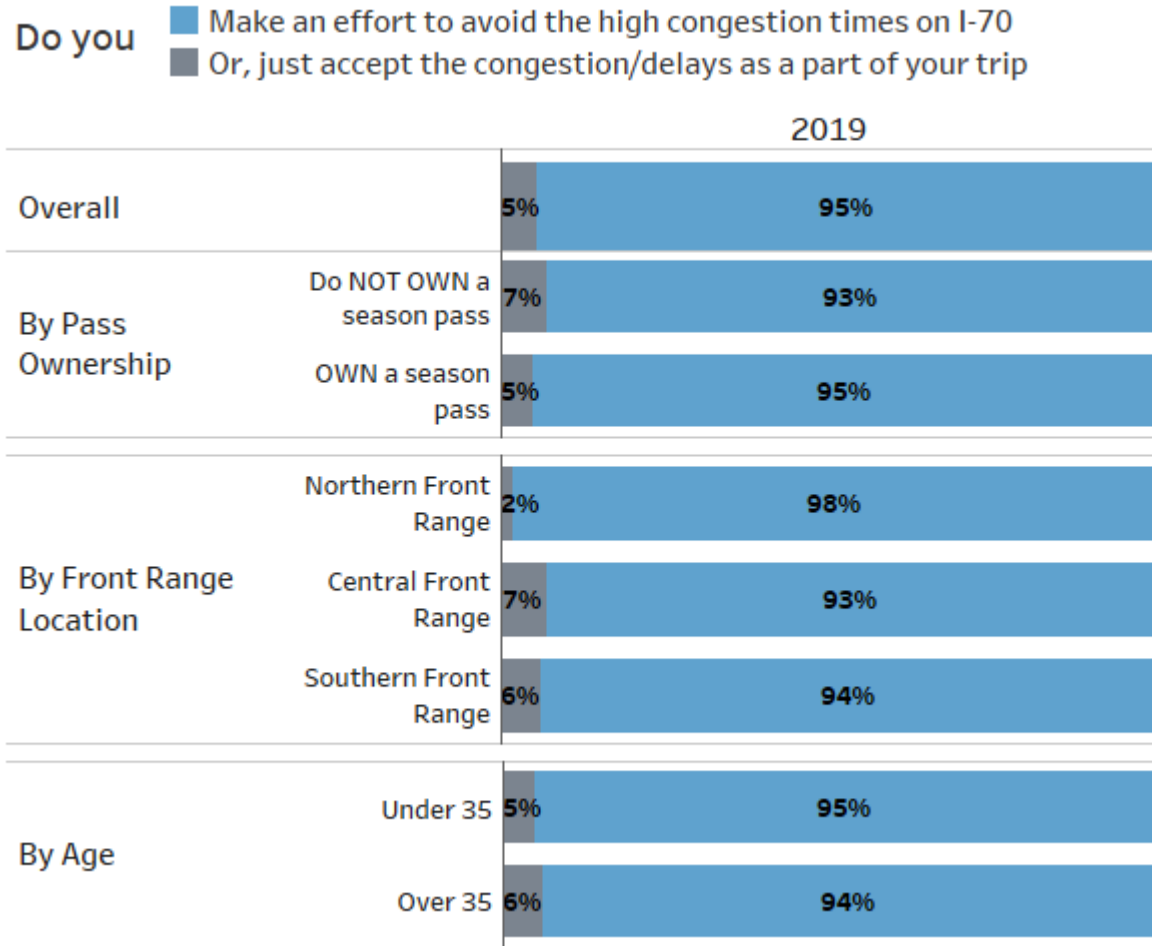
Are you taking more overnight skiing/snowboarding trips as a function of I-70 congestion? ■ Yes ■ No



A vast majority of respondents try to avoid the high congestion times on I-70 (95%), up from 94% in 2017, 90% in 2014, and 94% in 2012. While the majority of all respondents make an effort to avoid periods of congestion, there was only slight variation noted among groups of respondents as illustrated below.

Figure 30.

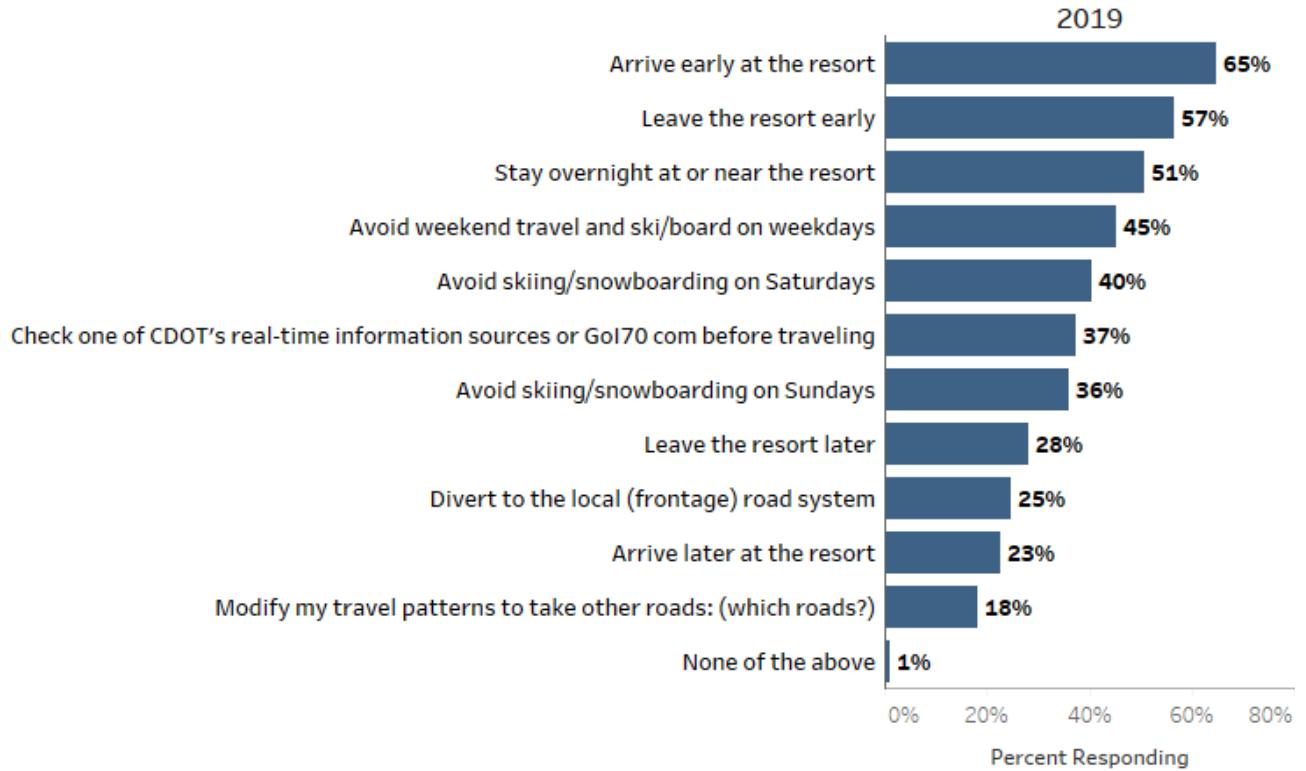
Approach to Congestion Avoidance: Overall and by Front Range Location and Household Composition



Strategies for Congestion Avoidance

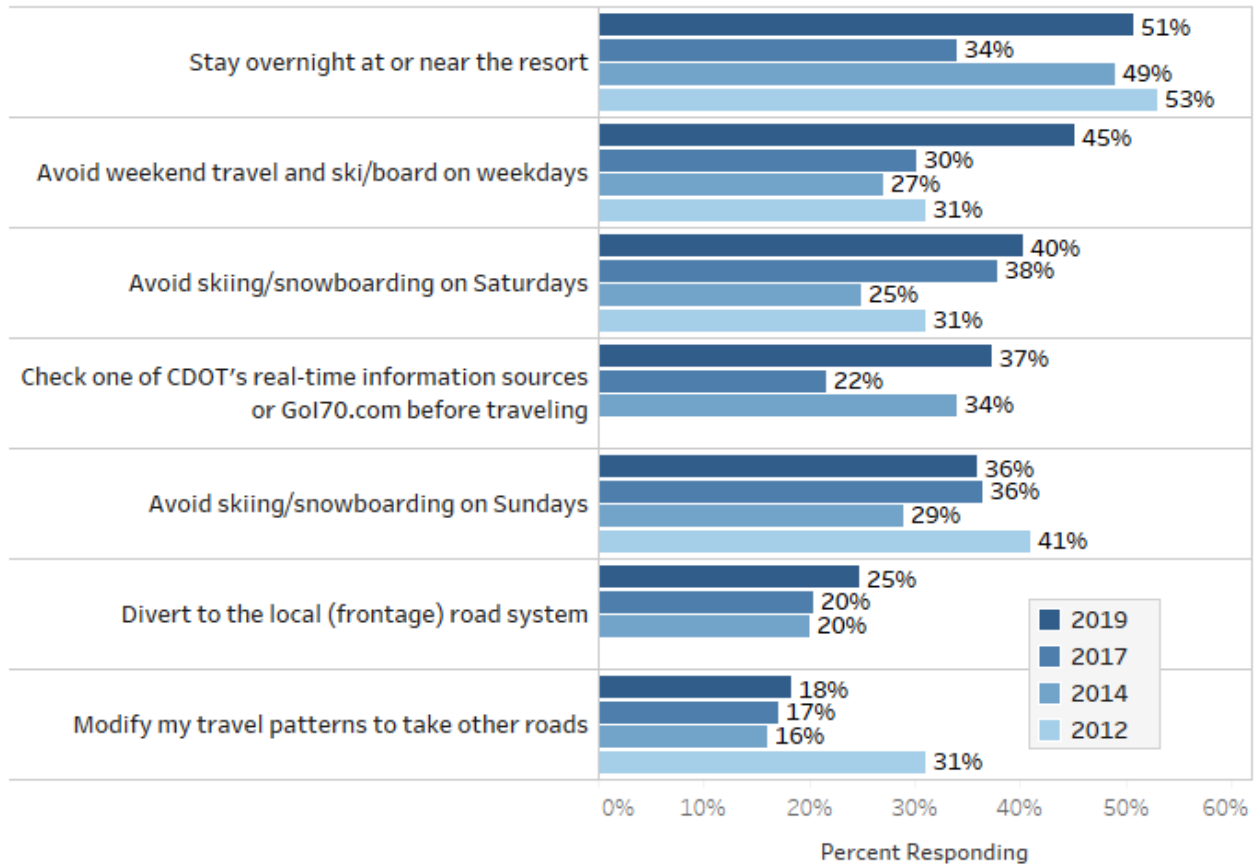
Most respondents indicate that they use some mix of strategies in order to avoid congestion on I-70. On average, respondents use a combination of four different approaches, up from 3 on average observed in 2017. In 2019, the most common strategies include arriving early at the resort (65%), leaving the resort early (57%), staying overnight at or near the resort (51%), and avoiding weekend travel and skiing/snowboarding on weekdays (45%).

Figure 31.
2019 Strategies for Congestion Avoidance



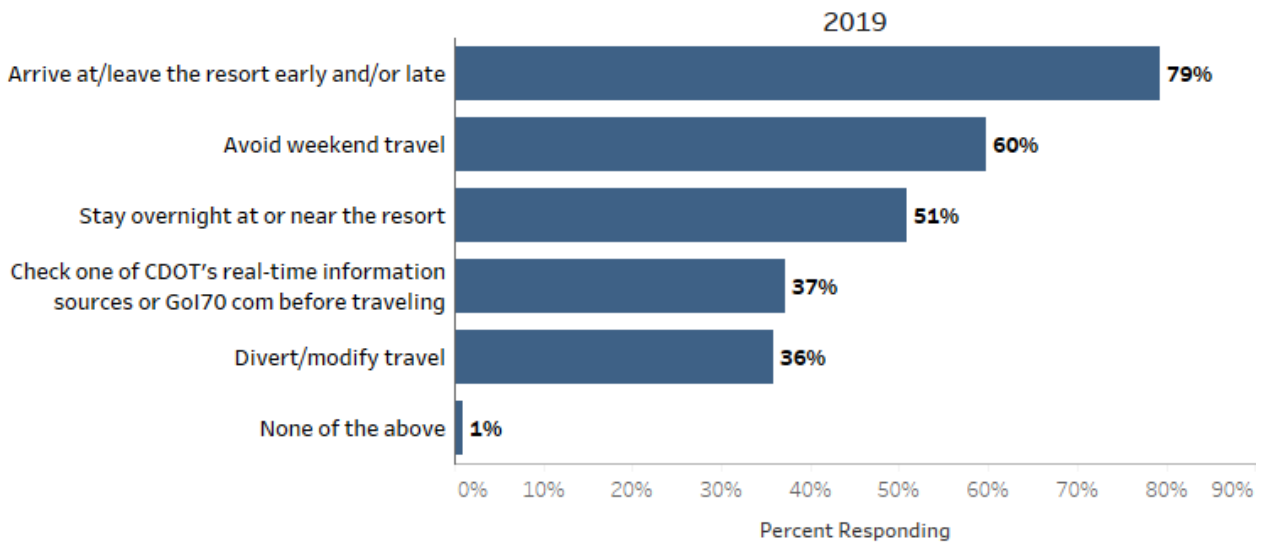
Although some answer options differed this year, several remained the same, thus enabling comparisons back to 2012 for those options. After a downward trend, staying overnight at or near the resort was up sharply this year. All other avoidance efforts, with the exception of avoiding Sundays, were up in 2019 relative to previous years.

Figure 32.
Strategies for Congestion Avoidance by Year



Assessed another way, the efforts adopted to avoid I-70 congestion may be grouped into key strategies. In 2019, the most common types of strategies involved arriving at or leaving the resort early and/or late, with over three quarters of respondents employing a strategy to that end. The next most common strategy involved avoiding weekend travel (whether it be on Saturday or Sunday specifically, or weekends altogether). Diverting or modifying travel, staying overnight, and using CDOT real-time information sources remain popular approaches, but were not cited as frequently as avoiding weekend travel or altering travel times.

Figure 33.
Grouped Strategies for Congestion Avoidance

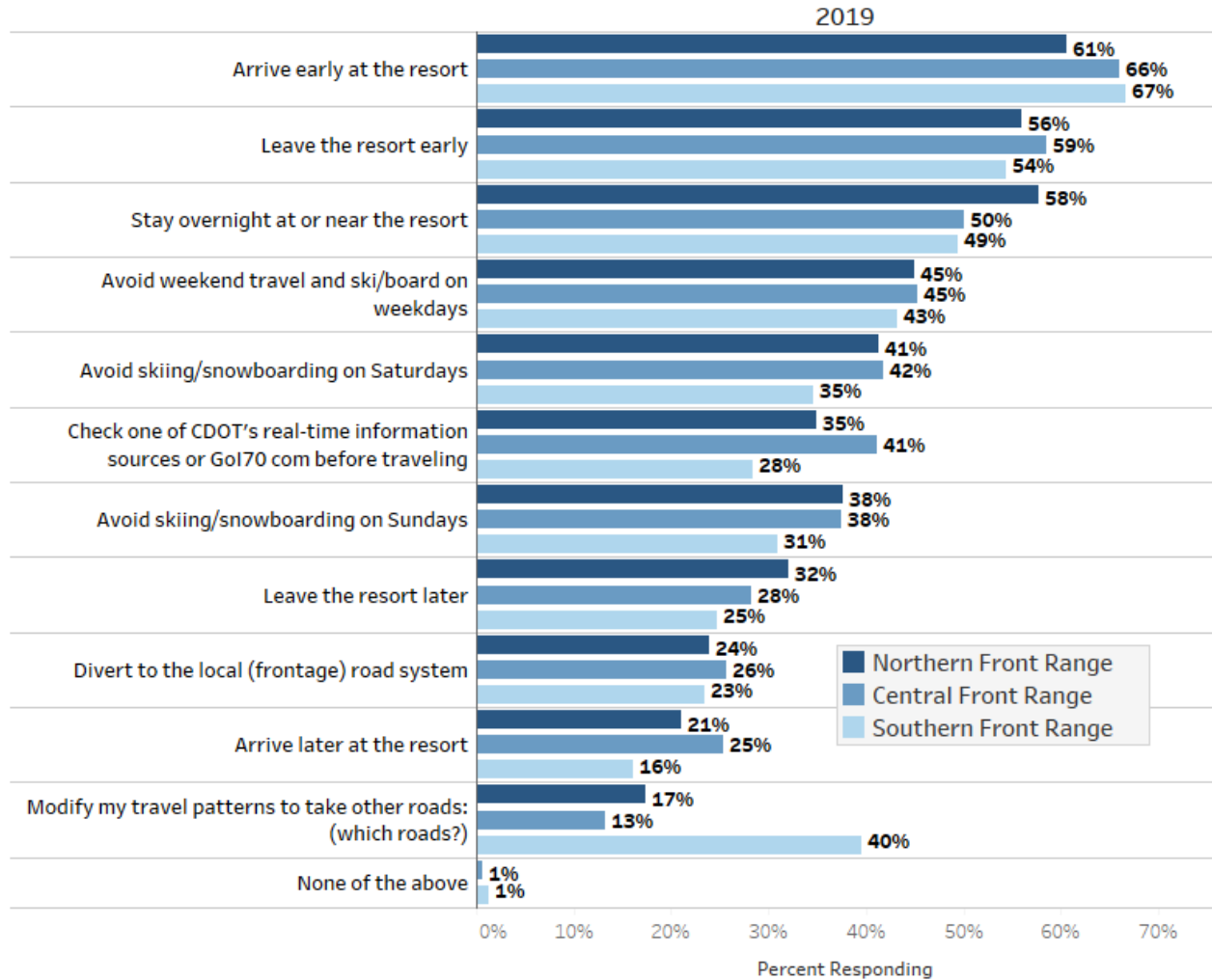


Strategies also differ somewhat when evaluated by Front Range area of residence. While all groups are most likely to arrive early, this is a slightly less favored approach among respondents from the Northern Front Range, perhaps due to their longer drive. On the other hand, Northern Front Range respondents were more likely to stay over overnight at or near the resort. Central Front Range respondents were more likely to check one of CDOT's real-time information sources or GoI70 before traveling.

Respondents that modify their travel patterns to take other roads were asked to identify these alternate routes: Northern Front Range respondents reported that they will use Highway 6 and frontage roads; Central Front Range respondents will often take 285 or a combination of 40 and 6; Southern Front Range respondents will often rely on Highway 24.

Figure 34.
Strategies for Congestion Avoidance by Front Range Location

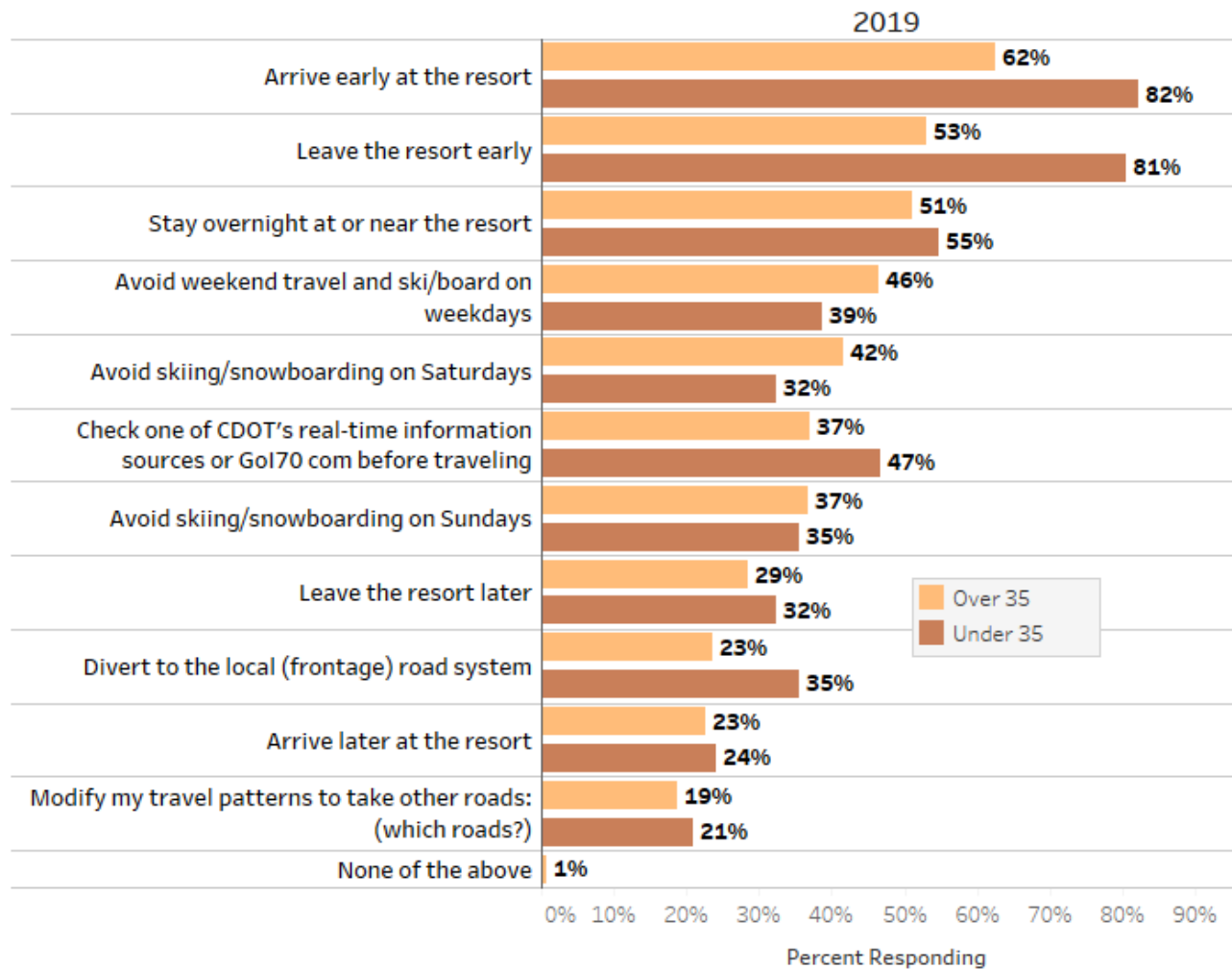
What efforts, if any, do you take to avoid I-70 congestion? (Check all that apply)



Analyzing strategies for congestion avoidance by age provides additional insight into tactics adopted by key demographic groups. Older respondents are less likely than their younger counterparts to arrive at and leave the resort early. They're more likely to avoid Saturdays, Sundays, and weekend travel altogether. Meanwhile, younger respondents are more likely to try each of the other methods than older respondents. They are particularly more likely to arrive early and stay later, arrive early and leave early. They are also more likely to check CDOT's real-time information sources or GoI70.com before traveling, as well as divert to frontage roads.

Figure 35.
Strategies for Congestion Avoidance by Age

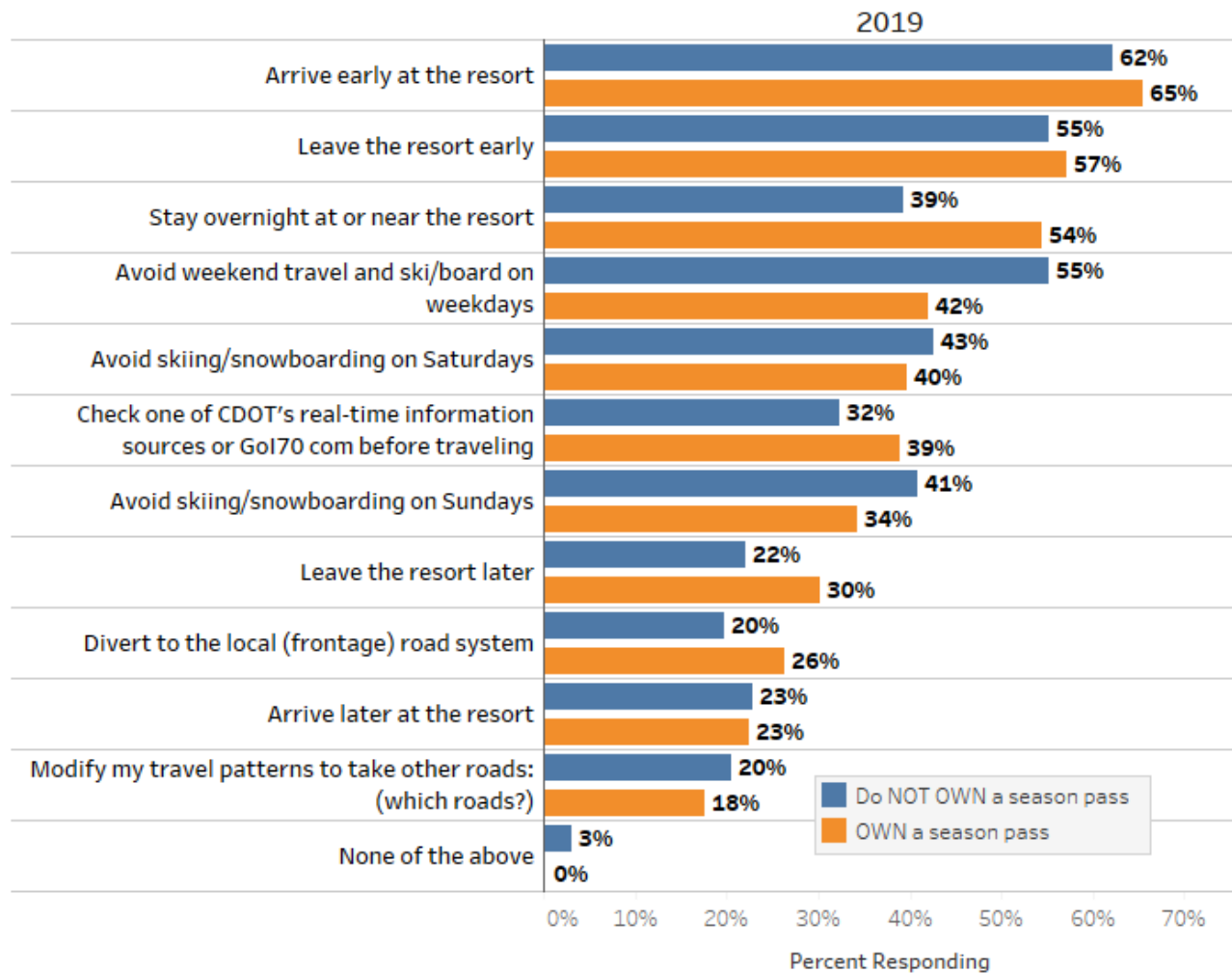
What efforts, if any, do you take to avoid I-70 congestion? (Check all that apply)



Respondents that own a pass product behave differently than those without one. As was the case in all previous studies, pass product holders are much more likely to arrive early and leave early, most likely because pass ownership enables one to enjoy just a few hours of skiing or riding, whereas those who pay for a full day lift ticket want to get more value out of their trip to the resort. Passholders were much more likely to adopt the majority of the strategies for congestion avoidance, with a few notable exceptions: avoiding weekend skiing/boarding and avoiding Saturdays and Sundays specifically.

Figure 36.
Strategies for Congestion Avoidance by 2016/17 Pass or Pack Ownership

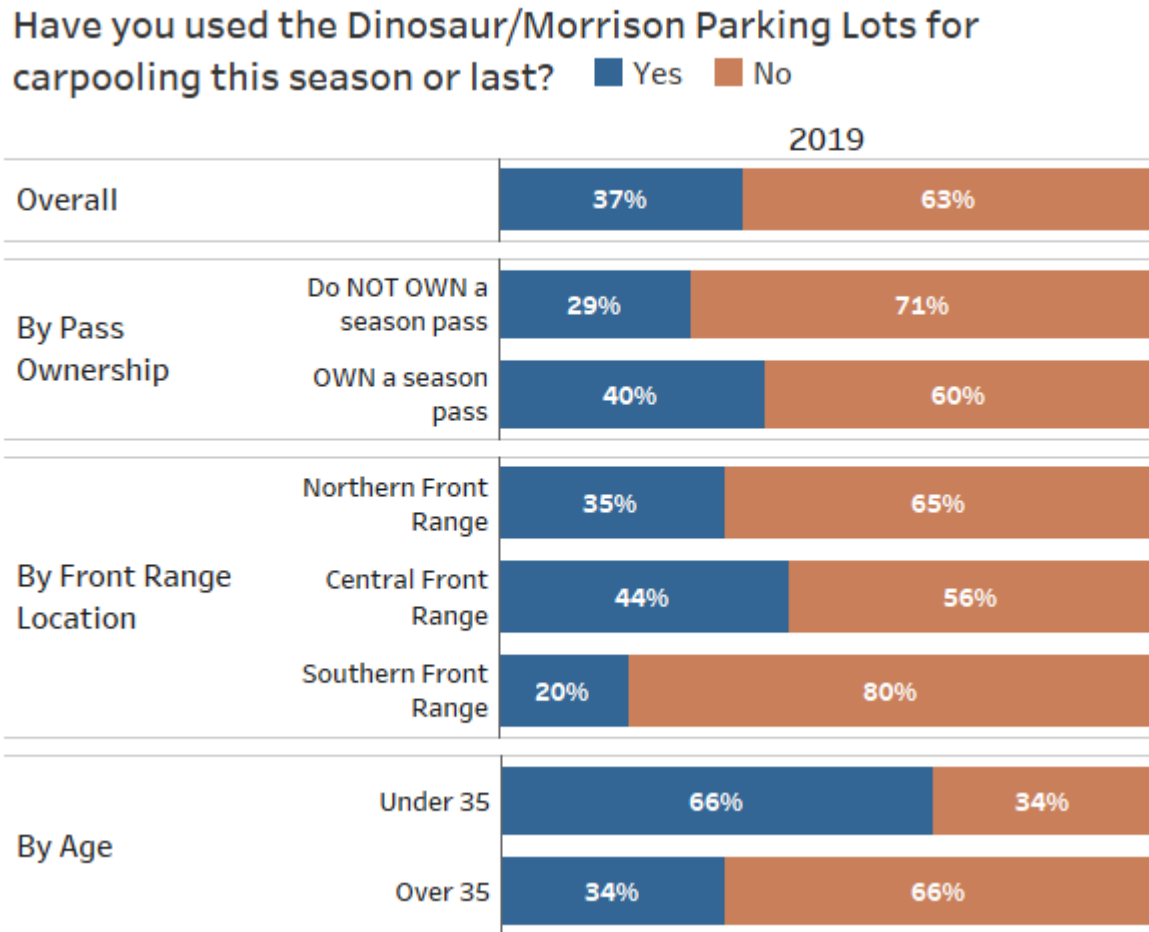
What efforts, if any, do you take to avoid I-70 congestion? (Check all that apply)



Dinosaur/Morrison Parking Lots Usage

Over one-third (37%) of panel respondents have used the Dinosaur/Morrison parking lots for carpooling either this season or last season, up from 33% in 2017. Respondents that own a season pass are more than twice as likely to have used the lots as those without a pass. Furthermore, those who live in the Northern and Central Front Range, as well as younger respondents are more likely to have used the lots.

Figure 37.
Have you used the Dinosaur/Morrison Parking Lots for carpooling this season or last?



QUALITATIVE INSIGHTS

Respondents who have used the Dinosaur/Morrison Parking Lots for carpooling were asked, “Do you have any comments on your experience using these lots?” Responses were generally quite positive:

- *“It's a convenient meeting point for people coming from both I-70 and 6th.”*
- *“Love the Dino lots, glad we can park for free and overnight.”*
- *“Love the lots, use the winter and summer.”*
- *“They're very useful, we could use some more of these.”*

However, there were several critiques/suggestions offered:

- Crowding/Increased use:
 - *“Lots are getting more full each year.”*
 - *“It's stressful when cannot find a spot.”*
 - *“Lot filled up completely early.”*
 - *“Overcrowded this year, this been several times where there is no spots left to park.”*
 - *“These lots are nice but have become extremely crowded.”*
 - *“It's so full! Need bathrooms.”*
 - *“Parking here is relatively convenient (easy on-off), but with crowds it an be hard to find your group. Usually park down in Denver to meet up.”*

Figure 38.

Word Cloud: Single Word

“Do you have any comments on your experience using these lots?”



Carpooling

There was an increase in the share of respondents aware of resort carpooling incentives (28% in 2019 vs. 22% in 2017 and 26% in 2014), however, the share of respondents that took advantage of those incentives decreased (43% in 2019 vs. 53% in 2017 and 46% in 2014. Passholders, Northern and Central Front Range respondents, and younger respondents were more likely to have taken advantage of parking incentives.

Figure 39.
Awareness and Taken Advantage of Carpooling Incentives

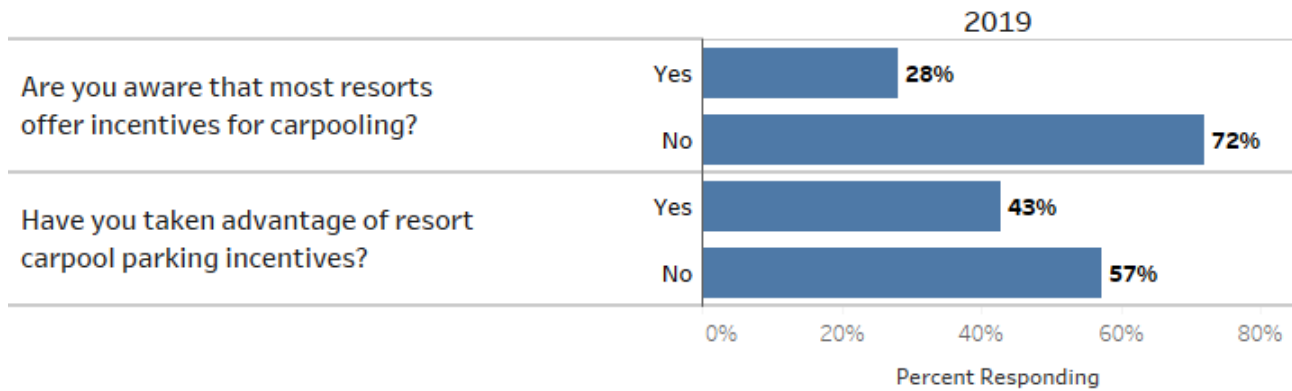
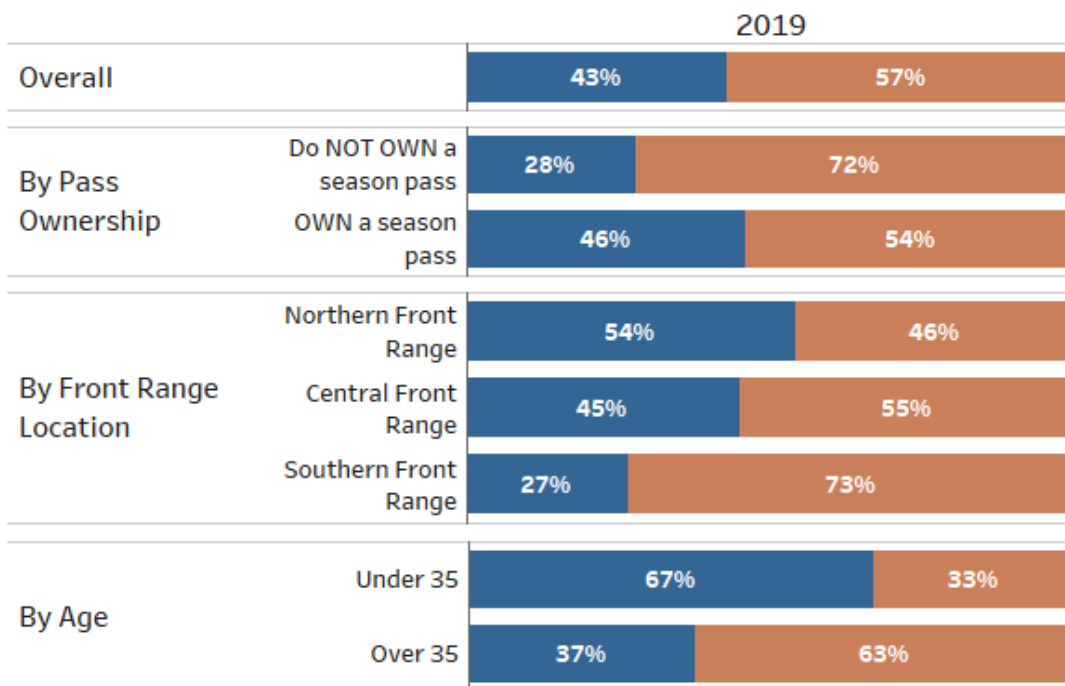


Figure 40.
Parking Incentives by Pass Ownership, Location and Age

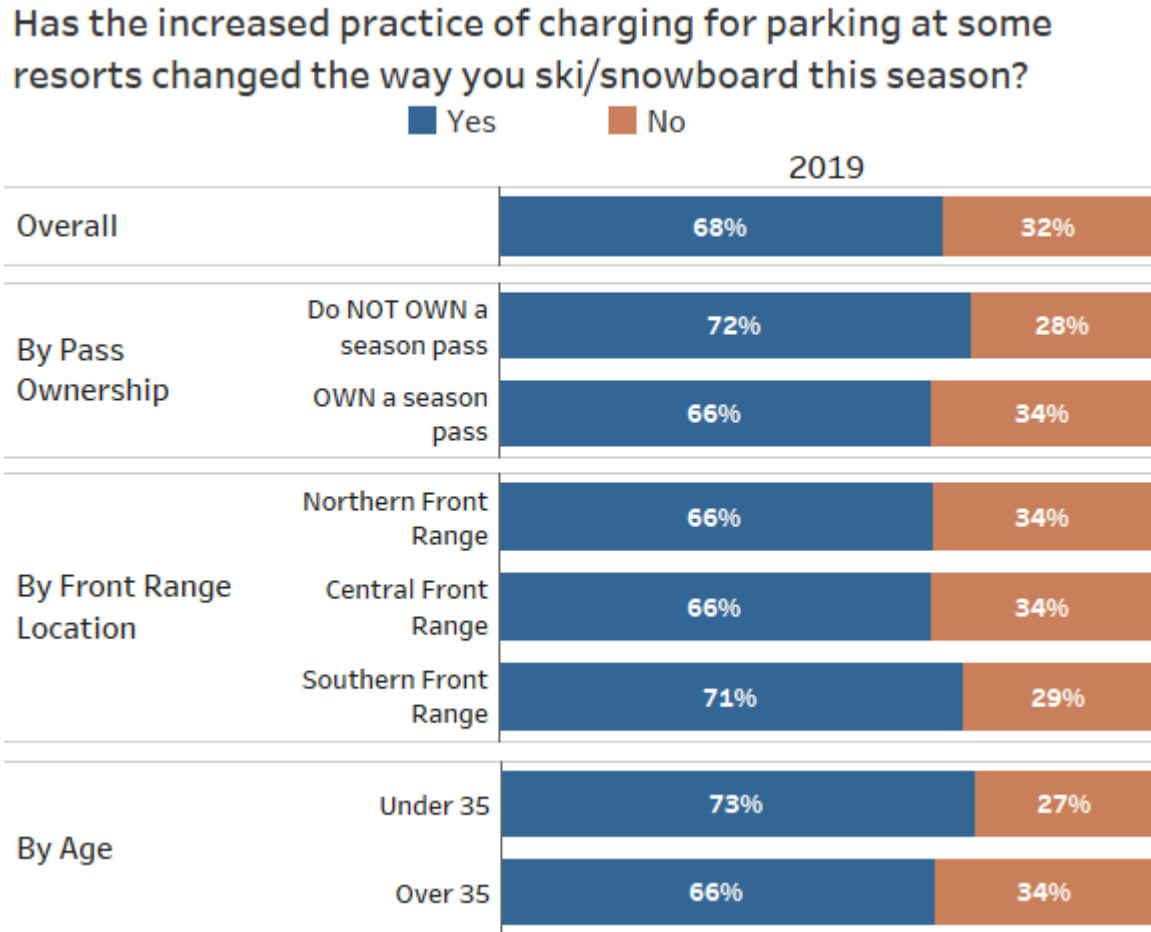
Have you taken advantage of resort carpool parking incentives?

■ Yes ■ No



A majority of panel members (68%) report that the practice of charging for parking has changed some of their skiing/riding behavior this season. Respondents under 35 were particularly likely to indicate that their practices have changed (73% say “yes”), and non-passholders were also especially likely to report a change (72%).

Figure 41.
Impacts of Charging for Parking Pass Ownership by Pass Ownership, Location, and Age (Grouped Responses)



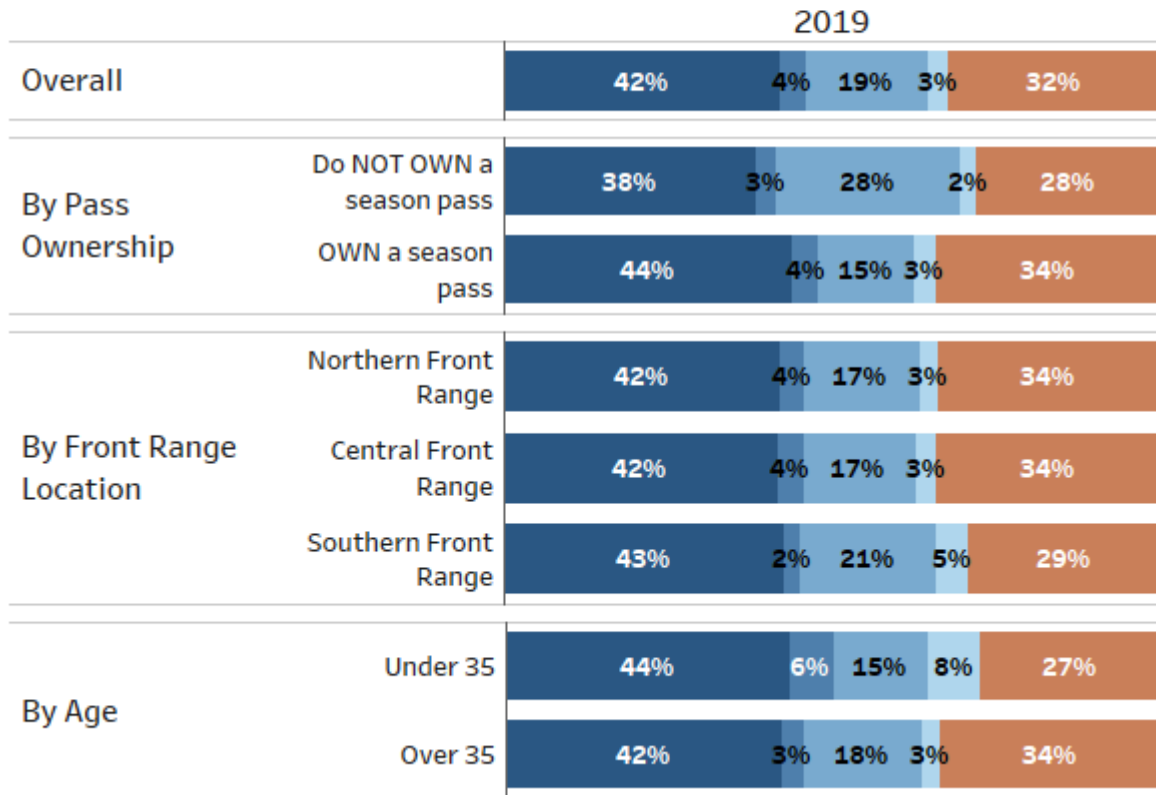
Among those that report a change in behavior, about 1 in 5 (19%) report they are skiing/riding “less overall.” However, this figure jumps to 28% among non-passholders. They are the segment most likely to report reduced activity. The data show some respondents favoring resorts that do not charge (42%) although it should be noted that most resorts offer both paid and free parking that varies by location within the resort. Among respondents under 35 years of age, a notable segment (8%) are reporting that charges for parking are encouraging carpooling overall (6%) and carpooling with more people per vehicle (8%). These trends should be viewed favorably, and efforts might be made to encourage greater adoption of carpooling by older participants.

Figure 42.

Impacts of Charging for Parking Pass Ownership by Pass Ownership, Location, and Age (Grouped Responses)

Has the increased practice of charging for parking at some resorts changed the way you ski/snowboard this season?

- Yes, tend to visit resorts with free parking
- Yes, tend to use the park and ride lots to facilitate carpooling
- Yes, tend to ski/ride less overall
- Yes, tend to be more likely to carpool with more people
- No



QUALITATIVE INSIGHTS

A final question to the survey asked respondents, “Do you have any additional comments regarding your use of I-70 for winter snowsports visits?” Again, a wide variety of ideas were proposed and should be read in full. However, the most common suggestions include:

- Add additional lanes and/or toll/carpool lanes (includes some positive comments about the existing eastbound Mountain Express Lane as well as suggestions for improvements in the future):
 - *“Need more lanes of traffic, another portal at the Eisenhower tunnel. Stop trying to study this to death or build a train, build more lanes!!!!”*
 - *“I use the toll lane and wish there was one going west”*
 - *“I thought the adding of a toll lane around Idaho Springs was a great addition and I definitely use it. That said I was very disappointed to see the report recently released stating that CDOT was 'allocated meager funds for the I-70 expansion project'...very disappointed. CO has been talking about improving the I-70 Mtn corridor for 15+ years but the best that's happened since then is a short toll lane? Come on. CDOT and our elected officials need to do a better job of fixing this mess...period.”*
 - *“Expand i-70 to an additional free travel lane 4 total. Offer better/cheaper incentives to travel (shuttles cost too much, it is still cheaper to drive!)”*
 - *“I70 is getting unbearable. Would like to see bus / carpool lanes at a minimum. Longer term solution needs to be put on the table as it will be impossible winter and summer to get to the mountains. These communities are only growing and will continue to grow.”*
 - *“Please expand and add toll lanes both ways all the way to/from tunnel!!!!”*
 - *“Please put in a toll lane west bound from Floyd Hill to US 40.”*
- More busses/train:
 - *“Please think of alternatives to reduce the traffic. More buses, trains, anything!”*
 - *“Would love to have better access to resorts. Love the idea of a train or other direct access.”*
 - *“Even if it's a dollar the toll lane should be open all the time. With a family of 5 car pooling, train or bus is just to pricey. We need a bus system from the dinosaur lots to the main I/70 resorts. Subsidized so that it's cheap enough for a family and run it using a lane from the other side of traffic so it is not delayed. This is a system that could be implemented now and as drivers see those busses spreading past them more and more will take it.”*

QUALITATIVE INSIGHTS, CONTINUED

- Remove restrictions on toll lane:
 - *“Why, after so much time and money, is the recent addition of the extra lane through the twin tunnels never utilized? It makes absolutely no sense to me! Wasn't the whole idea to ease congestion in times of need? What a waste! Also, why don't the ski resorts put money into a solution for the I-70 nightmare?! They have to be losing money since they are losing clientele. Just my 2 cents. Thanks for the opportunity to participate!”*
 - *“The new Express Toll lanes should be open more often.”*
 - *“The new 1/2 of a lane that was created and only used every blue moon was the worst waste of money by the corrupt and lack of real thinking CDOT. It truly was the worst thing possible, we build a new tunnel with big lanes, then don't use it at all. all the I 70 traffic does is push more people to go to Utah, they don't have the traffic problem. Or any resort not along 70. I just refuse to go any more, and I have had 100+ days in a year multiple times. you have successfully taken the fun out of everything. Hire real thinking people with a real solution.”*
 - *“The express lane was the worst idea. It should just be a regular 3rd lane. It's either closed half the time, or no one is in it.”*
 - *“Open the pass lane more often.”*

- Drive right, pass left:
 - *“Open the pass lane more often.”*
 - *“If the driving community on I-70 would respect the left lane to be a passing lane, I believe the congestion issue would be less severe. Currently, I have to use the right lane to pass left lane traffic for the majority of my passing. Too many drivers camp out in the left lane and cruise along between 50 and 55 mph destroying the left lane's purpose.”*
 - *“Make it illegal for trucks to use the left lane from Golden to Grand Junction.”*
 - *“Please add signage to get cars out of the left lane when traffic is behind them. This always leads to unnecessary backups and sudden slow-downs, which leads to unsafe passing on the right, and even more speeding when a gap finally appears to pass the slower traffic using a lane that they shouldn't be in.”*

