

2015-2016 Pleasant Grove Ranger District Visitor Use Study

SUMMER QUARTERLY REPORT



Prepared for:

Mountainland Association of Governments and the Pleasant Grove Ranger District
of the Uinta-Wasatch-Cache National Forest

Prepared by:

Chase C. Lamborn M.S.
Steven W. Burr Ph.D.
Justin Lofthouse

Institute for Outdoor Recreation and Tourism
Utah State University
Logan, UT

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Steven W. Burr, Ph.D.

Director, Institute for Outdoor Recreation and Tourism

Phone: (435) 797-7094

E-mail: steve.burr@usu.edu

Chase C. Lamborn M.S.

Research Associate, Institute for Outdoor Recreation and Tourism

Phone: (801)856-7476

E-mail: chase.lamborn@usu.edu

Department of Environment and Society

Quinney College of Natural Resources

Utah State University

5220 Old Main Hill

Logan, Utah 84322-5220

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Introduction

The purpose of this research is to collect visitor use data—from both dispersed and developed recreation areas—on the Pleasant Grove Ranger District of the Uinta-Wasatch-Cache National Forest, by conducting visitor intercept surveys (on-site interviews) at recreational sites, areas, and trailheads. Additionally, for those respondents agreeing to participate, a more-detailed, on-line e-survey will be administered. The data collected and subsequent analysis will be useful for the National Forest, Mountanland Association of Governments, and the American Fork Canyon Vision. This research project is being funded through the Mountanland Association of Governments and the Pleasant Grove Ranger District.

This report outlines the data gathered from the intercept survey during the **2015 summer quarter (May, June, and July)** of this twelve-month project. The intercept survey is designed to gather the following information: visitor demographics including group size and make-up; local and non-local use; visitor use patterns; minority use; forms of transportation utilized for access; explore additional transportation options; sites/areas recreated in and activities in which participated; motivations for recreation participation and personal values/benefits sought; issues of solitude and perceived crowding; and awareness and visitation of designated Wilderness Areas.

Methods

All study participants were recreating on the Pleasant Grove Ranger District when they were surveyed. Visitors were intercepted at trailheads and recreation areas as they were leaving these sites. Visitors were surveyed by a surveyor working for the Utah Conservation Corps, who was trained by Utah State University's Institute for Outdoor Recreation and Tourism research staff. Surveys were verbally administered, and each survey takes between eight to twelve minutes to complete. No recruiting tools or incentives were used to entice study participation.

Survey locations were chosen by the Pleasant Grove Ranger District's staff. A variety of sites were chosen across the Pleasant Grove Ranger District to capture its diverse use and users. Sites were chosen to represent frontcountry and backcountry users, motorized and non-motorized users, and day and overnight users. The days and times these sites were surveyed were chosen at random. Each month, sixteen sites were surveyed, and each site was surveyed during a six hour AM or PM block—AM (8:00 a.m. - 2:00 p.m.) PM (1:00 p.m. - 7:00 p.m.). (Note: PM survey times change with the seasonal changes in daylight hours.) Copies of this study's randomized survey schedule can be seen in Appendix D.

Many of the questions used in the survey instrument were developed by the USDA Forest Service for its National Visitor Use Monitoring Program (NVUM). Additional questions were added to the survey instrument that were more applicable to the Pleasant Grove Ranger District and current planning efforts. The final draft of the survey instrument was developed by the Institute for Outdoor Recreation and Tourism, the Pleasant Grove Ranger District, Mountanland Association of Governments, and Logan Simpson Design, who undertook the American Fork Canyon Visioning effort. A copy of the survey instrument can be found in Appendix G.

Results

Over the second quarter (summer), 626 visitor intercept surveys were completed. Table 1 presents the number of surveys completed at each survey location over the summer quarter.

Table 1: Number of surveys completed by site

	Surveys	(Percent of Surveys Completed)
Tibble Fork	91	14.5
Mt Timpanogos TH/Theater in the Pines	84	13.4
Battle Creek (Pleasant Grove)	83	13.3
Timpooneke TH	61	9.7
Cascade Springs Lower	31	5.0
Silver Lake Flat	30	4.8
Dry Creek (Alpine)	30	4.8
Dry Canyon (Lindon)	29	4.6
Summit Trailhead	20	3.2
Soldier Hollow	20	3.2
Mary Ellen Gulch Road	18	2.9
Roadhouse	18	2.9
Grove Creek (Pleasant Grove)	16	2.6
Little Mill	16	2.6
Martin	16	2.6
Snake Creek	15	2.4
Grey Cliffs	11	1.8
Mineral Basin	8	1.3
Upper Mill	6	1.0
Salamander Flat	6	1.0
Pine Hollow	5	.8
Saw Mill	5	.8
Mile Rock	4	.6
Dispersed Sites Between Tibble and Holman	3	.5
Total	626	(100.0)

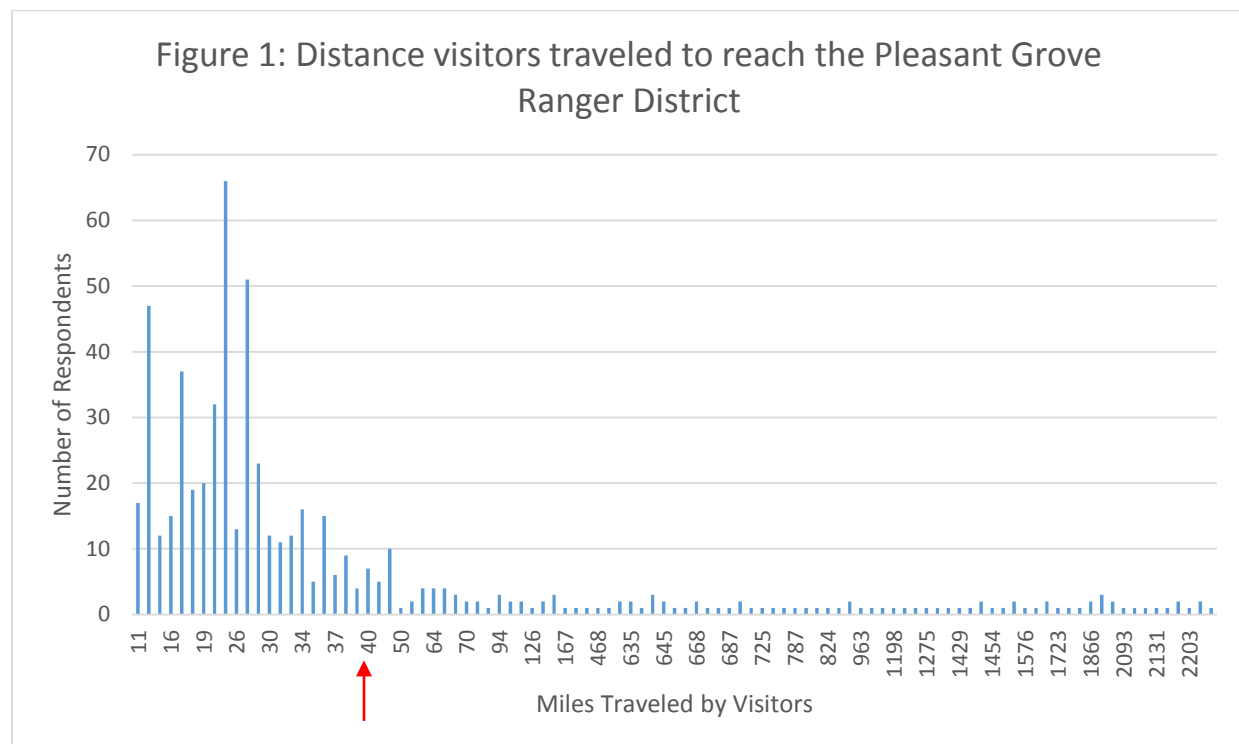
The results section follows the format of the intercept survey. Each question on the intercept survey is presented in italics, and is followed by tables, graphs, and interpretations of the data.

Are you a resident of the United States?

Yes ***If Yes, what is your Home Zip Code?*** _____

No ***If No, what Country are you from?*** _____

The question above was used to identify how far visitors were traveling to reach the Pleasant Grove Ranger District (PGRD). This analysis was done by calculating the distance each zip code was from a central location (i.e., Tibble Fork Reservoir) in the Pleasant Grove Ranger District. As seen in Figure 1, the overwhelming majority of visitors live fewer than 40 miles from Tibble Fork Reservoir. The median distance traveled by visitors was 27 miles, and the mean distance was 190 miles. The large discrepancy between the median and mean illustrates the heavily right-skewed distribution of the histogram below. The minimum distance traveled was 11 miles, and the maximum distance traveled by U.S. residents to reach the Pleasant Grove Ranger District during the summer quarter was 2,403 miles. Over this quarter, two respondent were from outside of the county—India—and one traveled from Hawaii. These data show that 77.8% of PGRD visitors live fewer than 40 miles from Tibble Fork Reservoir, and 63.1% live fewer than 30 miles.



How long are you going to be recreating on this trip to American Fork Canyon/the Alpine Loop?

- Short trip under three hours**
 About half the day
 The majority of the day
 Overnight
 Multiple days – if so, how many? _____ days

The question above is used to gauge how long respondents are spending on the Pleasant Grove Ranger District during their recreational visit. Half (51.5%) of the respondents spent fewer than three hours recreating during their visit, and 27.6% spent about half the day. Just over 13% spend multiple days during their visit.

Over the summer quarter, respondents tended to stay longer during their visits: 51.5% stayed under three hours and 27.6% spend about half the day. During the spring, 78% spent fewer than three hours, and only 14.8% spend half the day. Table 2 presents the amount of time respondents were recreating during their visit, and Table 3 present the number of days respondents spent recreating for those who spent multiple days on the PGRD.

Table 2: Respondents' Trip Duration

	Number	Percent
Short trip under three hours	319	51.5
About half the day	171	27.6
The majority of the day	48	7.7
Overnight	29	4.7
Multiple days	53	8.5
Total	620	100

Table 3: Number of days respondents spent recreating on their trip

	Number of Respondents	Percent
Two days	3	6
Three days	16	30
Four days	11	20
Five days	9	17
Six days	7	13
Seven days	2	4
Eight days	4	7
Ten days	1	2
Eleven days	1	2
Total	53	100

On this trip, are you planning on visiting any other sites in American Fork Canyon/the Alpine Loop besides this one? Yes No

If Yes, how many other sites are you going to visit? _____ sites

Respondents were asked if they planned on visiting more than one site during their trip to the PGRD. The majority (76.5%) of respondents said they only planned on visiting one site during their trip to the PGRD. Of the 23.5% who did plan on visiting multiple sites during their recreational visit, 42 respondents planned on visiting two sites, 62 planned on visiting three sites, 23 planned on visiting four sites, and 13 planned on visiting five or more sites. During the summer quarter, more respondents visited more than one site than in the spring. This aligns with respondents also spending more time when they visit. Table 4 presents the proportion of respondents who visited one site and the respondents who visited more than one site. Table 5 presents the number of sites visited by respondents who visited more than one site.

Table 4: Respondents visiting more than one site per visit

Visited more than one site	Number of respondents	Percent
No	476	76.5
Yes	146	23.5
Total	622	100

Table 5: Number of sites visited by respondents who visited more than one site

Total number of sites visited	Number of respondents	Percent
2	42	30
3	62	44.3
4	23	16.4
5	13	9.3
Total	140	100

***On average, how many times per year do you visit American Fork Canyon/the Alpine Loop?
_____ times per year***

Respondents were asked, on average, how many times they visit the PGRD in a year. The median number of times respondents visit the PGRD over the summer quarter was 5 times, and the mean was 17.26 times. Table 6 presents the mean, median, standard deviation, and range of days respondents visit the PGRD in a year.

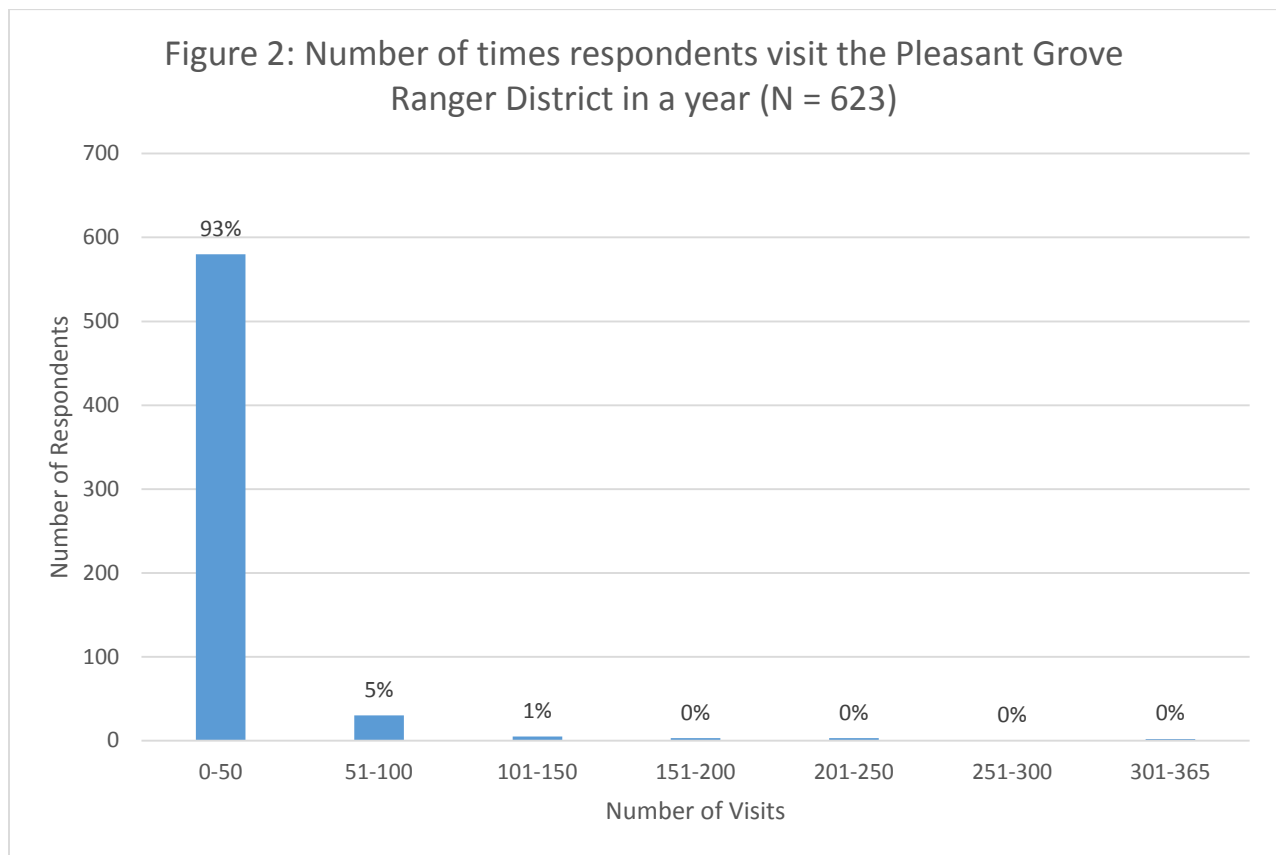
The mean and median number of times respondents visit the PGRD dropped over the summer quarter. During the spring quarter, the mean was 10 and the median was 33.56. This

indicates that the summer brings a large influx of visitors who visit less frequently than people who visit the PGRD during the spring months.

Table 6: Number of times respondents visit the Pleasant Grove Ranger District in a year

	Visits
Mean	17.26
Median	5
Std. Deviation	35.23
Minimum	1
Maximum	360

Figure 2 shows the large proportion of visitors that visit the PGRD fewer than fifty times per year.



What types of areas do you use most often when recreating here in American Fork Canyon/the Alpine Loop?

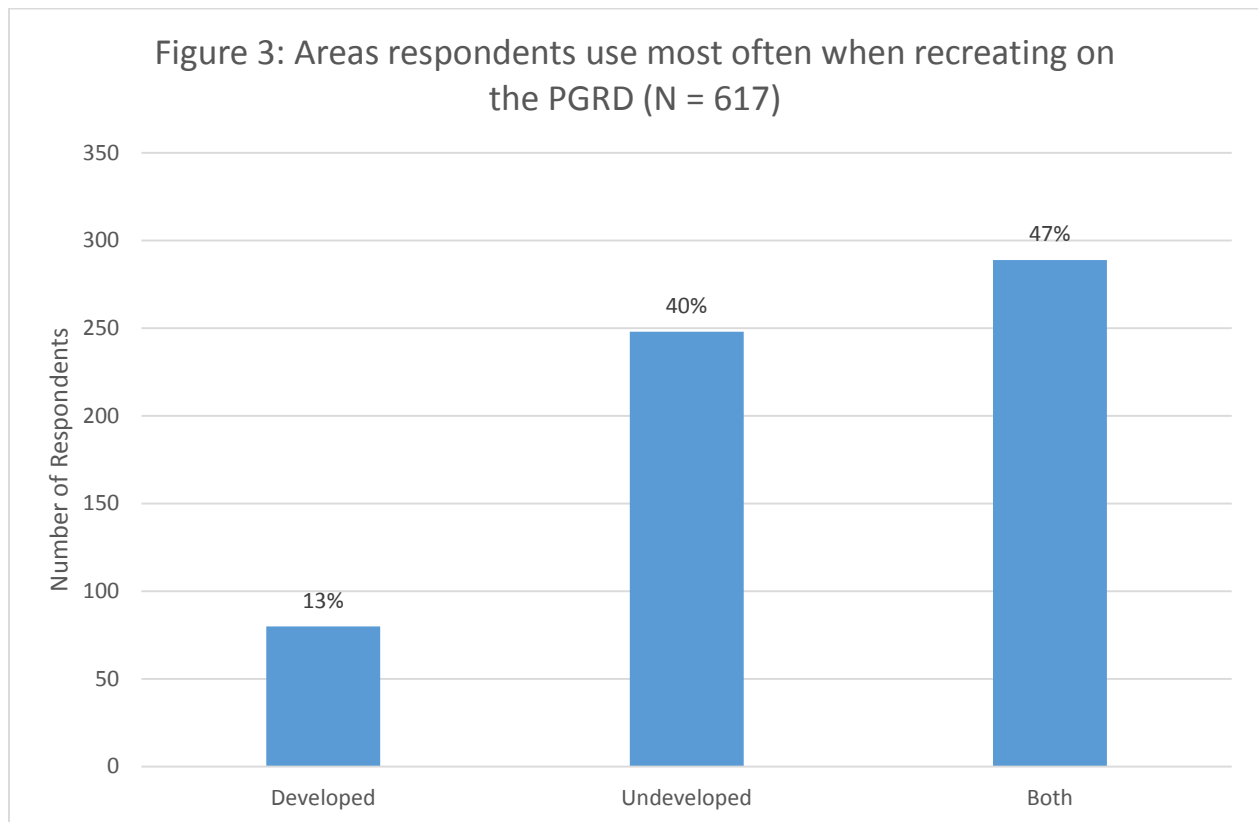
Developed areas, such as developed campgrounds, picnic areas, ski resorts, etc.

- Undeveloped areas, such as trails, dirt roads, rivers and lakes, dispersed camping, wilderness, etc.*
- I use both developed and undeveloped areas equally.*

Nearly half (47%) of the respondents reporting using both developed and undeveloped areas equally, and 40% said they mostly use undeveloped areas while recreating on the Pleasant Grove Ranger District (Table 7). Only 13% of respondents said they use developed sites most often. Figure 3 presents the types of areas PGRD visitors visit most often.

Table 7: Proportion of respondents who use developed and undeveloped areas

	Number	Percent
Developed	80	13%
Undeveloped	248	40%
Both	289	47%
Total	617	100



For **TODAY**, please check “✓” all of the Recreation Activities you have participated in (or will participate in). Then, **Circle** your **MAIN** activity or purpose for visiting American Fork Canyon/Alpine Loop **TODAY**.

✓	RECREATION ACTIVITIES
NON-MOTORIZED ACTIVITIES	
	Hiking/Walking
	Trail running
	Horseback riding
	Road cycling
	Mountain biking
	Fat biking
	Non-motorized water travel (canoe, kayak, raft, sail)
	Rock climbing
	Ice climbing
	Downhill skiing (Resort)
	Snowboarding (Resort)
	Cross-country skiing
	Backcountry skiing
	Backcountry snowboarding
	Snowshoeing
	Sledding, tobogganing
	Other non-motorized activities (races, endurance events)
MOTORIZED ACTIVITIES	
	Driving for pleasure on roads (paved, gravel or dirt)
	Riding on motorized trails (non-snow, OHV/ATV)
	Snowmobile travel
	Other motorized activities (races, games)
VIEWING & LEARNING—NATURE & CULTURE	
	Viewing wildlife, birds, fish, natural features, scenery, flowers, etc.
	Photographing birds, fish, natural features, scenery, flowers, etc.
	Visiting historic and prehistoric
	Nature study
	Visiting a nature center, interpretive trail, or visitor center

✓	RECREATION ACTIVITIES
CAMPING OR OTHER OVERNIGHT	
	Camping in developed sites (family or group sites)
	Primitive camping (motorized in roaded areas)
	Primitive camping (backpacking in unroaded backcountry areas)
	Resorts, cabins, or other accommodations on Forest Service managed lands (private or FS)
FISHING & HUNTING	
	Fishing—all types
	Hunting—all types
OTHER ACTIVITIES	
	Picnicking or family day gatherings in developed sites (family or group)
	Gathering mushrooms, berries, firewood, or other natural products
	Relaxing, hanging out
	Escaping heat, noise, pollution, etc.
	Exercising
	Walking/Exercising Pet(s)
	Visiting Timpanogos Cave National Monument
OTHER ACTIVITIES NOT LISTED? (Please write in below and ✓ to left.)	

The question on the previous page asks two things: it first asks respondents to identify all of the recreational activities they will be participating in during their visit to the PGRD, and it also asks them to identify their “main” activity or reason for visiting. The most popular “main” recreational activity participated in by PGRD visitors was hiking (54%). The second most popular activity was riding on motorized trails (10%), followed by driving for pleasure (7%), picnicking (5%), fishing (4%), and camping in developed sites (3%) (Table 8).

Table 8: Respondents’ main reason for visiting the Pleasant Grove Ranger District

	Number	Percent
Hiking/Walking	335	54%
Riding on motorized trails (non-snow, OHV/ATV)	62	10%
Driving for pleasure on roads (paved, gravel, or dirt)	44	7%
Picnicking of family day gatherings in developed sites (family or group)	33	5%
Fishing	24	4%
Camping in developed sites (family or group)	20	3%
Trail Running	18	3%
Mountain Biking	14	2%
Rock Climbing	14	2%
Relaxing, hanging out	13	2%
Horseback Riding	10	2%
Non-motorized water travel (canoe, kayak, raft, sail)	8	1%
Road Cycling	7	1%
Primitive camping backpacking in unroaded areas)	7	1%
Resorts, cabins, or other accommodations (Forest Service or Private)	4	1%
Primitive camping (motorized in roaded areas)	2	0%
Viewing wildlife, birds, fish, natural features, scenery, flowers, etc.	2	0%
Other non-motorized activities (races, endurance events)	1	0%
Snowmobiling	1	0%
Photographing wildlife, birds, fish, natural features, scenery, flowers, etc.	1	0%
Exercising	1	0%
	621	100%

Table 9 includes all of the activities in which respondents reported participating. To clarify, someone could visit the PGRD to ride their ATV, and they identify riding their ATV as their main activity, but they also may take pictures of the scenery and have a picnic. Therefore, hiking (67%) is still the most common activity, but viewing wildlife, birds, fish, natural features, scenery, flowers, etc. (38%), relaxing and hanging out (32%), photography (26%), and

exercising (19%) move up the list as many respondents participate in these activities along with their main activity.

Table 9: All activities in which respondents participated

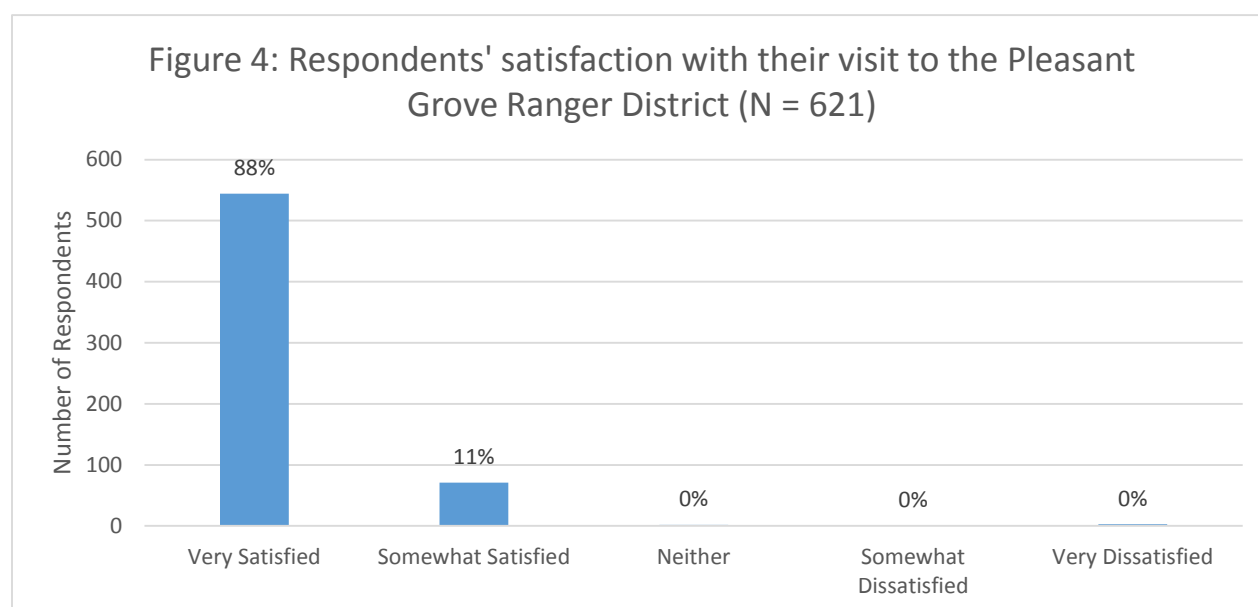
	Number	Percent
Hiking/Walking	416	67%
Viewing wildlife, birds, fish, natural features, scenery, flowers, etc.	239	38%
Relaxing, hanging out	200	32%
Photographing wildlife, birds, fish, natural features, scenery, flowers, etc.	160	26%
Exercising	117	19%
Driving for pleasure on roads (paved, gravel, or dirt)	109	17%
Picnicking of family day gatherings in developed sites (family or group)	108	17%
Riding on motorized trails (non-snow, OHV/ATV)	91	15%
Escaping heat, noise, pollution, etc.	69	11%
Fishing	59	9%
Trail Running	58	9%
Walking/Exercising Pet(s)	48	8%
Camping in developed sites (family or group)	48	8%
Primitive camping backpacking in unroaded areas)	28	4%
Rock Climbing	23	4%
Non-motorized water travel (canoe, kayak, raft, sail)	22	4%
Mountain Biking	16	3%
Nature study	15	2%
Primitive camping (motorized in roaded areas)	15	2%
Visiting historic sites	14	2%
Horseback Riding	11	2%
Resorts, cabins, or other accommodations (Forest Service or Private)	10	2%
Road Cycling	9	1%
Visiting Timpanogos Cave National Monument	8	1%
Gathering mushrooms, berries, firewood, or other natural products	7	1%
Visiting a nature center, nature trail, or visitor center	7	1%
Other non-motorized activities (races, endurance events)	3	0%
Snowmobiling	2	0%
Hunting	2	0%

Note: Recreational activities that were only mentioned once were omitted from this table. N = 623

Overall, how satisfied or dissatisfied are you with your visit to American Fork Canyon/the Alpine Loop today?

- Very satisfied**
- Somewhat satisfied**
- Neither satisfied or dissatisfied**
- Somewhat dissatisfied**
- Very dissatisfied**

The majority of respondents (88%) were “very satisfied” with their visit to the PGRD, and 11% were “somewhat satisfied.” Less than one percent were “neither satisfied or dissatisfied” or “Somewhat dissatisfied/very dissatisfied” (Figure 4).



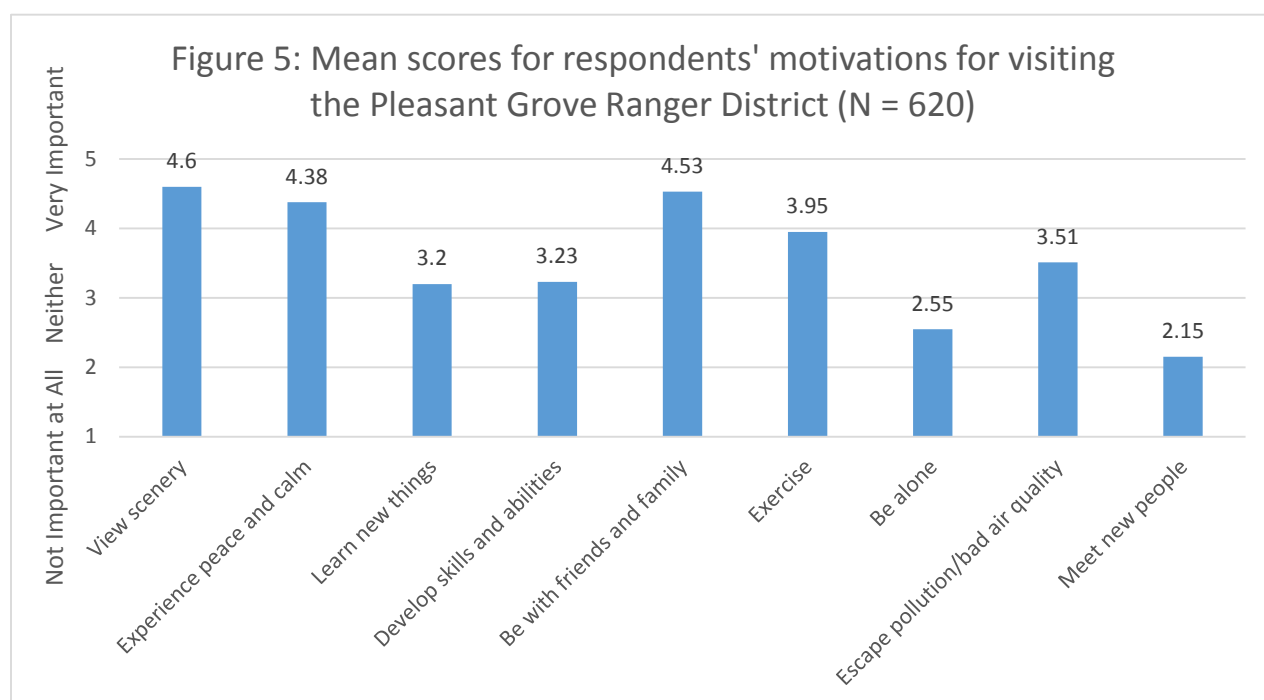
What is the main reason you chose to recreate at this specific site today? (e.g., picnic tables, bathrooms, trail shade, fewer people, scenery, close to home, etc.)

Respondents were asked why they chose the site they did, and the most common reason was because the site was close to their home. The next most common reason was for the trails, followed by scenery/beauty of the site, and because the site was new to them and they wanted to explore it. Other reasons given by respondents were waterfalls, picnic tables, and fewer people. For the full list of reasons why respondents chose the sites they did, by location, please refer to Appendix B.

What motivated you to recreate TODAY? Please rank below.

	<i>Not Important at All</i>	<i>Somewhat Unimportant</i>	<i>Neither Unimportant nor Important</i>	<i>Somewhat Important</i>	<i>Very Important</i>
<i>View scenery</i>	1	2	3	4	5
<i>Experience peace and calm</i>	1	2	3	4	5
<i>Learn new things</i>	1	2	3	4	5
<i>Develop skills and abilities</i>	1	2	3	4	5
<i>Be with friends and family</i>	1	2	3	4	5
<i>Exercise</i>	1	2	3	4	5
<i>Be alone</i>	1	2	3	4	5
<i>Escape pollution/bad air quality</i>	1	2	3	4	5
<i>Meet new people</i>	1	2	3	4	5

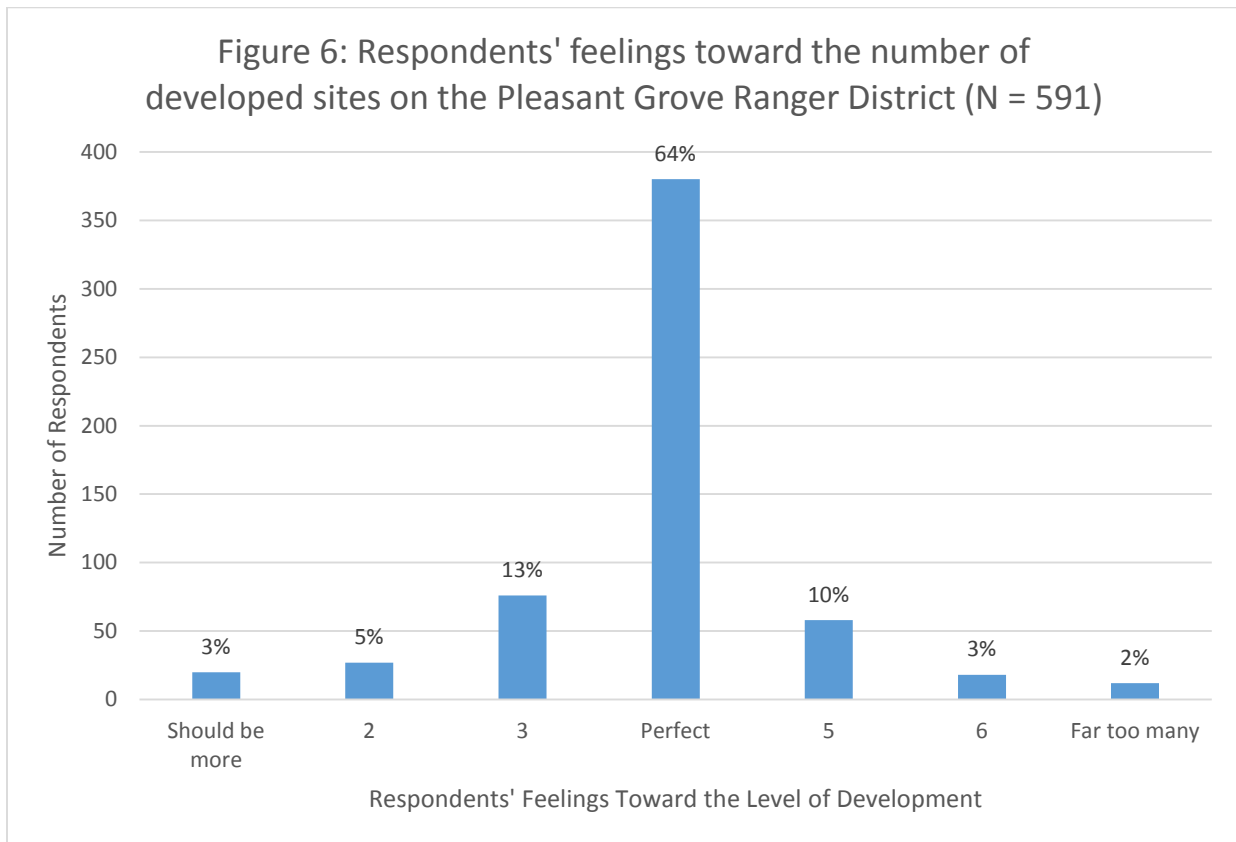
There are many reasons why people visit public lands, and the list of motivations above are some of the most common. Respondents were asked to rank each of these motivations on a scale from “not important at all” to “very important.” Respondents ranked “view scenery,” “experience peace and calm,” and “be with friends and family” as the most important motivating factors for visiting the PGRD. Respondents ranked “meet new people” and “be alone” as the least important factors for visiting the PGRD. Figure 5 presents all of the motivations with their corresponding mean scores.



How do you feel about the number of developed sites (i.e., campgrounds, picnic areas, etc.) in American Fork Canyon/Alpine Loop?

Should be more				Perfect			Far too many
1	2	3	4	5	6	7	

Respondents were asked how they felt about the number of developed recreation sites on the PGRD, and the majority (64%) said there is a perfect number of developed sites. Slightly more respondents said there should be more developed sites than fewer developed sites. Respondents' feelings toward the number of developed sites can be seen in Figure 6 below.



Have you recreated in the Lone Peak Wilderness or Mt. Timpanogos Wilderness areas?

Yes → Lone Peak Wilderness, and/or Mt. Timpanogos Wilderness

No

I don't know

If yes, what recreational activities do you typically engage in when you visit these Wilderness areas?

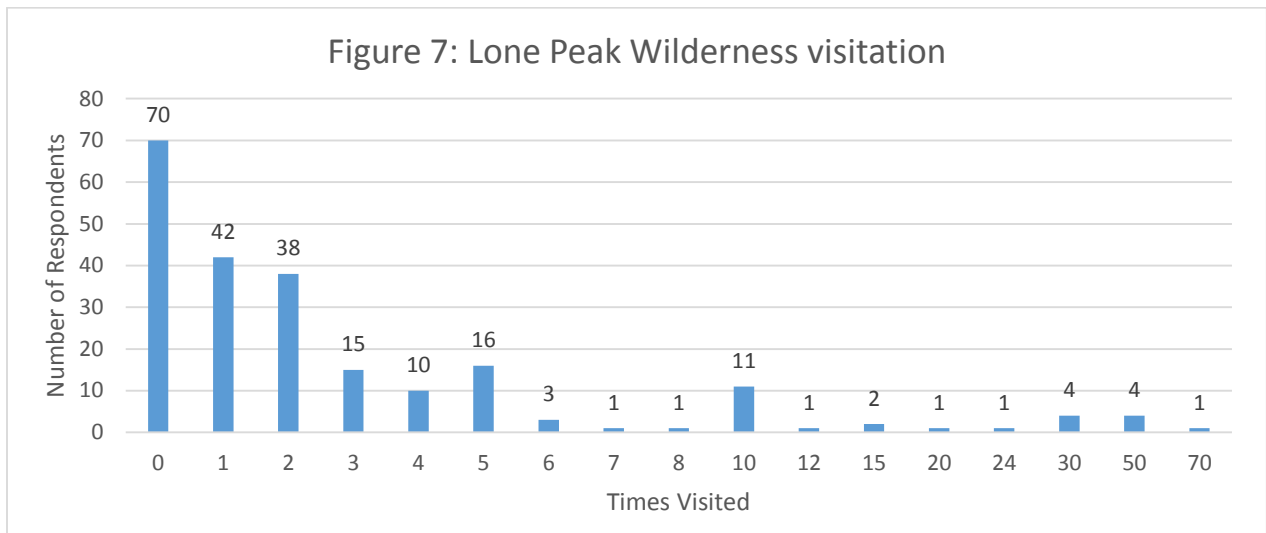
Respondents were asked if they have ever recreated in the Lone Peak or Mount Timpanogos Wilderness Areas, and 381 of the 486 respondents who responded to the question said they had. Those respondents who had visited the Wilderness areas on the PGRD were asked which of the two Wilderness areas they visited, 43% said they visited both Wilderness areas, 47% said they visited only Mount Timpanogos Wilderness area, and 10% said they only visited Lone Peak Wilderness.

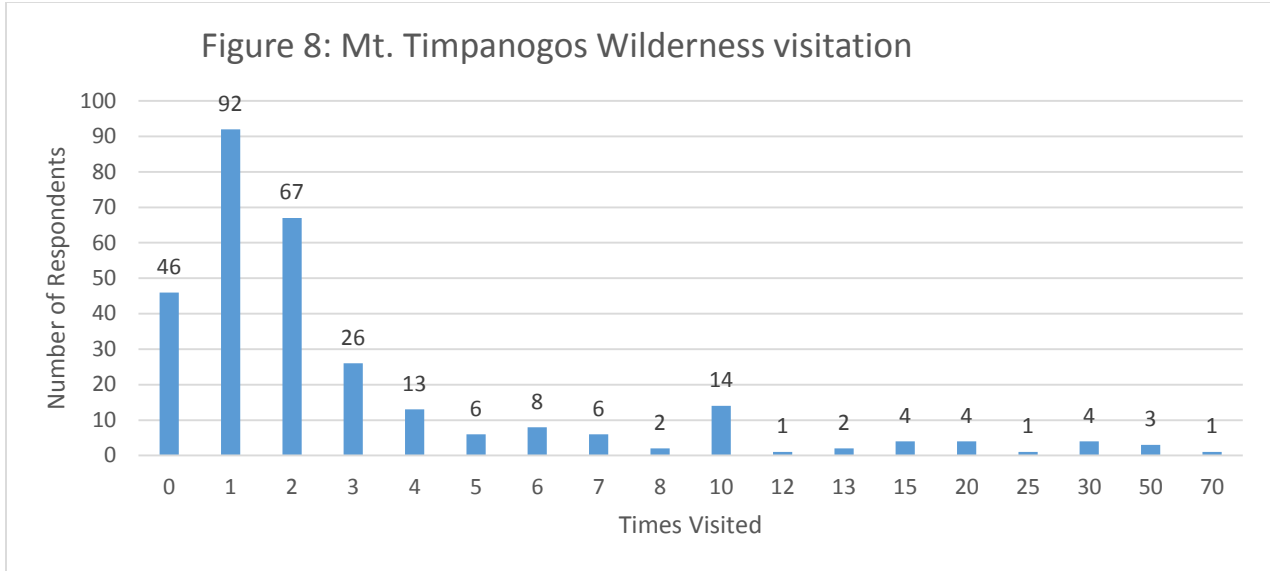
How many times have you visited these Wilderness areas in the last 12 months?

Lone Peak Wilderness _____

Mt. Timpanogos Wilderness _____

Respondents were then asked how many times they have visited one or both of these Wilderness areas in the last twelve months. Respondents reported visiting the Lone Peak Wilderness Area slightly less frequently (median = 1) than the Mount Timpanogos Wilderness area (median = 2). Figures 7 and 8 below present the distributions of respondents' Wilderness visitation on the PGRD.

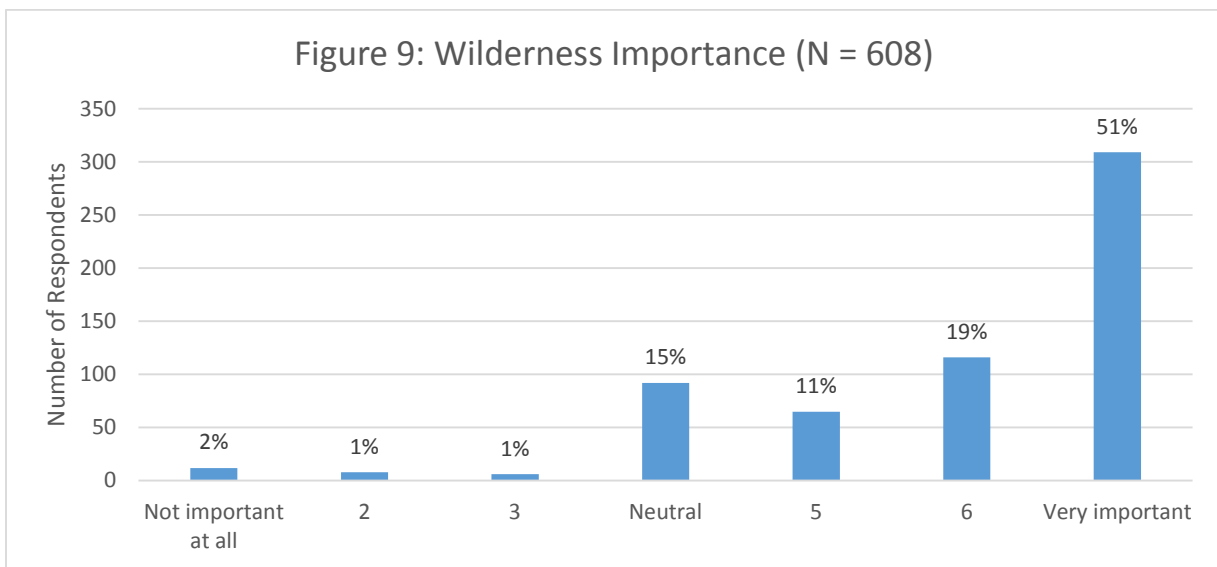




How important are these congressionally designated Wilderness areas to you?

Not important at all		Neutral			Very important	
1	2	3	4	5	6	7

Fifty-one percent of all respondents said congressionally designated Wilderness areas are very important to them. Less than 5% said Wilderness areas are not important to them, and 15% said they had neutral feeling towards Wilderness areas. Figure 9 below presents respondents' self-ranked importance of congressionally designated Wilderness areas.



Would you support the expansion of Wilderness areas in American Fork Canyon/Alpine Loop?

Yes No

Please explain: _____

When respondents were asked if they would support the expansion of Wilderness areas on the PGRD, 79.7% (467 respondents) said they would, and only 19.8% (116 respondents) said they would not. When asked to explain why they would or would not support Wilderness expansion, respondents left comments that were separated into their respective groups. Content analysis was performed to extract the common themes among the comments.

Many respondents said they would support Wilderness expansion because they want the remaining undeveloped lands protected and kept natural. Another common reason was people did not want any more development; also, people wanted to limit the amount of area accessible to motorized vehicles such as motorcycles, four-wheelers, and side-by-sides.

A large proportion of respondents said they would support Wilderness expansion, but they had stipulations, such as where the expansion would occur and how much it would cost. Some also said they would support Wilderness expansion as long as it did not limit the current amount of off-highway vehicle use or restrict current grazing rights.

Comments left by respondents who said they would not support the expansion of Wilderness areas on the PLGD fell into two categories: 1) "I like it how it is" and 2) "Do not limit access." Those who opposed Wilderness expansions because it would limit access were mostly concerned about losing motorized vehicle and mountain bike access. They were also concerned about the children and elderly people who may lose access because of their inability to hike long distances. Many also said they like it the way it is, and there is no need to change it.

Are there places in American Fork Canyon/Alpine Loop you no longer visit because encounters with other forest users/uses have negatively affected your recreational experience? Yes No

If Yes, please identify the area(s) and explain the type of encounter and why you no longer visit:

Respondents were asked if there were places on the PGRD they no longer visit because of negative encounters and/or experiences, and 88.7% said "no" there were not places they no longer visit, and 10.8% said "yes" there were places they no longer visit. When asked what

area(s) they no longer visit and what negatively affected their experience, the most common location was Tibble Fork Reservoir, and the reasons for no longer visiting ranged from the area being too loud because of ATV/motorcycles and it being altogether too crowded and chaotic. Other areas were also mentioned, such as Mount Timpanogos (too crowded), Cascade Springs (too many off-highway vehicles), American Fork Canyon (too crowded), and developed campgrounds (too crowded and expensive). Some respondents did not mention specific areas, but said they avoid areas where there are many off-highway vehicles and areas that are generally crowded. To see all of the locations respondents said they no longer visit, and the reasons why they no longer visit, please refer to Appendix E.

About how many people outside of your group did you encounter (see, talk to, interact with, etc.) while recreating today? _____ people

What do you think about the number of people you encountered while recreating today?

Did they positively enhance your experience? Yes No

If Yes, in what ways? Please describe:

Did they negatively affect your experience? Yes No

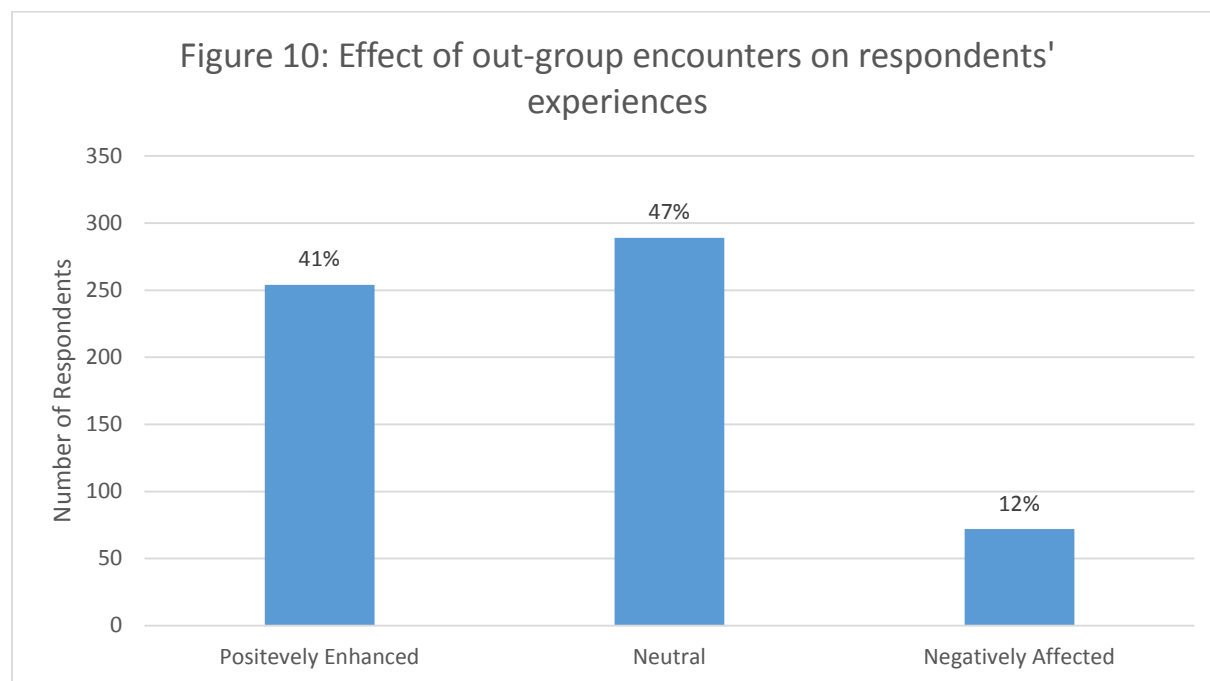
If Yes, in what ways? Please describe:

They neither positively enhanced nor negatively affected my experience.

Respondents were asked how many people outside of their group they encountered while recreating. The median number of out-group encounters was ten people (mean = 25.90), and the range was from zero to 300 out-group encounters. The summer quarter showed a large increase in the number of out-group encounters; the median number of out-group encounters experienced by respondents during the spring was three, and the mean was 6.22. This indicates a large influx of visitors during the summer season.

Respondents were then asked how those out-group encounters affected their visit to the PGRD. Forty-one percent said their out-group encounter positively enhanced their recreational visit, 47% said their out-group encounter had no impact, and 12% said their out-group encounter had a negative impact on their experience. Therefore, 88% said their out-group encounter either positively enhanced or had no impact on their visit to the PGRD (Figure 10). There was a large increase in the number of out-group encounters that had a negative impact on respondents' recreational experience. During the spring, only 4% of out-group encounters negatively affected respondents' experience, and over the summer that increased to 12%. With the large increase of

visitors during the summer, it is understandable that the number of conflicts and level of crowding increased.



We separated the comments explaining why respondents' out-group encounters negatively affected their experience by location (Table 10).

Table 10: Explanations of negative out-group encounters by location

Location	Comment
Little Mill	It is mostly developed if there is too much, it sucks.
Summit Trailhead	Too many people. I expected to see a lot of people today. Too many cars on the road.
Mt. Timpanogos/Theater in the Pines	A little too many people. I expected it today. Too many people Lots of people There was some point where it was hard to get through the trail. Too many people. Traffic jams.
Salamander Flat	Drunk people being loud very late at night. One guy packed up and left at 4:00 am; very loud campers.

	People in camp sang loudly until midnight. One person started his outfit at 4:00 am and woke everyone.
Mile Rock	I wanted to be alone.
Tibble Fork	Dogs off leash, undisciplined. People passed closed gates at Silver Lake Flat. Two had dogs running loose and disturbing the people fishing.
Snake Creek	Kids running around and screaming.
Soldier Hollow	One crazy driver. Some were driving too fast on road. Too many people.
Dry Creek (Alpine)	I don't like running into people.
Battle Creek (Pleasant Grove)	A little crowded. A little crowded I go as high as I can to get away from people. I like it better when we were up higher, not too many people. It was really crowded. Just too many people. Somewhat negative. Too crowded. Too many. Too many kids (Lindon City Days). Too many people. Too many people; it's nice to get away from the population.
Dry Canyon (Lindon)	Too crowded.
Cascade Springs	Loud and screaming. Too many people.
Mary Ellen Gulch Road	More people than we expected. Parking. Too many people on small road.
Mineral Basin	I like to be the only person for miles.
Timpooneke Trailhead	Gross horse poop on the trails! I like to get away from many people. I prefer to see no people. Motorcycles. Some were playing loud music on trail. People were in the stream. Too many people.
Silver Lake Flat	I used to see nobody. The ATV's driving very fast late last night.

How did you access the recreation site you are visiting today? (Check one)

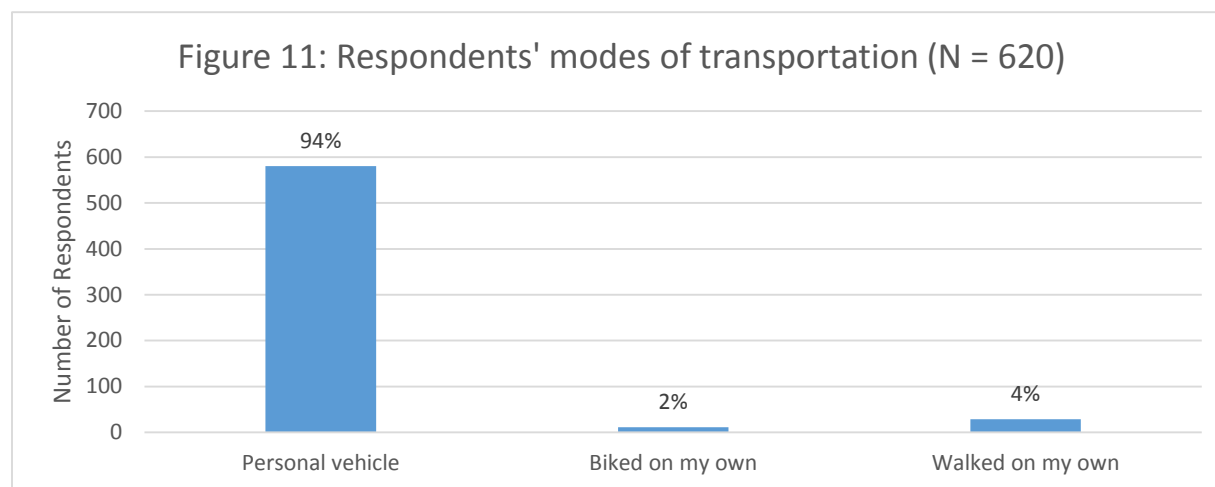
Personal Vehicle—How many people were in your vehicle TOTAL? _____

Biked on my own

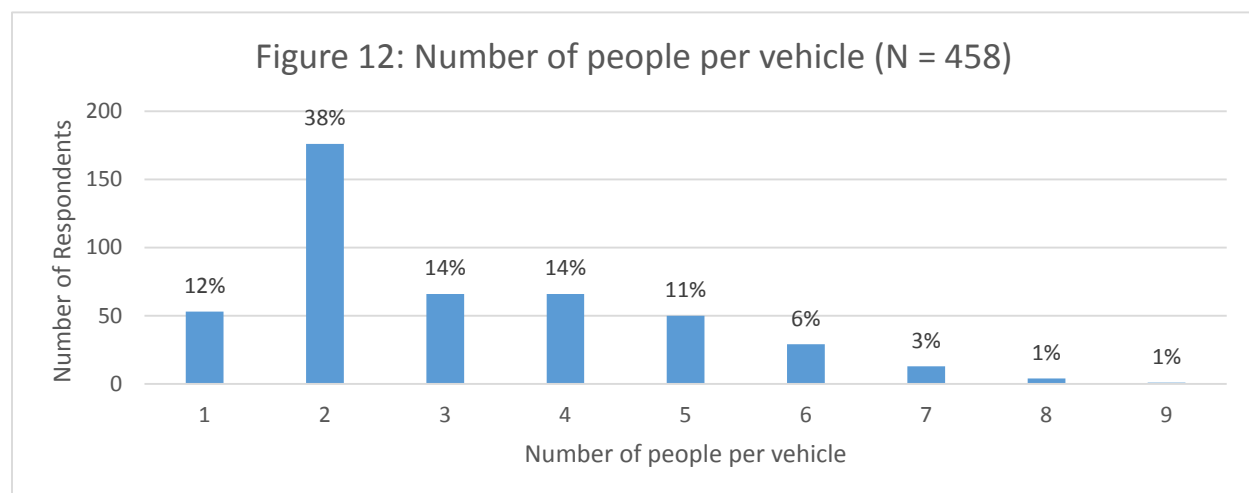
Walked on my own

Other Please describe: _____

The most common mode of transportation respondents used to reach their desired recreation site was their personal vehicle (94%). Of the other two modes of transportation, 2% biked and 4% walked. Figure 11 presents the modes of transportation used by respondents to reach their desired locations on the PLGD.



The respondents who used their personal vehicle to reach their desired location were asked how many people total were traveling in their vehicle. The median number of people per vehicle was two (mean = 2.98) with a range of 1-9. Figure 12 presents the number of people per vehicle.



If a public transit system were available, would you have used it today to reach this recreation site?

Yes ***No***

Please explain: _____

Respondents were asked if they would have used public transportation to reach their desired location the day they were surveyed, and 83% said they would not, and 17% said they would have if it were available. Content analysis was performed on the comments left by respondents to gain a better understanding of why respondents would or would not have used a shuttle the day they were surveyed.

Of the comments left by respondents explaining why they would not have used a shuttle to reach their desired location, the most common reason was because respondents said they like driving themselves. Another common reason respondents gave was because they would not have been able to carry their gear, dog, etc. with them, along with not having control over when they come and leave. Some respondents also said they live so close that it does not make sense to use a shuttle, and some just said they just do not like public transportation and they don't want to see it in the mountains.

The three most common reasons respondents gave for wanting to use a shuttle system were 1) to cut down on congestion in parking areas, 2) because they would like to support public transportation, and 3) it would save them money on fuel.

A large portion of respondents who said they would have used a shuttle had stipulations, such as, they would have used a shuttle if they could bring their dog, had time to wait for it to pick them up and drop them off, or they said it would have to be *very efficient*.

To which of the following sites would you like to see shuttle transportation?

Timpanogos Cave NM

Timpooneke

Mt. Timp/AG

Sawmill (Cross Country)

Summit

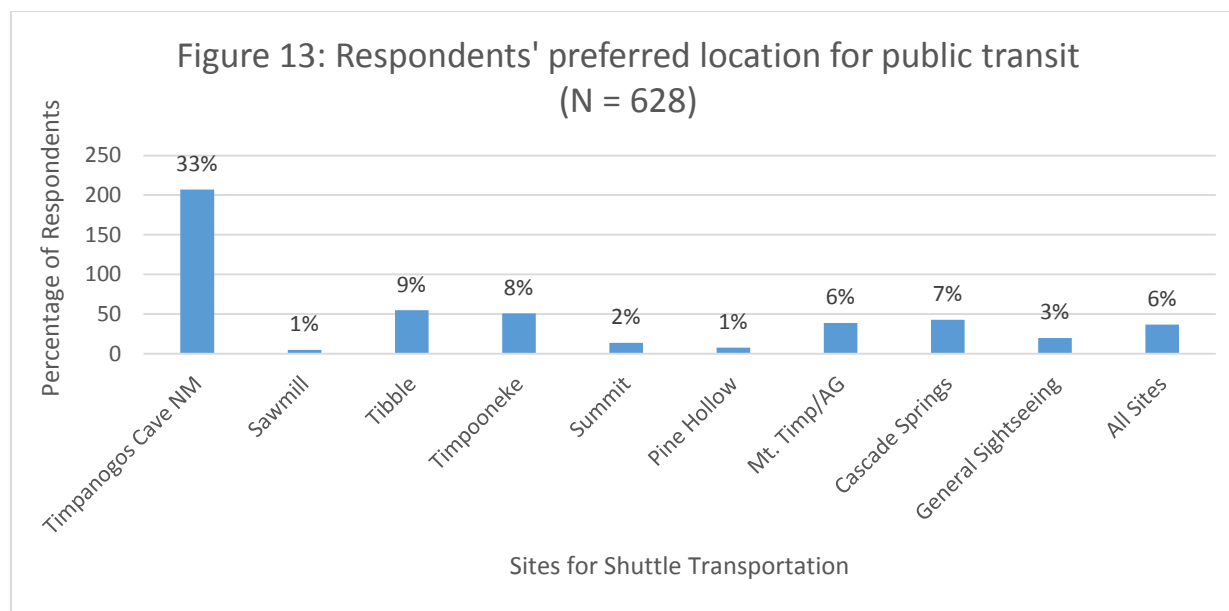
Cascade Springs

Tibble

Pine Hollow

General Sightseeing

Respondents were then asked to pick sites where they would like to see shuttle transportation, and 33% said they would like to see a shuttle system implemented for Timpanogos Cave National Monument. Tibble Fork Reservoir (9%) was the next most desired location for shuttle transportation. Only 6% said they would like to see shuttle transportation to all of the sites (Figure 13).



If you could choose just one or two words to describe your personal feelings about American Fork Canyon/Alpine Loop what would the word(s) be?

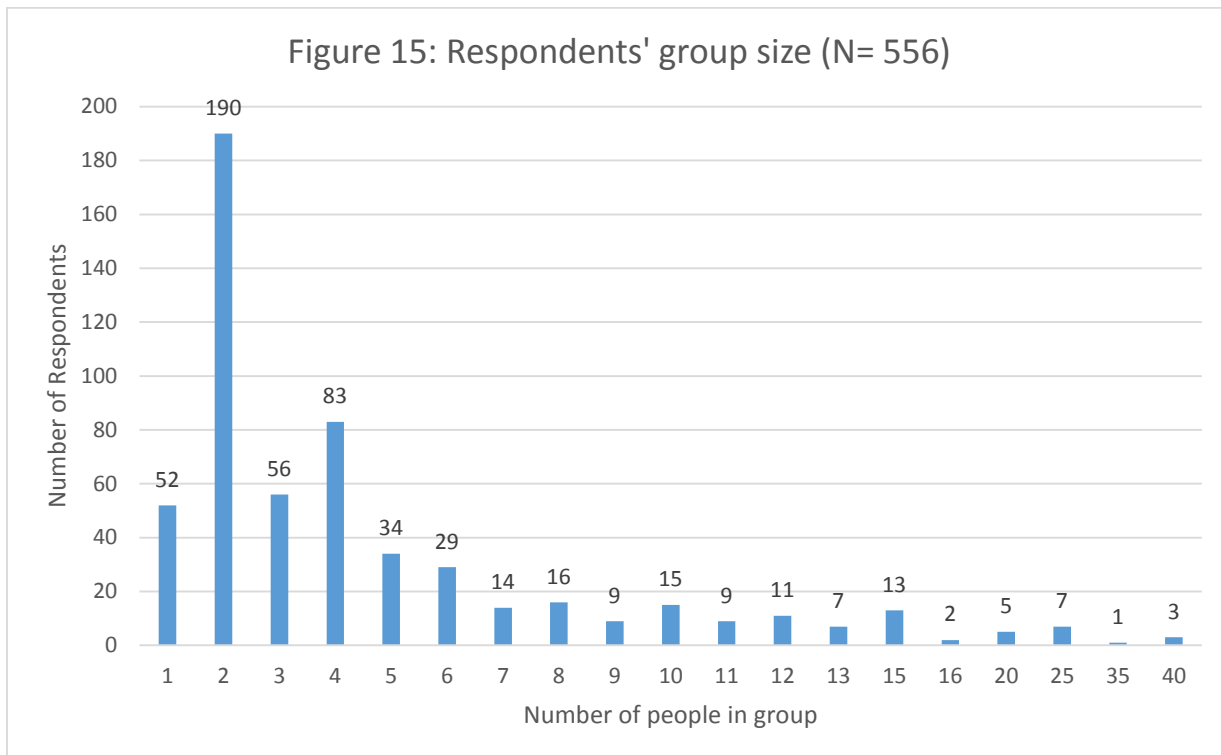
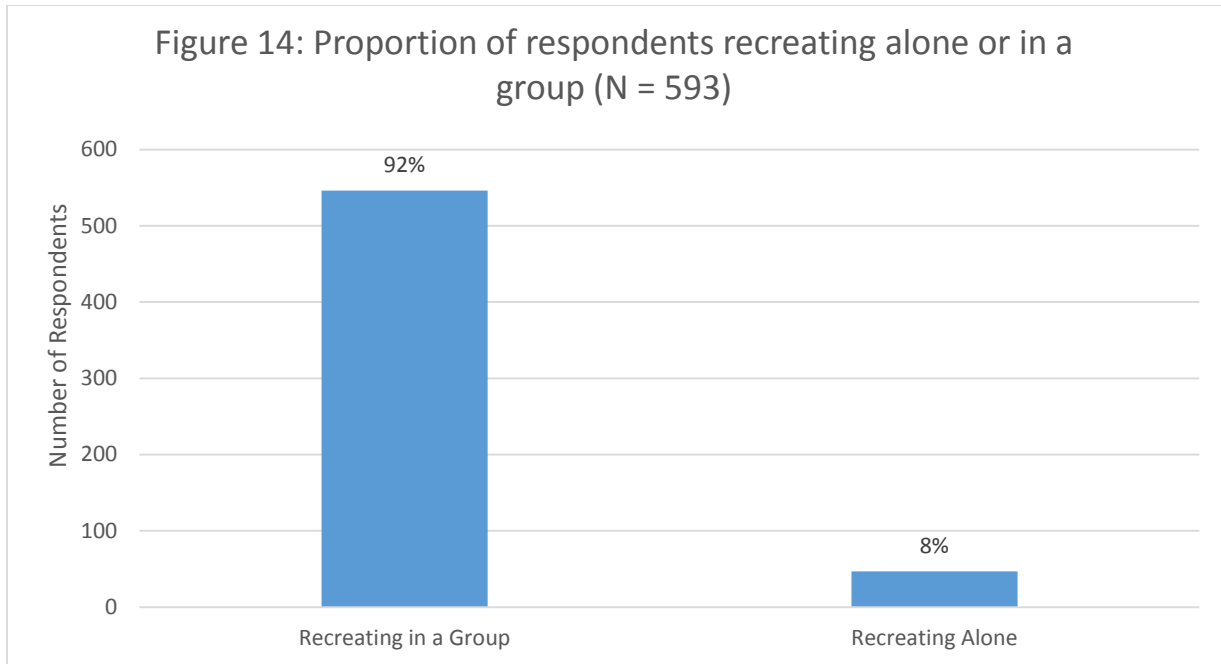
The word map on the cover page of this report was developed from the frequency of words respondents used to describe their personal feeling toward the PGRD. The website *Tagul* was used to develop the word map. For a larger image of the word map, please refer to Appendix F.

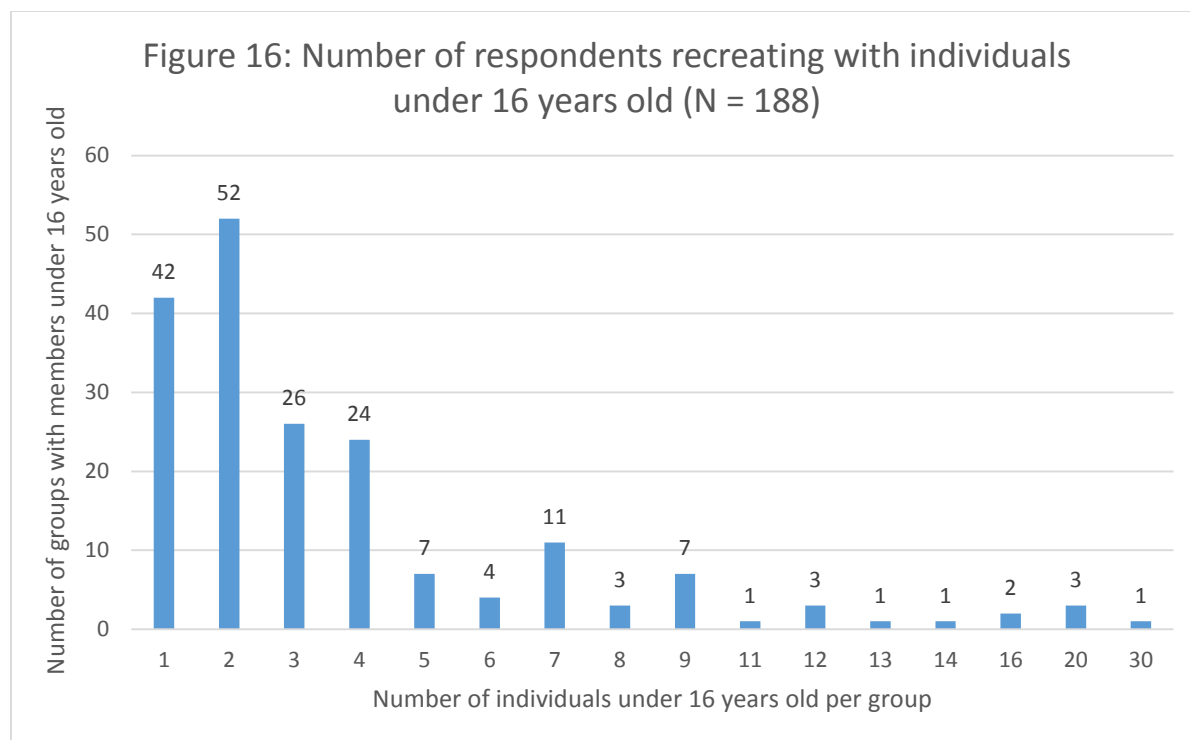
Are you recreating alone today? Yes No

If No, how many people (total) are in your group? _____ people

Of these, how many are under 16 years of age? _____ people

The number of people recreating in a group rose over the summer to 92%; during the spring 74% of respondents were recreating in a group (Figure 14). The size of groups also rose from a median group size of two in the spring to three over the summer (spring mean = 3.32; summer mean = 4.69), and the range was from two to 40 people (Figure 15). Of the 92% of respondents who were recreating in a group, 34.4% had group members who were under 16 years of age (Figure 16).





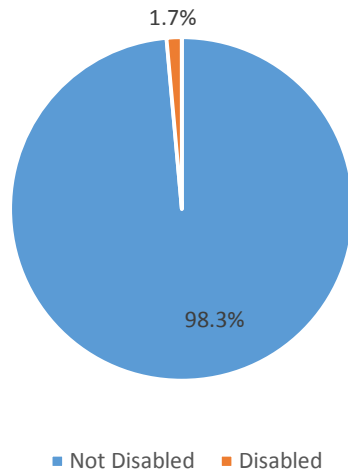
Does anyone in your group have any disabilities? Yes No

If Yes, were the areas and facilities you visited accessible? Yes No

If No, please explain: _____

Of the 369 who responded to the question, eleven (1.7%) reported themselves, or someone in their group as being disabled (Figure 17). Respondents who reported themselves, or someone in their group as being disabled were then asked if the sites and facilities they visited were accessible, and nine said “yes,” they were accessible. One respondents did leave a comment saying, “Provide better signage that tells people with disabilities where things get steeper/harder so it’s not an all or nothing experience.”

Figure 17: Proportion of respondents who reported being disabled or having a disabled group member(s) (N = 632)



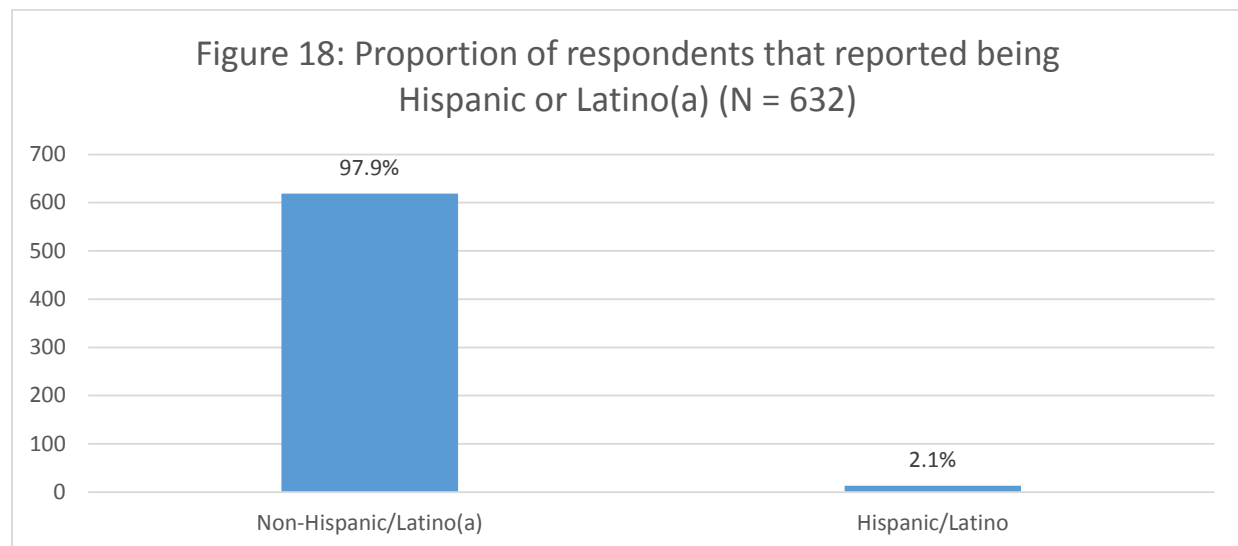
Do you consider yourself Hispanic or Latino(a)?

Yes, Hispanic or Latino(a)

No, not Hispanic or Latino(a)

Respondents were asked if they considered themselves Hispanic or Latino(a). Of the 632 people who responded to the question, only 13 (2.1%) identified as Hispanic or Latino(a). Figure 18 presents the proportion of respondents who identified as Hispanic or Latino(a).

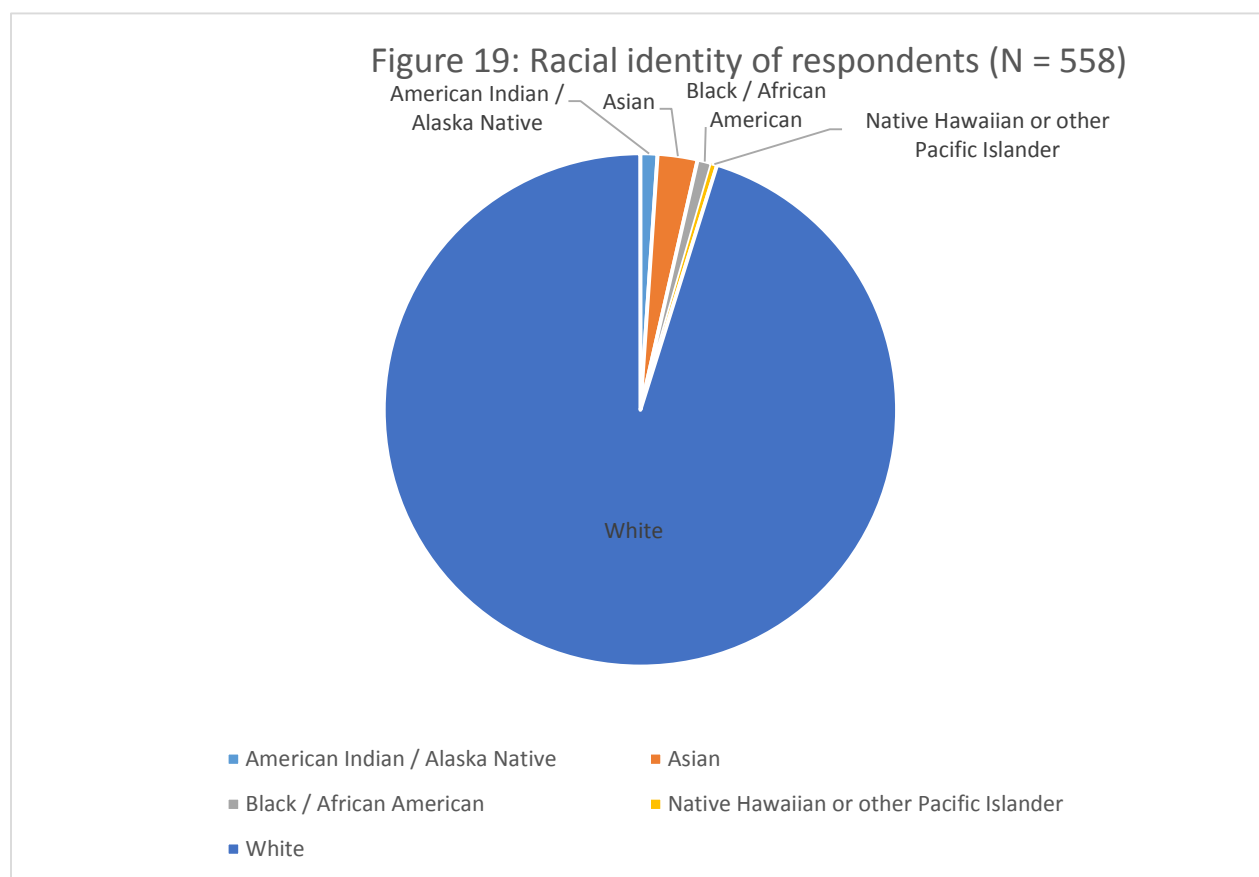
Figure 18: Proportion of respondents that reported being Hispanic or Latino(a) (N = 632)



With which racial group do you most closely identify?

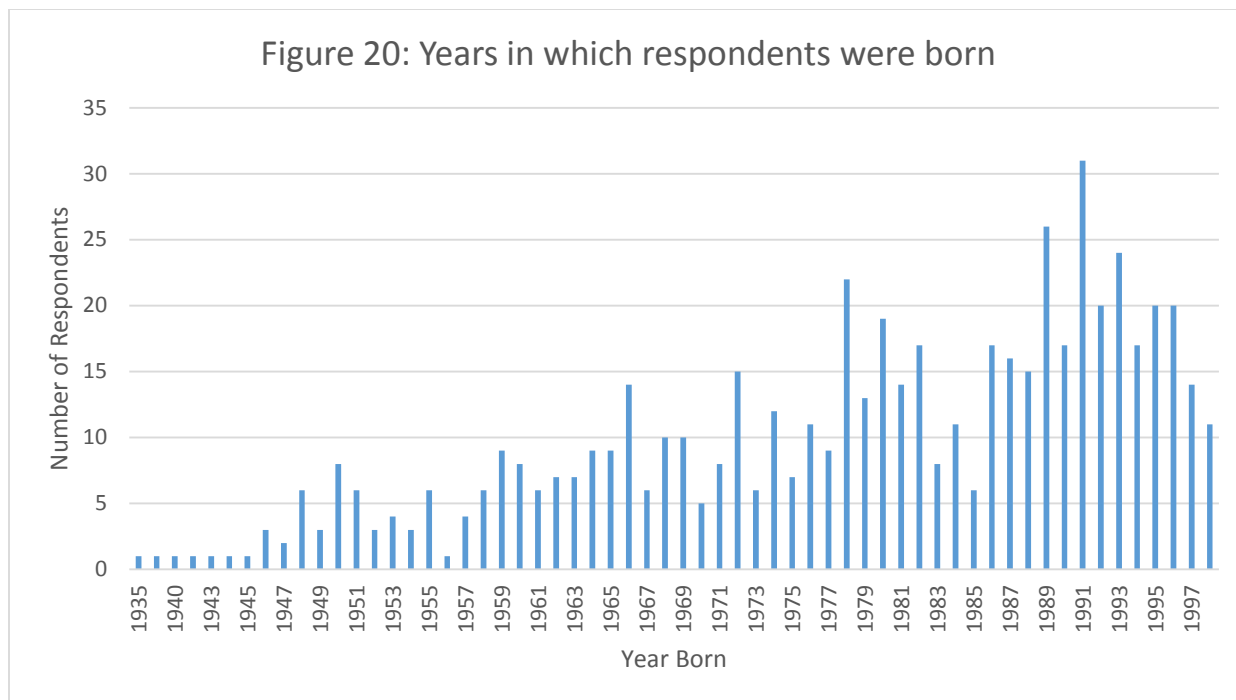
- American Indian/Alaska Native**
- Asian**
- Black/African American**
- Native Hawaiian or other Pacific Islander**
- White**

Respondents were asked which racial group they most closely identified, and 95% identified as “white.” “Asian” (3%) was the next most common racial groups respondents identified, followed by “Black/African American” (1%) and “American Indian/Alaska Native” (1%) (Figure 19).



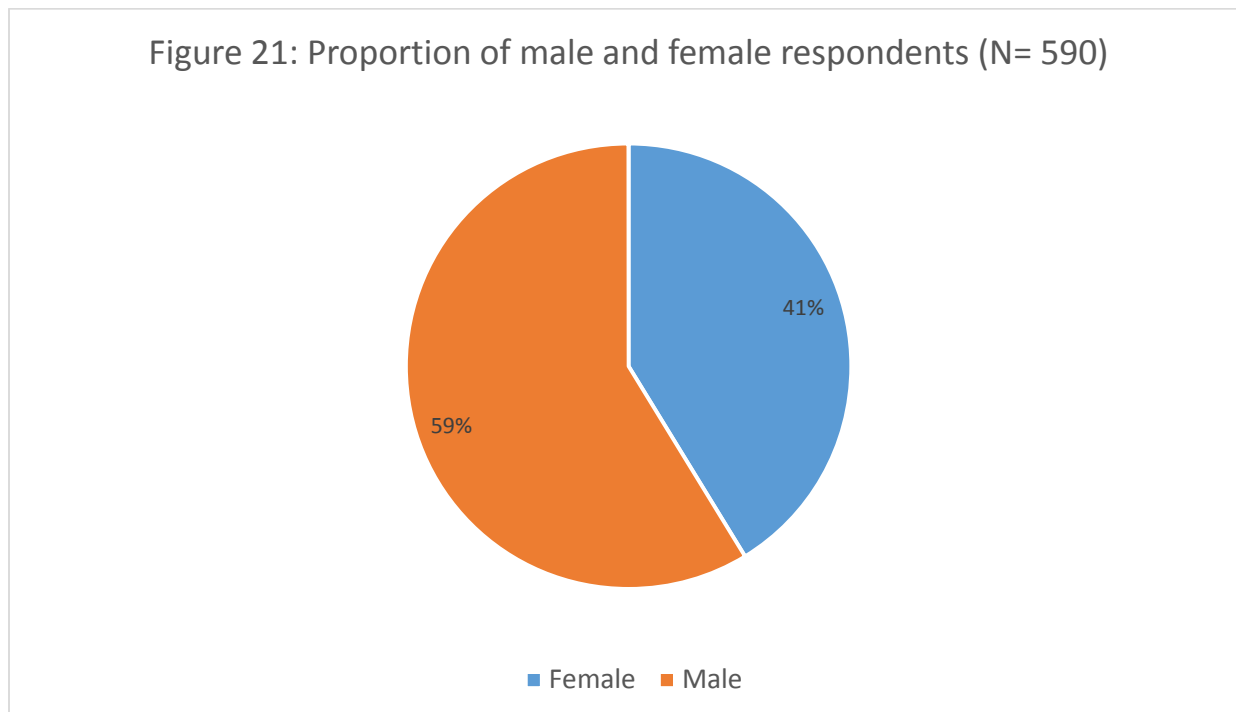
***In what year were you born?* _____**

The median age of respondents was 33 years old (mean = 42 years old), and the range was from 18 to 80 years old. During the summer, the median and mean ages increased from the spring’s median of 28 years old (mean = 35), to the summer’s median of 33. Figure 20 presents the distribution in respondents’ ages.



What is your sex: Male Female

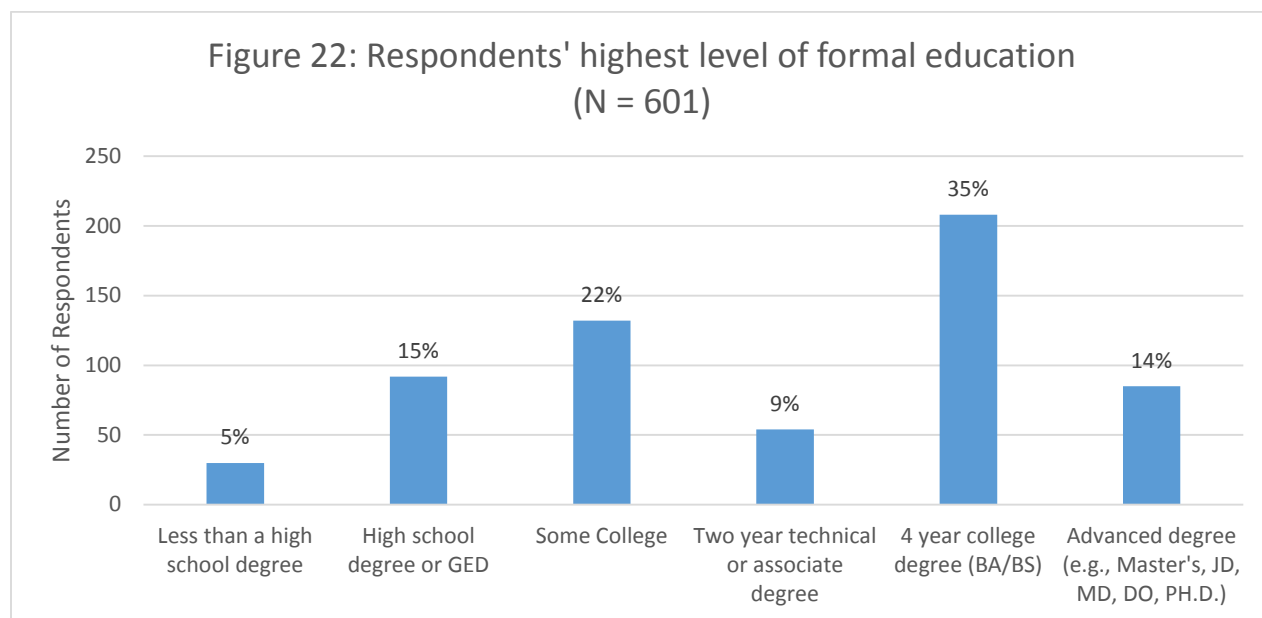
More males (59%) were surveyed than females (41%). Figure 21 presents the proportion of males and females recreating on the PGRD.



What is the highest level of formal education you have completed?

- Less than a high school degree* *High school degree or GED*
 Some college *2 year technical or associate degree*
 4 year college degree (BA/BS) *Advanced degree (e.g., Master's, JD, MD, DO, Ph.D.)*

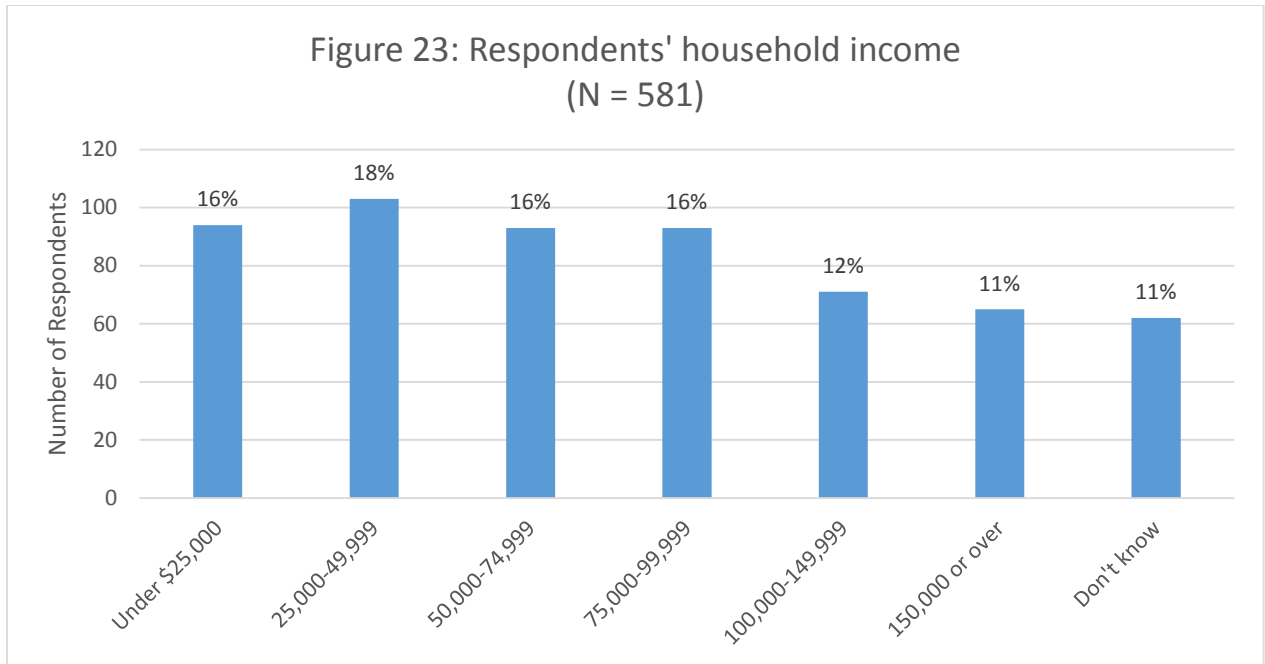
There was a wide distribution in the level of respondents' formal education. The largest proportion (35%) had a "4 year college degree (BA/BS)", and the next highest proportion (22%) had "some college". Figure 22 presents respondents' highest level of formal education.



Information about income is important because people with different incomes come to Public Lands for different reasons. What is your annual household income?

- Under \$25,000* *\$100,000-\$149,999*
 \$25,000-\$49,999 *\$150,000 or over*
 \$50,000-\$74,999 *Don't know*
 \$75,000-\$99,999

There was a wide distribution in respondents' household incomes. Both the mean and median household incomes fell within \$50,000 - \$74,000. Figure 23 presents the distribution in respondents' household incomes.



Appendices

Appendix A: Comments for Forest Service

If you could ask the U.S. Forest Service to change some things about the way they manage American Fork Canyon/the Alpine Loop, what would you ask them to do?

A few more trails, or more information about them.

A little bit less easy to access.

A little more maintenance on trails. Outreach to groups, trees cut too close to trail between the switchbacks above Tibble and where it joins up with 252.

A sign designating the Timpanogos Trail better.

Actually charge people for cutting trails, littering and being loud people.

Add a bike lane.

Add a sign right before Horsetail falls.

All good.

Allow public drinking.

Apps that show campground usage or to have digital sign.

Ask for more money from Congress.

Ban motorcycles off these trails. Noise and safety issue. Prefer not to have expansion of ski resorts in AF Canyon; it would cause too much traffic and impact atmosphere. The one place I come to get away for it all.

Bathroom on Timpanogos Trail.

Battle Creek parking is too rocky.

Be stricter on having equestrian clean up after their horses.

Be very proactive about protecting Wilderness and unspoiled backcountry.

Better access to back country roads. Some of the roads we used to use as kids are closed now. More road base going up to Silver Lake Flats.

Better advice about what is open and what is not (e.g., campgrounds) at base of canyon. Driving difficulty has increased with bikers. Lock gate at Silver Lake. Don't swap land with Snowbird.

Better bathrooms, and campsites that are easier to reserve. Don't let people just park a trailer to reserve a campsite for the weekend.

Better bathrooms, or full service bathrooms. Bathrooms on both ends of Tibble Fork.

Better directions to places.

Better directions, more signs.

Better management of stinging nettle.

Better maps and directions on how to get places.

Better marked signs with mileage, difficulty, etc. Information about trail conditions. Easier to find trails on the web to plan our trip. Better cared for bathrooms.

Better road to Silver Lake.

Better road to Silver Lake, more restrooms with running water, widen Alpine Loop.

Better roads (wider) to allow room for runners and cyclists.

Better sign marking Timpanogos Trail Head so you don't go to Stuart falls instead.

Better signs on trails.

Better signs with mileage.

Better signs, I didn't realize AF Canyon branched out in so many ways. Could the road be widened a little without too many impacts?

Better smelling bathrooms (The restrooms in BCC are way better maintained).

Better trail map resources; better signage - e.g. mileage for trail junctions.

Better trail signs.

Better trail signs on Timpanogos.

Better trailhead maps.

Better, cleaner maps and signs.

Bike lane.

Charge less money.

Cheaper camping.

Clean restrooms more.

Clean the trash.

Clean up walls of restroom.

Cleaner bathrooms.

Cleaner bathrooms in AF canyon.

Cleaner/nicer bathrooms.

Clear plants for trails; bathrooms.

Create leash-less dog park.

Cut down the stinging nettle that hangs over the path.

Cut more single track.

Dangerous traffic for kids around the entrance of Little Mill. Charge fee for every car entering the canyon. Trash service for campgrounds.

Dirt roads have too many dips and pot holes.

Do not allow Snowbird into AF Canyon.

Do not limit access in the future (motorized vehicles). Fees kind of limit access too, but I don't understand why.

Dog friendly.

Don't allow development.

Don't allow Snowbird to expand into AF canyon.

Don't allow snowbird to expand. Fix Timpooneke parking issue.

Don't build any more buildings.

Don't change.

Don't charge for admittance; take reservations for camping.

Don't develop any more, no ski resort in AF.

Don't expand Wilderness.

Don't open it up to more ATV's or snowmobiles.

Don't sell/trade any land to Snowbird.

Don't change the way they manage things.

Easier road/access.

Educate people on self-reliance while hiking.

Emergency accessible areas, Fish and Game.

Empty toilets more often (stinky), provide trash service in campground.

Encourage people to not litter, trash can at Dry Creek (Alpine).

Enforce horse poop clean up. Help people care more about not leaving trash.

Enforce non-motorized (e.g. Grove Creek).

Figure out how to control the pine beetle.

Fill in holes on dirt roads.

Find a way to obtain more money.

Fix bathrooms, they smell bad.

Fix road to Silver Lake.

Fix the shelter at Emerald Lake.

Focus ATV use in one area or specific trails for dirt bikes and mountain bikes (separate trails).

Free entry.

Free parking.

Garbage cans.

Garbage cans near picnic areas.

Get rid of guys in charge.

Get the trail crew in the Wilderness a bit more. Better education about areas, impacts, and Wilderness.

Good job.

Grade road toward mineral basin.

Great job - would like better signage.

I don't like the fee station, it takes too long, I have an annual pass.

I don't think that dirt bikes belong up here. I like the small road. Don't allow ski resort development at Tibble Fork.

I enjoyed everything, it seemed well maintained.

I register my ATVs, a % of that money goes to maintaining trails. I shouldn't have to pay the day use fee.

I would like a 1 day pass.

If we have to pay for camping, we should be able to dump our garbage here (Little Mill).

Improve bathrooms.

Improve dirt road to Silver Lake, barriers on side of road.

Improve parking and roads.

Keep a closer eye on the bathroom: toilet paper/cleanliness.

Keep doing all the wonderful things you are doing.

Keep doing what you're doing.

Keep hiring friendly people and don't put in shuttles.

Keep open for OHV.

Keep paved roads clear of debris (Fist sized rocks or larger).

Keep roads maintained better.

Keep snowmobiles out of Wilderness - they are going there.

Keep the recreation in AF free, keep Snowbird out.

Keep trails open to motorized use.

Keep trails up-to date with natural disasters that have happened (on websites or signs).

Large map of area.

Larger fish planted.

Larger parking at Timpanogos TH on AF side. Against the privatization of public lands.

Leave it the way it is - it's not perfect, but it's as close to heaven as we're going to get.

Less logging, more preservation.

Less money.

Less motorized bike access.

Less people on Timpanogos trail.

Less rocks on Timpanogos trail.

Less trash on trails, remove large rocks from trails/roads.

Let us know about events.

Limit impact of ATVs.

LIMIT motor use in the area, dangerous for horse riders. They also destroy the trails.

Limit the access to cars past Tibble Fork. Better maintain the roads.

Limit the number of people.

Litter control.

Lower fees.

Lower prices on group sites, \$100 for 4 hours is too much; Keep roads better, sides of roads are chipping off.

Lower the price.

Maintain more non-motorized access! Focus OHV crowd in one area.

Maintain restrooms better, better education (e.g. don't poop on the trail), refurbish structure below Timpanogos, bathroom by Timpanogos.

Maintain roads.

Maintain things better.

Maintain trails a little better toward Horsetail falls, lots of loose rocks.

Maintenance of off-road trails can be improved. More frequent clearing (especially up to Timpooneke).

Maintenance of facilities; open gate earlier if snow has melted.

Make dirt roads a little better, fewer large rocks.

Make it bigger.

Make it cheaper to come up, it adds up for how much I come up.

Make more campgrounds, \$6 is kind of a steep price if we have a lot of cars.

Make passes more affordable (Annual).

Make people more responsible about leaving trash.

Manage it like a Wilderness area as much as possible (ATV's). Motorcyclists are polite but ATV's are not. We oppose ski area development.

Manage parking.

Manage single track trails for dirt bikers and other activities.

Mark Timpanogos trail with mile makers.

Mark trails better - name, basic info, bathrooms, map - more user friendly. Sign day use pass.

Maybe something for all ATV's and OHV people so they aren't just racing up and down dirt roads.

Minimal management is good.

Monitor people speeding (motorbikes and cars), reduce people leaving trash.

More affordable yearly passes for locals.

More available self-serve sites.

More bathrooms.

More bathrooms and drinking fountains.

More campgrounds, keep dog friendly.

More campgrounds, widen the Alpine Loop.

More camping, reduced fees, more bathrooms.

More campsites.

More campsites available.

More clarity about Snowbirds desires and intentions in regards to buying land around Mineral Basin. I have fears about 4x4 trails being shut down.

More cooperation with the Access Fund to help manage the area.

More constant trail maintenance for rocks.

More contact info (phone number).

More drinking water access; bike lane.

More first come first serve campsites.

More garbage cans.

More hiking and biking trails without motorcycle use.

More motorized trails please. Get rid of all people.

More oversight on people who are leaving trash and not putting out fires.

More parking.

More partnering with the Access Fund; I don't want to see Snowbird access this area.

More picnic areas.

More picnic areas at Tibble Fork; widen roads to allow bike lane.

More rangers to interact with.

More remote trails.

More signs at trailhead and AF Canyon mouth, e.g. where is camping allowed and not allowed.

More signs in campgrounds, we couldn't find our way out. Make it possible to pay with card when people aren't in booth.

More signs, better bathrooms in the foothills.

More signs, more clear for trails.

More signs/maps on trails.

More trail makers on Timpooneke trail, especially at the top, because there was snow.

More trails.

More trashcans.

More water access; better bike lanes!

More water stations for fill-ups, etc.

More wildlife.

Move the rocks off of the main trail in Dry Creek (Alpine).

Nicer bathrooms.

Nicer bathrooms in AF Canyon.

No diminished OHV.

No land swaps that diminish OHV use.

No more development (ATV's, snowmobiles, campgrounds).

No more roads or developed campsites.

Not enough first come first serve campgrounds.

Not too over developed.

One more restroom facility.

Open gates sooner in the spring.

Open trails sooner.

Open up more undeveloped camping sites for people to use instead of blocking sites with big boulders.

Open up of the toilets in the winter at Timpooneke and Granite Flats.

Patrol it and keep the people on the trail. Enforce people without spark arrestors (mufflers) on OHV's.

Pave road up to Silver Lake and Rocky Mountain Campground.

Permit system to hike Timpanogos.

Photographing people.

Place picnic tables at Salamander Campsites; keep personal enterprise out of this pristine canyon.

Poop bags for dogs.

Post distance along trails.

Potable water in dry season. Remove stinging nettle, more signs. Slightly wider roads.

Preserve, reduce, reuse, recycle!

Prevent Snowbird from developing condos.

Price is a little high.

Promote people to clean up after themselves.

Provide better maps at the beginning of locations.

Provide garbage service in the campground. People don't tend to pack out their trash. Water spigot at each campground.

Put a bike trail away from the road in AF canyon.

Put a shoulder for bikers.

Put chemical on road to make it packed and less dusty.

Put hand sanitizer in the bathrooms.

Put some restrictions on ATV's, limits on where they can go. Keep Snowbird out of Mineral Basin.

Put toilet paper in bathrooms and make them less stinky. Fewer reserved campgrounds.

Quit developing the area.

Reduce cost of admission.

Reduce fees for people who are using it less.

Reduce price to free.

Reduce traffic.

Reduce traffic flow.

Regulate the OHV's (razors); they drive too fast.

Remove more rocks on the Timpooneke trail.

Resolve parking issues at Timpooneke Trailhead and Timpanogos Cave NM.

Road bike lanes.

Road maintenance/pot holes; not blocking undeveloped campsites with boulders, widening certain parts of roads e.g. Alpine Loop.

Running and biking trails by the main road.

See a breakdown of how funds (fees) are used. Does fee filter the socio-economic groups that visit the canyon? For example, does the fee limit access for low wage people?

Seems perfect to me.

Set up speed limit above Tibble Fork and have someone monitor it.

Single day passes for cheaper.

Soap in bathrooms.

Some of the roads are not kept up as well as they could be.

Steps on steep areas on Timpanogos trail.

Stock more fish at Silver Lake and Tibble Fork.

Stop closing hard trails/add multiple difficulties to spread out users. Public input or trail cleaning.

Stop cutting down baby trees and how people don't properly put out fires.

Stop letting Snowbird take over parts of the canyon.

Stop taking away ATV trails (e.g. past Kiwanis Park).

They do a great job.

Tighten up on coming into the camps and making sure people are taking out their garbage.

Times when roads are closed for cars, but they could be accessible for motorcycles.

Toilet on the way to Timpanogos—make it better. Put more toilet paper in the bathroom by the Theater in the Pines.

Traffic - speeding, people leaving trash.

Trash cans at trailheads, packing out dog stuff sucks.

Trash management.

Trim back brush along trail at Steward Falls and Timpanogos Trail.

When snow years are bad, open gates on Alpine Loop SOONER.

Widen Alpine Loop.

Widen Alpine Loop Road.

Widen narrow areas of the road to make them safer.

Widen the roads.

Widen the roads or put a barrier up on the cliff turns.

Wider trails where they are too narrow.

Wonderful place.

Worried about access to areas if Snowbird expansion is allowed.

Wouldn't want to see things expanded.

Appendix B: Respondents reasons for picking sites by site.

Saw Mill	Close
	New
	River, level trail
	Visiting friends
	Visiting friends
Grey Cliffs	Climbing
	Close
	Close to home
	Close to home
	Familiar
	Only camping area available
	Pretty
	Rock climbing
	Short hike, level of climbing
	Very close, dogs allowed
Little Mill	Access
	Access, dog friendly
	Camping
	Climbing
	Climbing
	Convenient
	Familiar to us
	Family gathers
	Heard about the climbing
	Not crowded, fire pit
	On the river
	Picnic
	Shade
	Shade, good climbing
	Shade, privacy, fire
Space for tents	
Pine Hollow	Access, less traffic
	Close
	New to area
	Outside
	Scenery, picnic
Summit Trailhead	Bathroom

	Beautiful scenery
	Beauty, low traffic
	Close
	Close
	Close and great trail
	High elevation
	Mountain Biking
	Ride
	Scenery
	Scenery
	Scenery
	Scenery, altitude gain
	Trail
	Trail
	Trail
	Trail
	Training
	You can camp anywhere
Mt Timpanogos TH/Picnic Site/Theater in the Pines	Close
	Close and short hike
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home, good hike
	Close to home, waterfall
	Close, trail
	Close to home, water fall
	Dogs allowed
	Easy for kids, waterfall
	Easy hike, scenery, falls
	Easy trail
	Exercise
	Falls
	Falls
	Falls
	Falls
	Falls, scenery
	Falls, short hike

	Good trails
	Great trail, waterfall
	Hang out and visit short falls
	Have fun
	Hike
	Hike for exercise
	Hiking
	Hiking
	Hiking to falls
	Hiking, to be in nature
	I have a connection to TERT
	It's new to us
	Just to get out
	Landscape
	New to us
	New to us
	New trail
	New trail
	New, trail
	Not too many people
	Scenery
	Scenery
	Scenery, close to home
	Scenery, summit Timpanogos
	Scenery, trail
	Steward falls
	Stewart falls
	The falls
	The falls
	Timpanogos Peak
	Told to do so
	Trail
	Trail
	Trail accessibility, shady picnic areas
	Trail has shade, bathroom
	Trail to Timpanogos
	Trail, shade
	Trailhead
	Trails, scenery

	Training
	Very scenic, peaceful
	Visit with family
	Ward activity
	Waterfall
	Waterfall
	Waterfalls, trails
Salamander Flat	Camping, horseback riding
	Familiar
	Flat area
	Free camping, toilet, trails
	Trails, parking for horse trailer
	We like the high country
Roadhouse	Bathrooms, picnic tables
	Close to home, trails, place to ride quads
	Close, fish, picnic tables
	Easy access to water
	Easy access to water for small children
	Fire pit, river
	Four-wheeling
	Good tree cover, river
	Location from home
	Nice trees, river
	Picnic
	Picnic and grills
	Picnic area/site, close to creek
	Picnic table
	River
	Show our brother-in-law from CA
	Sister knew area
	Water, stream
Martin	Birthday picnic
	Close
	Familiar
	Favorite spot
	Nice, beautiful place to be with family
	Picnic
	Picnic
	Picnic tables, fewer people

	Picnic tables, shade, scenery
	Picnic with family
	Picnic, river
	Scenery
	Water, bathrooms
Mile Rock	Bridges and water
	Cascade was closed
	Hiking/walking
	I know there are fish here
Tibble Fork	AF vision up here
	Bathrooms
	Bathrooms
	Beautiful/scenic
	Beauty
	Been here before
	Been here before, ease of access
	Close
	Close
	Close
	Close
	Close
	Close
	Close
	Close
	Close by
	Close proximity
	Close to family
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home
	Closest fishing spot
	Cool weather
	Dirt trails (OHV)
	Easy access to remote locations
	Familiar
	Familiar

	Familiar
	Family
	Fewer people
	Fewer people, close to home
	Fish
	Fishing
	Fishing
	Fishing
	Fishing
	Fishing location close to home
	Fishing, camping
	Fishing, scenery
	Friends choice
	Good fish
	Higher elevation
	Just out for a while
	Lake
	Lake
	Lake
	Lake, picnic
	Location
	Memories
	Motorcycles
	My sister forced me to
	Natural beauty
	Nature
	New hike
	New to us
	Nice, close to home
	OHV
	Peace, calm
	Pretty scenery
	Pretty scenery, familiar
	Proximity
	Rain
	Scenery
	Scenery
	Scenery
	Scenery

	Scenery
	Scenery, close to home
	Scenery, close to home
	Scenery, escape the heat
	Scenery, familiar
	Scenery
	Single track
	The wild above Tibble for is the best
	Trail
	Trail
	Trail
	Trail
	Trail (OHV)
	Trails
	Trails and scenery
	Water
Snake Creek	Adventure, new
	Beautiful trails for horseback riding today
	Close
	Familiar
	Fun off-roading
	Hiking, camping
	New
	Pretty
	Scenery
	Scenery, close to home
	Scenery, proximity to Heber
	To get away from people
	Trails
	Trees, trail
Soldier Hollow	Beautiful scenery
	Challenging, beautiful
	Close to home
	Close to home, easy access
	Cool temps
	Good venue
	Near us
	Nice area
	Nice area

	One of the better ones
	Pretty scenery
	Single track
	Spring
	Trail riding
	Trails
Dry Creek (Alpine)	Beautiful trail, falls
	Close
	Close
	Close
	Close
	Close
	Close
	Close to home
	Close to home
	Few people
	Fewer people, scenery
	Have not been here
	Hike to waterfall
	Hike, close to home
	Meditation
	My friends chose this area
	New
	New to me
	Proximity
	Scenery
	Short walk with son
	The trees
	Trail, close to home
	Waterfall
	Waterfall
	Waterfall
	Waterfalls
	Wildlife!
Grove Creek (Pleasant Grove)	Close
	Close
	Close
	Close
	Close

	Close
	Close to home
	Close to home
	Close, trail
	Dogs allowed
	Get away
	Peace
	Solitude
	To take dogs for a walk
	Trail run
	Trail, fewer people
Battle Creek (Pleasant Grove)	Beauty
	Close
	Close
	Close
	Close
	Close
	Close
	Close
	Close
	Close
	Close
	Close
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home
	Close to home
	Date
	Easy hike
	Easy, close
	Exercise
	Familiar
	Familiar
	Family day hike
	Family hike
	Family hike

Fewer people
Fewer people, falls
Free food
Good hike
Good mountain bike trails
Great for kids
Hang out with the family
Hear a lot of good things
Hike
Hike
Hiking
I know the trail
It's close
Just along for the trip
Length of trail
Length of trail, family friendly
Looked cool
Moderate hike
Needed to get out in nature
New to me, trail
PG day hike
Picnic area
Pretty hike
Pretty waterfall
Quiet
Scenery
Scenery, trails
Scenery, waterfall
Short
Short hike
Short hike, pretty
Short hike, waterfall
Social
Sounded fun
The length of the hike, the waterfall
Tradition
Trail
Trail, shade
Trail, short hike

	Trails
	Water
	Waterfall
	Waterfall, easy hike
	Waterfalls
	Waterfalls, trail
Dry Canyon (Lindon)	Baldy
	Close
	Close
	Close to home
	Close to home
	Close to home
	Fewer people
	Fewer people, close to home
	Get away
	Live close
	Live close
	Live close
	Lower elevation hike
	New to us
	Running
	Scenery
	Short hike
	Solitude
	Trail
	Trail run
	Trail, few people, scenery
	Trails
Upper Mill	Convenience
	Good tracks
	Higher up, single track
	Love the loop
	Single track
Cascade Springs Lower	ATV
	Bathrooms, fewer people
	Beautiful
	Beautiful scenery
	Beauty, scenery
	Cascade springs

	Cascade Springs
	Close by
	Close to home
	Close to home, really pretty
	Coolness of water
	Easy access
	Excellent review from prior visits
	Family choice
	Halfway point
	Memories
	New
	Scenery
	Scenery
	Scenery
	Scenery
	Shade, fewer people, scenery, close to home
	Spring
	The scenery
	To get out of the heat, springs
	Trail
	Trail, photography, picnic
	Trail, scenery
	Water
Dispersed Sites Between Tibble and Holman	Bigger camp sites
	Close
	Off the road a little bit
Mary Ellen Gulch Road	Big campground
	Big enough for our group
	Camp
	Capture the flag
	Close
	Close to home
	Close to home, fewer people
	Close to lake
	Convince
	Large campsites
	Off-roading
	Off-road trails
	Scenery, close to home

	Scenery, close to home
	Trails
	Visiting Mary Ellen's Gulch
	Wanted to see Marry Ellen's Gulch
Mineral Basin	Close
	Close
	Close, good unpaved riding
	Close, scenery
	Close, scenery
	Four-wheeling
	Fun, scenery
	Scenery
Timpooneke TH	Access
	Because I was told to
	Camping
	Challenge
	Challenging
	Close to home
	Dog friendly
	Falls
	Familiar
	Familiar
	Family chose site, nearby
	Fewer people
	Higher altitude
	Hike
	Hike
	Hike
	Hike Timpanogos
	Hiking
	Hiking a new trail
	I heard it was awesome
	It's really pretty and the terrain is off the Hook!
	long trail, dog friendly
	Mount Timpanogos
	New
	New experience
	New to us
	New to us, falls

	Scenery
	Scenery, short hike and close to home
	Scenery, sunrise
	Scenery, trails
	Scout falls
	Scout Falls
	Shade
	Shade, close to home
	Single track
	Single track
	Something new
	Summit of Timpanogos
	Sunrise hike on Timpanogos
	Sunrise hike up Mt. Timpanogos
	Sunrise, trail
	The peak
	The view
	Timpanogos
	Timpanogos summit
	To see Timpanogos
	Trail
	Trail
	Trail
	Trail
	Trail
	Trail, challenge
	Trail, dog friendly
	Trails
	Trails, scenery
	Wildflowers
Silver Lake Flat	Close
	Close to home
	Close to home, campsites
	Close to home, scenery
	Family selection
	Fewer people
	Fewer people, close to home
	Fishing
	Found it on Google

	Found it on internet
	Get away from crowds
	Hike
	Kayak
	Lake
	Lake, avoid crowd
	Lake, the view
	New
	New
	New hike, water
	New to us
	New trail for us
	Scenery, close to home
	Scenery, close to home
	Scenic
	Silver lake
	Swimming at Silver Lake
	Swimming, picnic
	Trail, view, lake

Appendix C: Comments by respondents explaining why their out-group encounters positively enhanced their recreational experience.

Always fun to see families.

Being happy.

Being helpful and informative.

Better when we are by ourselves.

Chatting.

Clean air.

Come during week because I know it's not busy.

Courteous.

Dog was funny.

Encouraging.

Everyone is pleasant.

Felt alone.

Friendly.

Friendly people.

Friendly smiles from everyone.

Friendly, enjoy nature together.

Friendly, made us smile.

Friendly, talkative.

Fun activity.

Gave us info.

Generally polite.

Good to see people having fun.

Good to see people outdoors.

Guy told us of trails.

Had hiking info.

Hung out.

Happy, positive people.
Hardly saw anyone.
He made me do a survey.
Hearing what others do up here.
Help with trails.
Helped me think about the bigger picture.
Helped with flat tire.
Helpful.
I like being away from people.
I like to see them enjoy themselves.
I liked talking to people.
I said "hi."
I stopped to pet their dog.
I try to avoid people.
It's good to see people.
It's fun to meet new people.
It's good to see other people enjoying nature.
Just happy to be outside.
Just to see and interact.
Kind.
Fewer people than I expected.
Loved being in nature and no people.
Loved it! Like that we had alone time.
Nice.
Nice and friendly.
Nice lady at the reservoir.
Nice motorcyclists.
Nice people.

Nice people.

Nice people/friendly.

Nice to be alone.

Nice to be alone.

Nice to chat with new people.

Nice to help them.

Not too crowded.

Not too many people. Enough to be friendly.

Peace, calm.

People were courteous.

People were friendly.

Positive and encouraging.

Quiet.

Ranger at station was helpful.

Said "hello."

Said "hello."

Smiles.

Talked to us.

They had cute kids and they smiles.

They let us know how far.

They waved and were nice.

They were encouraging.

They were friendly.

They were friendly.

They were nice.

They were really nice.

They were nice.

Took a picture of us.

Took photos for us.

Very approachable.

Very friendly.

Very friendly.

Very friendly backpackers.

Very friendly. Took photo of us and we took photo for them.

Very respectful.

Were kind.

Appendix D: Survey Schedule.

~ May 2015 ~						
◀ Apr 2015						Jun 2015 ▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4 Soldier Hollow (PM)	5 Pine Hollow (PM)	6 Tibble Fork (AM)	7 Roadhouse/Martin/Mile Rock (PM)	8	9 Soldier Hollow (PM)
10	11 Snake Creek (AM)	12 Battle Creek (PM)	13 Dry Creek (Alpine) (PM)	14 Roadhouse/Martin/Mile Rock (PM)	15	16
17	18	19 Saw Mill (AM)	20	21	22 Mt. Timp/Theater in the Pines (AM)	23 Tibble Fork (AM)
24 Dry Canyon (AM)	25 Mt. Timp/Theater in the Pines (PM)	26	27	28	29	30 Battle Creek (PM)
31 Grove Creek (AM)	Notes: AM = 7:00-3:00 PM = 12:00-8:00					

~ June 2015 ~						
◀ May 2015						Jul 2015 ▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5 Soldier Hollow (PM)	6 Battle Creek (AM)
7 Silver Lake (AM)	8	9	10 Little Mill/Grey Cliffs (AM)	11 085 GFA (AM)	12 Mill Canyon GFA (AM)	13
14	15 Salamander Flat (AM)	16	17 Dry Creek (Lindon) (PM)	18 Alpine Summit (PM)	19 Dry Creek (Alpine) (AM)	20
21	22	23 Picnic Areas in AF Canyon (PM)	24 Cascade Springs GFA (PM)	25 Aspen Grove (AM)	26	27 Tibble Fork (AM)
28 Timpooneke GFA (PM)	29 Mt. Timpanogos/Theater in the Pines (PM)	30	Notes: AM = 7:00-3:00 PM = 1:00-9:00			

~ July 2015 ~						
◀ Jun 2015						Aug 2015 ▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 Silver Lake (PM)	3 Soldier Hollow (PM)	4 Mill Canyon (PM)
5	6 Cascade Springs (PM)	7 Snake Creek (PM)	8 Dry Creek (Alpine) (PM)	9 Mt. Timpanogos/Theater in the Pines (PM)	10	11
12 Timpooneke Trailhead (AM)	13	14	15 Salamander Flat (AM)	16 Mt. Timpanogos/Theater in the Pines (AM)	17 Tibble Fork (PM)	18
19 Dutchman Flat/Schaffer Fork/Marry Ellen (PM)	20	21 Picnic Areas ((PM)	22	23	24	25
26	27 Mineral Basin Rd./085 Junction (PM)	28	29 Summit Trailhead (AM)	30 Little Mill/Grey Cliffs (PM)	31	Notes: AM = 7:00- 3:00 PM = 1:00- 9:00

Appendix E: Places and reasons respondents no longer visit

"Redneck alley" past Tibble Fork.

A lot of garbage up North Fork area.

Above Tibble Fork.

Above Tibble Fork, so much ATV traffic and camping.

AF—many people.

AF—really crowded there.

AF with my motorcycles, too many people.

Alpine Loop Road in winter (snowshoeing) negative experience with snowmobiles.

Aspen Grove.

Areas with ATV access.

Avoid motorized vehicles using trails.

Battle Creek—weird people at night.

Campgrounds, too many people.

Camping is expensive.

Campsites—just way too many people.

Cascade—so many ATVs, lots of trash.

Cascade Springs—there were 10 razors, they were loud.

Crowded trails—ATVs.

Developed areas, too crowded.

During high use weekends.

Horses on ATV trails. They can avoid me by going in Wilderness or horse trails, I cannot avoid them.

I don't like having to pay to access the canyon.

I don't mountain bike here in general because of motorcycles.

I don't ride my horse by Tibble Fork because of motorbikes (but I also use motorbikes).

I hate the motorbikes.

It does get very crowded on Timpanogos trail.

Just when it's overcrowded.

Lower campgrounds in AF Canyon.

Mineral Basin because Snowbird is blocking places now.

Motorized trails.

Provo Canyon, too busy.

Ridge trail, off Alpine Loop Summit - motor vehicles are there.

Salamander Flats—dirt bikes.

Sometimes avoid Ridge Trail on weekends.

Theater in the Pines—too many people.

Tibble—too crowded.

Tibble Fork.

Tibble Fork—ATV, fishing; Silver Lake.

Tibble fork—bikes tear up trails.

Tibble Fork—crowded, but expected.

Tibble Fork—too many people up there.

Tibble Fork—too many people, not enough quiet for me.

Tibble Fork Lake—too many people.

Tibble Fork Reservoir—too many people and a lot of litter.

Tibble Fork, too many people.

Tibble—motorbikes, some are cool, some are not.

Timpanogos over holidays.

Timpanogos trail—people listen to music with speakers.

Timpanogos trail—too crowded.

Too many motorized vehicles up by Tibble fork.

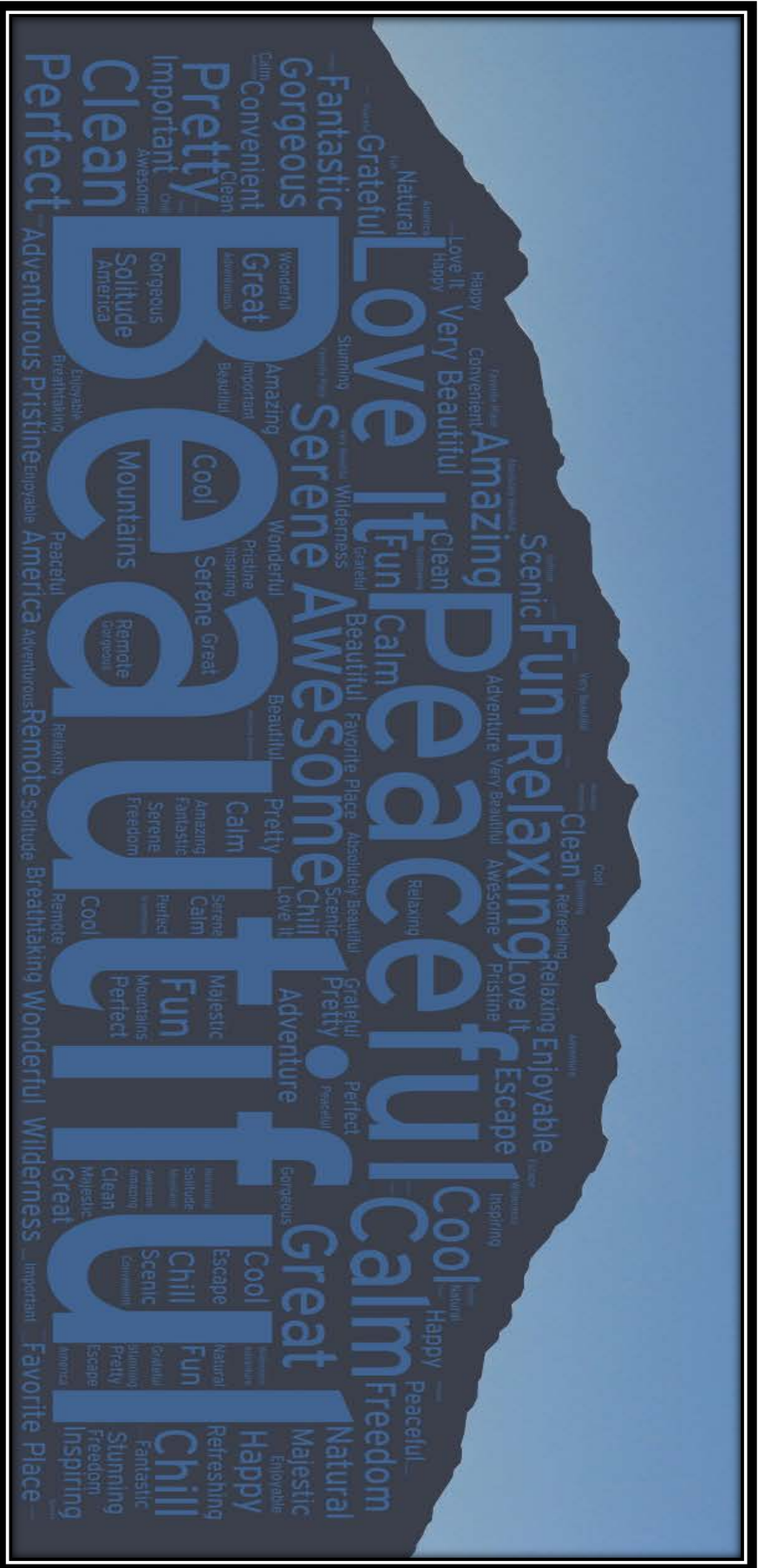
Too many motorized vehicles and 4 wheelers.

Too many people at Silver Lake and Tibble Fork.

Trails on Tibble and Mill that are damaged by motorcycles, but encounters are almost always pleasant.

Trails with ATVs.

Appendix F: Word map from the following intercept survey question, “If you could choose just one or two words to describe your personal feelings about American Fork Canyon/the Alpine Loop what would the word(s) be?”



Appendix G: Survey Instrument

Survey ID#: _____

(Please Leave Blank)

**Visitor Intercept Survey
Pleasant Grove Ranger District
Uinta-Wasatch-Cache National Forest**

Surveyor Introduction:

Hello! I am surveying visitors using the National Forest here on the Pleasant Grove Ranger District, as part of a study being conducted by Utah State University's Institute for Outdoor Recreation and Tourism, and we are very interested in learning more about you as a recreationist.

To Be Completed by Surveyor:

Date: _____ Day: M Tu W Th F S Su

Time: _____ Location: _____
a.m./p.m. _____

Surveyor's Name: _____

Your participation in this survey is voluntary and all of your answers to these questions will be kept strictly confidential.

1. Would you be willing to take a few minutes to complete this survey?

Yes No (If "No," ask for ZIP Code or County and record on DSF)

2. Are you a resident of the United States?

Yes If Yes, what is your Home ZIP Code? _____

No If No, what Country are you from? _____

3. How long are you going to be recreating on this trip to American Fork Canyon/the Alpine Loop?

Short trip under three hours

About half the day

The majority of the day

Overnight

Multiple days – If so, how many? _____ days

4. On this trip, are you planning on visiting any other sites in American Fork Canyon, or on the Alpine Loop besides this one? Yes No

If Yes, how many other sites are you going to visit? _____ sites

5. On average, how many times per year do you visit American Fork Canyon/Alpine Loop?

_____ times per year

6. What types of areas do you use most often when recreating here in American Fork Canyon/Alpine Loop?

Developed areas, such as developed campgrounds, picnic areas, etc.

Undeveloped areas, such as trails, dirt roads, rivers and lakes, dispersed camping, wilderness, etc.

I use both developed and undeveloped areas equally.

7. For **TODAY**, please check “✓” all of the Recreation Activities you have participated in (or will participate in). Then, **Circle** your **MAIN** activity or purpose for visiting American Fork Canyon/Alpine Loop **TODAY**.

✓	RECREATION ACTIVITIES
NON-MOTORIZED ACTIVITIES	
	Hiking/Walking
	Trail running
	Horseback riding
	Road cycling
	Mountain biking
	Fat biking
	Non-motorized water travel (canoe, kayak, raft, sail)
	Rock climbing
	Ice climbing
	Downhill skiing (Resort)
	Snowboarding (Resort)
	Cross-country skiing
	Backcountry skiing
	Backcountry snowboarding
	Snowshoeing
	Sledding, tobogganing
	Other non-motorized activities (races, endurance events)
MOTORIZED ACTIVITIES	
	Driving for pleasure on roads (paved, gravel or dirt)
	Riding on motorized trails (non-snow, OHV/ATV)
	Snowmobile travel
	Other motorized activities (races, games)
VIEWING & LEARNING—NATURE & CULTURE	
	Viewing wildlife, birds, fish, natural features, scenery, flowers, etc.
	Photographing birds, fish, natural features, scenery, flowers, etc.
	Visiting historic and prehistoric
	Nature study
	Visiting a nature center, interpretive trail, or visitor center

✓	RECREATION ACTIVITIES
CAMPING OR OTHER OVERNIGHT	
	Camping in developed sites (family or group sites)
	Primitive camping (motorized in roaded areas)
	Primitive camping (backpacking in unroaded backcountry areas)
	Resorts, cabins, or other accommodations on Forest Service managed lands (private or FS)
FISHING & HUNTING	
	Fishing—all types
	Hunting—all types
OTHER ACTIVITIES	
	Picnicking or family day gatherings in developed sites (family or group)
	Gathering mushrooms, berries, firewood, or other natural products
	Relaxing, hanging out
	Escaping heat, noise, pollution, etc.
	Exercising
	Walking/Exercising Pet(s)
	Visiting Timpanogos Cave National Monument
OTHER ACTIVITIES NOT LISTED? (Please write in below and ✓ to left.)	

12. Have you recreated in the Lone Peak Wilderness or Mt. Timpanogos Wilderness areas?

- Yes → Lone Peak Wilderness, and/or Mt. Timpanogos Wilderness
 No
 I don't know

12a. If yes, what recreational activities do you typically engage in when you visit these Wilderness areas?

12b. How many times have you visited these Wilderness areas in the last 12 months?

Lone Peak Wilderness _____

Mt. Timpanogos Wilderness _____

13. How important are these Congressionally designated Wilderness areas to you?

Not important at all		Neutral		Very important
1	2	3	4	5
				6
				7

14. Would you support the expansion of Wilderness areas in American Fork Canyon/Alpine Loop?

- Yes No

Please explain: _____

15. Are there places in American Fork Canyon/Alpine Loop you no longer visit because encounters with other forest users/uses have negatively affected your recreational experience? Yes No

If Yes, please identify the area(s) and explain the type of encounter and why you no longer visit:

16. About how many people outside of your group did you encounter (see, talk to, interact with, etc.) while recreating today? _____ people

16a. What do you think about the number of people you encountered while recreating today?

Did they positively enhance your experience? Yes No

If Yes, in what ways? Please describe:

Did they negatively affect your experience? Yes No

If Yes, in what ways? Please describe:

They neither positively enhanced nor negatively affected my experience.

17. How did you access the recreation site you are visiting today? (Check one)

Personal Vehicle—How many people were in your vehicle TOTAL? _____

Biked on my own

Walked on my own

Other Please describe: _____

18. If a public transit system were available, would you have used it today to reach this recreation site?

Yes No

Please explain: _____

To which of the following sites would you like to see shuttle transportation?

Timpanogos Cave NM

Timpooneke

Mt. Timp/AG

Sawmill (Cross Country)

Summit

Cascade Springs

Tibble

Pine Hollow

General Sightseeing

19. If you could choose just one or two words to describe your personal feelings about American Fork Canyon/Alpine Loop what would the word(s) be?

20. Are you recreating alone today? Yes No

If No, how many people (total) are in your group? _____ people

Of these, how many are under 16 years of age? _____ people

21. Does anyone in your group have any disabilities? Yes No

If Yes, were the areas and facilities you visited accessible? Yes No

If No, please explain: _____

22. Do you consider yourself Hispanic or Latino(a)?

Yes, Hispanic or Latino(a)

No, not Hispanic or Latino(a)

23. With which racial group do you most closely identify?

American Indian/Alaska Native

Asian

Black/African American

Native Hawaiian or other Pacific Islander

White

24. In what year were you born? _____

25. What is your sex: Male Female

26. What is the highest level of formal education you have completed?

Less than a high school degree High school degree or GED

Some college 2 year technical or associate degree

4 year college degree (BA/BS) Advanced degree (e.g., Master's, JD, MD, DO, Ph.D.)

27. Information about income is important because people with different incomes come to Public Lands for different reasons. What is your annual household income?

Under \$25,000 \$100,000-\$149,999

\$25,000-\$49,999 \$150,000 or over

\$50,000-\$74,999 Don't know

\$75,000-\$99,999

28. We would like to learn more about your recreational experience and your perspectives on planning for the future of the American Fork Canyon/Alpine Loop.

Would you be willing to participate in a follow-up e-survey that asks questions specific to issues regarding resource protection, transportation, access, and capacity on the Pleasant Grove Ranger District?

Yes No

If Yes, please provide your first name and e-mail address below:

First Name: _____

E-mail Address: _____

(please write clearly)

29. If you could ask the U.S. Forest Service to change some things about the way they manage American Fork Canyon/the Alpine Loop, what would you ask them to do?