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Demographics, Experiences, and Management Preferences of Backcountry Campers in Yellowstone National Park

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DEMOGRAPHICS, EXPERIENCES, AND MANAGEMENT PREFERENCES OF BACKCOUNTRY CAMPERS IN YELLOWSTONE NATIONAL PARK

By

RYAN PAUL GRISHAM, Bachelor of Science in Forestry, Associate of Arts

Presented to the Faculty of the Graduate School of

Stephen F. Austin State University

In Partial Fulfillment

Of the Requirements

For the Degree of

Master of Science in Forestry

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ABSTRACT

A questionnaire was distributed to backcountry campers in Yellowstone National Park for the summer of 2016. Upon registering for a backcountry camping permit, park rangers asked if campers would like to participate in the survey, which included questions regarding demographics and opinions on visitor experiences and management policies. Participants provided their names and email address and were sent a link to the questionnaire about two weeks after their trip. The survey was a partial replication of a study by Tim Oosterhous conducted in 1999 and results for both years were analyzed and compared to identify any changes in backcountry use and demographics. The response rate for the questionnaire was 50.9% for a total of 305 usable questionnaires.

The purpose of the study was to identify, by demographic, who was using the backcountry, how campers interpreted their experiences in the park, visitor preferences toward current management policies, and to test visitor knowledge of recommended wildlife safety precautions. Results indicate that, much like in 1999, campers in 2016 were typically young, white, well educated, and male. Backcountry campers stayed for one to three nights on average and supported the new permit fee implemented in 2015. Campers typically opposed commercial use in the backcountry and were well versed in safety precautions recommended by the National Park Service designed to minimize human/wildlife interactions.

i

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ii

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iii

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TABLE OF CONTENTS

Page
ABSTRACT i
ACKNOWLEDGEMENTSii
TABLE OF CONTENTS
LIST OF TABLES
LIST OF FIGURES xiii
LIST OF APPENDICESxiv
INTRODUCTION 1
Research Objectives3
LITERATURE REVIEW
Management Background4
Backcountry Use Demographics 11
Backcountry Survey Techniques15
METHODOLOGY 17
Background of Study Area 17
Study Methods22
RESULTS AND DISCUSSION
Demographic Characteristics27
Party Characteristics

Planning and Preparation	. 37
Trip Experience	46
Visitor Opinions and Preferences	69
Visitor Knowledge of Wildlife and YELL Source Material	80
General Comments	. 84
SUMMARY AND CONCLUSIONS	. 88
Demographic Characteristics	. 88
Party Characteristics	. 89
Planning and Preparation	. 90
Trip Experience	. 91
Visitor Opinions and Preferences	. 96
Visitor Knowledge of Wildlife and YELL Source Material	. 99
General Comments	. 99
Yellowstone National Park Management Recommendations	100
Additional Research Recommendations	102
Study Design and Limitations	104
LITERATURE CITED	106
APPENDICES	110
VITA	226

.

LIST OF TABLES

Table Page
1. Home state of backcountry campers in Yellowstone National Park for
the 2016 Peak Season27
2. Home region of backcountry campers in Yellowstone National Park 30
3. Country of residence for backcountry campers in Yellowstone National
Park who do not reside in the United States of America
4. Age of backcountry campers in Yellowstone National Park
5. Gender of backcountry campers in Yellowstone National Park
6. Ethnicity of backcountry campers in Yellowstone National Park
7. Backcountry campers self-identified as Hispanic in Yellowstone
National Park
8. Highest degree attained for backcountry campers in Yellowstone
National Park
9. Number of individuals per party of Yellowstone backcountry
Campers
10. Number of individuals per party under the age of 18 in Yellowstone's
backcountry 37

11.	Hours spent in pre-planning of Yellowstone National Park	
	backcountry visits	. 38
12.	Time rangers spent in pre-planning of Yellowstone National Park	
	backcountry visits	. 39
13.	Number of previous overnight visits to Yellowstone's backcountry	
	including this most recent trip	. 40
14.	Crosstabulation of age and number of visits to Yellowstone's	
	backcountry	. 41
15.	Crosstabulation of home region and number of visits to Yellowstone's	
	backcountry	. 41
16.	Backcountry visitors who found information they needed on the park	
	website	. 43
17.	Backcountry campers who looked for bear safety information while	
	visiting the official park website	. 43
18.	Information sources used in pre-trip planning of Yellowstone National	
	Park backcountry trips	. 44
19.	Information sources used based on number of nights spent in	
	Yellowstone National Park's backcountry	. 45
20.	Yellowstone National Park backcountry campers indicating whether	
	or not they felt prepared for common safety situations	. 46

21.	Backcountry offices in which permits were obtained by backcountry	
	campers	. 47
22.	Bear safety video views by backcountry campers of Yellowstone	
	National Park	. 48
23.	Adequacy of information obtained by permit issuing ranger at	
	Yellowstone National Park	. 50
24.	Backcountry campers in Yellowstone National Park who had a	
	preselected campsite in mind	. 51
25.	Availability of preselected campsites for Yellowstone National Park	
	backcountry campers	. 51
26.	Crosstabulation of individuals with a pre-selected area in mind to	
	camp and desired area obtained	. 52
27.	Availability of parking for backcountry campers of Yellowstone	
	National Park	. 53
28.	Number of nights spent per individual in the Yellowstone National Park	
	backcountry	. 54
29.	Descriptive statistics for ANOVA of backcountry age ranges and mean	
	number of nights spent in the backcountry of Yellowstone National	
	Park	. 56
30.	Yellowstone National Park backcountry campers' mode of	
	transportation	. 57

31.	Locations visited by backcountry campers in Yellowstone National	
	Park	. 59
32.	Reasons for leaving the trail used by backcountry campers in	
	Yellowstone National Park	. 61
33.	Number of groups seen per day by Yellowstone National Park	
	backcountry campers	. 62
34.	Degree of feeling crowded for backcountry campers in Yellowstone	
	National Park	. 63
35.	Descriptive statistics for ANOVA of degree of crowding and number	
	of hiking groups encountered in the backcountry	. 64
36.	Time of day backcountry campers felt crowded in Yellowstone	
	National Park	. 65
37.	Number of nights seeing or hearing other individuals while in the	
	Yellowstone National Park backcountry	. 66
38.	Rangers encountered by backcountry campers in Yellowstone	
	National Park's backcountry	. 67
39.	Bears encountered by backcountry campers in Yellowstone	
	National Park	. 68
40.	Crosstabulation of groups seen in the backcountry and bears	
	encountered	. 69

41.	Backcountry camper support or opposition of Yellowstone National	
	Park's overnight permit fee	70
42.	Backcountry campers' opinions on the number of trails in Yellowstone	
	National Park's backcountry	71
43.	Backcountry campers who experienced detractions from their enjoyment	t
	of their Yellowstone National Park backcountry experience	72
44.	Crosstabulation of highest level of education attained and opinion	
	of acceptability of commercial use in the backcountry	74
45.	Backcountry camper' opinions on the acceptability of commercial	
	use in Yellowstone National Park's backcountry	75
46.	Backcountry campers' opinion on the desirability of backcountry	
	elements in Yellowstone National Park	77
47.	Degree of backcountry campers' satisfaction with Yellowstone	
	National Park trip aspects	79
48.	Backcountry campers' knowledge of the recommended distance	
	they should keep between themselves and bears or wolves	81
49.	Backcountry campers' knowledge of the recommended distance they	
	should keep between themselves and other animals such as bison,	
	deer, elk, and moose	82
50.	Backcountry campers' knowledge of how many times faster a bison	
	can run compared to a human	83

LIST OF FIGURES

Figure Page		Page
1.	Location of Yellowstone National Park	18
2.	Number of annual individuals who visited Yellowstone National	
	Park for recreation purposes	19
3.	Annual visitation of backcountry campers in Yellowstone National	
	Park for both the full year and for peak season	20
4.	Backcountry ranger offices in Yellowstone National Park	21
5.	Age of backcountry campers in Yellowstone National Park for	
	peak season in both 1999 and 2016	32
6.	Age of backcountry campers compared to mean number of	
	nights spent in Yellowstone National Park's backcountry	56
7.	Degree of feelings crowded based on number of other groups	
	seen in Yellowstone National Park's backcountry	65

LIST OF APPENDICES

APPENDIX Page		
A.	Survey Solicitation Script110	0
В.	Backcountry Survey Questionnaire 112	2
C.	Unedited "No" Responses to Question 2: "Did you watch the	
	Backcountry video before beginning y our trip? If not, why	
	no?"122	2
D.	Unedited "Yes" Responses to Question 2: "Did you watch	
	the backcountry video before beginning you trip? If you	
	watched the video, how did this video prepare you for your	
	backcountry trip? What additional information or approach would	
	improve the video?" 124	4
E.	Unedited "No" Responses to Question 3: "Did you receive adequate	
	information from the permit office before beginning your backcountry	
	trip? If no, why not?" 136	6
F.	Unedited "No" Responses to Question 5: "Did you get a campsite	
	In your desired area? If not, how did this affect your backcountry	
	experience?"	9
G.	Unedited Responses to Question 12: "Why did you and your	
	personal group choose the trails you did?" 143	3

- J. Unedited "Support" Responses to Question 24: "This is the first year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per person, per night for stock parties). Prior to 2015, the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office. Do you support or not support this change? (Please explain your answer)" 161
- K. Unedited "Not Support" Responses to Question 24: "This is the first Year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per person, per night for stock parties). Prior to 2015, the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office. Do you support or not support this change? (Please explain your answer)" 175

L.	Unedited "Yes" Responses to Question 22: "Did anything detract
	You from your enjoyment of Yellowstone's backcountry on this trip?
	If Yes, what detracted from your enjoyment and how did it detract
	from your enjoyment?"179
M.	Unedited "Commercial use is not acceptable" Responses to
	Question 26: "What is your opinion about commercial use in
	the backcountry? Why do you believe commercial use is
	not acceptable?" 188
N.	Unedited "Commercial use is acceptable" Responses to Question 26:
	"What is your opinion about commercial use in the backcountry?
	Why do you believe commercial use is acceptable?" 198
О.	Unedited Responses to Question 49: "Please write any comments,
	complaint, or suggestions pertaining to Yellowstone's backcountry
	that may help us improve the backcountry experience."

INTRODUCTION

Yellowstone National Park (YELL), established by congress in 1872 as the United States' first National Park, offers a broad spectrum of opportunities that allow visitors to experience nature while maintaining various levels of physical exertion or comfort. Visitors can experience the thrill of viewing wildlife mere feet away while behind the wheel of their automobile, while others prefer less developed areas and seek to explore the terrain further into the wilderness.

Yellowstone National Park overnight backcountry, or wilderness users represent the population of park visitors who decide to venture out into the undeveloped areas of the park and make camp for at least a single night. Due to the isolated and ambitious nature of this activity, backcountry campers are a small, understudied demographic in Yellowstone National Park.

Visitors to the Yellowstone National Park backcountry often only interact with rangers or park management once during their trip when they check in to a backcountry office for their permits. Standard operating procedures involve a permitting process and education on bear safety before entering the backcountry for an overnight stay. This helps minimize risks to the campers' safety and to protect the resource from destructive behavior. There is no policy in place to check back in upon leaving the backcountry, so it is difficult to determine the

quality of their overnight stay or to ascertain backcountry visitors' attitudes towards current policies.

The mission of the National Park Service is to preserve "unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations". In order to implement management decisions that both protect the resource and suit the desires of this and future generations, it is imperative that the National Park Service consistently and periodically review the ever-changing views, attitudes, and opinions of visitors and recreationists at their parks. Since these user dynamics change over time, and with each new generation, management policies should continue to suit the demands of the user as long as the resource remains uncompromised.

The purpose of this study is to identify, by demographic, who is using the backcountry and to determine what backcountry campers' attitudes and opinions are of current policies and their experiences. This study also aims to give park managers a more complete understanding of overnight backcountry camper dynamics for considerations in future policy decisions.

This report is the culmination of a partial replication and updated study of Tim Oosterhous' (2000) report, "Attitudes, Opinions, Characteristics, and Management Preferences of Backcountry Campers in Yellowstone National

Park." An abbreviated version of Oosterhous' report is available in *Yellowstone Science*, 2007 (Oosterhous, Legg & Darville, 2007).

Additionally, this research includes overnight backcountry visitors' knowledge of park endorsed safety precautions, which were not included in Tim Oosterhous' original report. Data for the 2016 peak season was compared to trends and results of Oosterhous' 2000 report to identify changes in visitor use and experiences over the last 16 years.

Research Objectives

The overall goal of this research was to provide the National Park Service and visitors with data quantifying public perceptions and opinions of Yellowstone National Park resources and services so that appropriate accommodations could be considered for the continuously evolving demographics and expectations of visitors. To this end, the objectives of this study included:

- determine the existing levels of use on resources and services by demographic;
- 2) determine visitor perceptions of wildlife interactions and safety precautions;
- 3) identify and quantify public opinions toward existing services and policies;
- 4) determine the backcountry campers' perceptions of their experiences.

LITERATURE REVIEW

Management Background

Backcountry and wilderness recreation management as an organized field of study began in 1933 when the Copeland Report was published stating a need to educate the public of their impacts on the land and why low impact-camping techniques were necessary for conservation efforts. This report introduced the concept of a "point of no return" regarding resource degradation. (Hendee, Stankey, and Lucas ,1990; T. Oosterhous, 2000). This concept of managing people to manage the landscape laid the groundwork for the idea of carrying capacity. Robert E. Manning (2007) notes that balancing and managing for Visitor Enjoyment and Resource Protection, or VERP, could require limiting the use, and therefore the destructive impact, on a resource. There are several ways to accomplish this goal, all of which have slight flaws. These include reservation systems, lotteries, first-come/first-served, and access based on pricing or merit. Yellowstone National Park currently uses a combination of reservation systems and first-come/first-served methods for crowding control and to avoid breaking carrying capacity.

To determine carrying capacity and to create a baseline for measuring the degradation of a resource, Stokes (1990) endorsed the Limits of Acceptable Change, or LAC, technique. Since every backcountry and wilderness area is

unique by definition, it is not possible to apply the same measurable standards to all resources across the board. Instead of declaring that waters and lands must meet exact, measurable criteria regardless of geographical location or use is impractical and counterproductive, LAC accepts resource degradation as an inevitability and seeks to manage the resource in a way that decreases or eliminates degradation, particularly from human use (Lucas and Stankey, 1985). When determining exactly what the limits of acceptable change are, researchers should meet four criteria according to Lucas and Stankey (1985). These criteria include:

(1) determine how wilderness visitors perceive the relative importance of various aspects of the resource and social setting (to aid in selecting indicators); (2) learn how visitors evaluate various degrees of resource impact (to help define standards); (3) develop and test monitoring techniques for social indicators; and (4) develop, test, and evaluate a wide variety of management practices". Yellowstone National Park has developed its own version of LAC called Visitor Use Management, or VUM (Oosterhous, 2000, p. 13; U.S. Department of the Interior, 1995).

Marion, Roggenbuck, and Manning (1993) addressed many challenges that backcountry recreation managers face concerning visitor management. In a study of over 106 National Park Service units, each of these management

strategies were in effect in over half of the parks: a permit system, limited group sizes, low impact educational programs, limited lengths of stay, verbal warnings for violations, campsite and trail maintenance, restricted campfires and wood cutting, concentrated use on designated trails and campsites, available user information on crowding and conflicting uses, restricted horse use, prohibited feeding of wildlife, pet restrictions, removal of human fecal matter, and provision of primitive toilets.

Managers also stated in the study which strategies were perceived to be the most effective. Designated sites, prohibited campfires, established facilities, limited group sizes, and a reservation system were among the most effective methods for minimizing campsite depredation. Trail maintenance, impact monitoring, a formal trail system, and use quotas are recommended to minimize degenerative trail impacts. Wildlife impacts are often addressed by temporarily closing sensitive areas, regulating food storage, providing user education, restricting pets, and providing workshops for commercial use licensees. Water impacts are best alleviated through the presence of primitive toilets at high-use sites. Crowding and conflicting uses are still an ongoing concern, but the implementation of visitor use quotas and controlling backcountry access with a visitor transportation system are favored methods among surveyed backcountry managers (Marion et al, 1993).

All of these management guidelines are specifically designed for protecting the resource, but significant studies beginning in the 70s began to shift some focus to the resource user. If management techniques detract from the visitors' experience in any significant way, this could lead to poor attendance, unhappy users, or policy violation. After all, the National Park Service's mission statement includes that parks were set aside for "the enjoyment and benefit of the people". Some issues that have been found to diminish visitor satisfaction are the presence or absence of trails, human-made structures, designated campsites, directional or informational signs, human-caused noise, odors, crowding, pre-trip planning information, the frequency of wildlife encounters, and difficult terrain (U.S. Department of the Interior, 1994).

The wide ranges of human interests and desired activities within a park make it impossible to provide all visitors the opportunities to do whatever they want. Some activities, such as drones or all-terrain vehicles, must be limited or restricted because they infringe upon the solitude and privacy of other visitors. In order to best accommodate the majority of visitors, it is important to understand what most visitors expect to experience within a backcountry area or wilderness. This varies depending on the resource. For example, on a large body of water, many people might expect to have marina access for boats. In a grassland prairie, visitors might prefer a few structures providing shade. Clark and Stankey (1979) developed the Recreation Opportunity Spectrum, or ROS, to help balance

resource management and visitor satisfaction. The ROS acknowledges that different visitors may have different expectations for their leisure time. Some visitors may prefer developed front country areas and decide to spend their time in a "modern" setting, while other visitors should still be able to meet their recreation expectations in the backcountry, which is usually designated as "primitive". There are many designations between modern and primitive, but the concept lays a framework for visitor expectations by location within a park or public area. This also allows managers to continue developing some areas while leaving others as undisturbed as possible.

Visitor expectations and experiences are a top priority for management decisions. In many ways, public opinion heavily influences management decisions. Not exclusive to backcountry and wilderness settings, public opinion often drives policy changes. As technology continues to advance and offer new recreational opportunities, society evolves in their mindsets and attitudes. "Risk recreation, technology revolutions, changing demographics and tastes, and many other factors are changing outdoor recreation as Americans adopt a widening variety of ways to experience, enjoy, and learn about the outdoor environment" (Cordell and Overdevest, 2001). Since culture is not stagnant, policies should change to reflect visitor desires as long as they are not destructive to the resource.

"A considerable congruence was found between changes in preferences and in policies, especially for large, stable opinion changes on salient issues. There is evidence that public opinion is often a proximate cause of policy, affecting policy more than policy influences opinion" (Page and Shapiro, 1983).

McCool and Lime (1988) were familiar with the concept of public opinion and policies and stated 4 main reasons why understanding visitor attitudes is important for management decisions. First, attitudes influence behavior. A favorable outlook on a resource or management team will incline a visitor to take better care of their recreational setting. Second, knowledge of visitor attitudes can help translate broadly written policy guidelines and objectives into more specific and useful management directions in situations where there may be wide latitude in discretionary authority to act. An example of this would be the Wilderness Act which lays broad guidelines but allows them to be enforced in a flexible manner. Third, knowledge of visitor attitudes can directly influence the managerial component of the setting. This can help enhance, maintain, or restore recreational opportunities desired by visitors. The fourth important reason for studying visitor attitudes is that attitudes about management policy can help establish normative preferences or tolerances for specific techniques or actions. A manager can get a baseline idea as to which potential policies are more likely to be accepted by the visitors, and visitors may also get a baseline idea as to the acceptability of recreational practices based on policy.

Managers using visitor behavior and attitudes as guidelines for decision making can be reflected in a study by Hammitt and Patterson (1991). This study showed that many backpackers in Great Smoky Mountains National Park created physical and social barriers to achieve their desired levels of solitude. Many campers would set up camp out of view from other hikers and sometimes avoid crossing paths with other hikers altogether. This could lead managers to make decisions about visibility and locations of campsites and trails.

Particularly concerning solitude as a goal for a visitor's experience, Stewart and Carpenter (1989) conducted a survey to determine if backcountry hikers were achieving their own goals of solitude in Grand Canyon National Park. Of respondents who sought solitude, 80% felt they had met their goal.

When policies reflect visitor attitudes and expectations, majority support and implementation of these policies often increase. Stankey and Schreyer (1987) describe visitors heavily endorsing their comparatively strict policies in Denali National Park. A good indicator of the level at which the public values nonmarket goods and services is their willingness to pay. In 1994, a substantial proportion of the population, 45%, said that they were willing or fairly willing to pay "much higher" prices for products in order to protect the environment (Cordell and Overdevest, 2001).

Backcountry Use Demographics

Historically, backcountry visitation has been dominated by the user demographic of educated, wealthy, young, white males. Although many backcountry visitors do not fit into this demographic, several studies support a trend in this direction. Roggenbuck and Lucas (1987) compiled data from 25 different studies ranging from the 1960s to the 1980s. The studies suggest that individuals aged 16-25 were the dominant demographic, followed closely by individuals aged 26-35, in backcountry settings regardless of geographic location within the United States. These age brackets of 18-25 and 26-35 were the dominant demographic in YELL in 1999 (Oosterhous, Legg, and Darville, 2007). Studies by Roggenbuck and Lucas (1987), Taylor and Mackay (1980), Hughes (1985), and Oosterhous, (2000) conducted in backcountry or wilderness also indicate an overrepresentation of males compared to the general population during single season samples. These studies, however, vary on time of year, location, and preferred visitor use activities.

Backcountry hikers tend to have achieved higher education levels than the general population. Reiling, Montville, and Facchina (1979), in a profile of Baxter State Park, found that 43% of backcountry hikers had at least 17 years of completed education. Lucas (1980) found that 31% of visitors had a comparable amount of completed education in the Bob Marshall Wilderness. Oosterhous,

(2000) found that 71.4% of Yellowstone backcountry hikers were college graduates or higher.

Roggenbuck and Lucas (1987) discovered that outdoor recreationists have higher incomes than the general population average throughout the United States. Although income varied from region to region, outdoor recreationists had a higher income compared to their respective populations. The 1999 peak season in Yellowstone averaged a backcountry user income between \$40,000 -\$50,000, which was above the national average of \$37,000 at the time. This same sample found that 55.9% of backcountry users held white collar jobs. Studies by Merriam and Ammons (1967), Murray (1974), and Echelberger and Moeller (1977) found that most backcountry hikers were likely to have professional occupations, technical occupations, or they were college students (Oosterhous, 2000).

The average length of stay for hikers in wilderness areas is 2 - 3 days (Roggenbuck and Lucas, 1987). However, Hendee, Stankey, and Lucas (1978) state that one-day trips are the dominant length of stay for most small to mediumsized wilderness areas. These smaller areas tend to get much more use from the local population, while larger areas tend to draw visitors from more distant locations. Oosterhous (2000) found that 38% of campers only stayed for 1 night at any given location, followed by 30% of campers staying 2 nights.

The average party size in wilderness areas is 2 - 4 individuals (Roggenbuck and Lucas, 1987). In areas where bear safety should be considered, the National Park Service endorses party sizes of 2 or more and to make plenty of noise as to avoid a surprise encounter. Interestingly, individuals are more likely to camp alone in National Parks compared to Wilderness Area campers. Solo backcountry campers made up 10% of the backcountry camping population in Yellowstone National Park in the 1999 peak season (Oosterhous, 2000).

Mode of transportation within backcountry areas tend to vary based on location and resource. Lucas (1964) found that in The Boundary Waters Canoe Area in Minnesota, 75% of users were using non-motorized boats as their primary form of transportation throughout the wilderness. It was discovered in The Bob Marshall Wilderness Area that there was an even split between hikers and horse users (Roggenbuck and Lucas, 1985). They also discovered that 60 – 90% of users in Rocky Mountain wilderness areas were hikers. In Yellowstone National Park, 82% of backcountry campers traveled by foot, followed by 10% of backcountry campers using non-motorized boats according to Oosterhous' study (2000).

Each individual backcountry user has his or her own background, attitudes, and opinions. Hammitt and Patterson (1991) studied individual hikers' perceptions on crowding and their level of satisfaction. Backcountry hikers were

asked how many parties other than their own they encountered on the trail in Great Smoky Mountains National Park. Of the respondents, 83% said that they saw more parties than they found acceptable, but only 35% of respondents also stated that the number of parties observed detracted from their experience. One theory provided in the study is that these encounters, although not preferable, were of small importance to the overall experience. In Yellowstone National Park, 68.3% of respondents felt that the number of groups that they encountered in the backcountry was "about right" during the 1999 summer season (Oosterhous, 2000).

Several other notable statistics from Oosterhous' (2000) study of the Yellowstone National Park 1999 summer season include: (1) backcountry campers noted elk, moose, and bears as their most encountered species of notable wildlife at 40%, 36%, and 21%, respectively; (2) respondents felt that the bear safety video was a "good" or "average" method of preparing hikers for risk management at 46% and 17% respectively; (3) regarding the permit process, 89% of respondents felt as though they received adequate information; (4) regarding campsite selection, 76% of respondents knew where they wanted to camp before entering the permit office. Of those individuals, 61.3% were able to get the campsite that they had desired.

Backcountry Survey Techniques

Lucas and Oltman (1971) mention two sampling techniques that reduce the intrusive nature of backcountry surveys. Visitors to wilderness and backcountry sites are often seeking solitude, to test physical and mental limitations, or a peaceful few days in the outdoors (Stankey and Schreyer, 1987). Regardless of an individual's preference of activity, it is important that surveyors not interfere with the "wilderness experience," which may alter visitor behavior or undermine their reasons for attending the backcountry in the first place. These two methods include the personal interview method and mail surveys.

The personal interview method is often executed from the trailhead or a common intersection of trails where visitors are likely to be found. Personal interviews may also be conducted using roaming surveyors, but this introduces length of stay bias where visitors who remain in the backcountry for longer periods of time are more likely to be contacted (Lucas, 1963). An additional challenge is presented to surveyors since backcountry users are often in remote locations at many different times of day.

The mail survey method, when applied specifically to wilderness, tends to have a high return rate due to a generality that wilderness users enjoy contributing to and protecting the resource that they frequent (Robin, 1965). However, non-response bias still exists. An additional challenge to overcome, particularly with wilderness users, is finding a way to collect a mailing list. Many backcountry users start and end at various locations and times, making it difficult to regulate a sign-in sheet. There would also be no value for the number of individuals who did not contribute to the mailing list.

With the widespread use of the internet in modern society, many researchers have transitioned into the use of email surveys to replace surveys conducted via traditional parcel mail. This provides for quicker results, a shorter amount of time spent taking the survey, and a reduction in cost. A possible drawback for email surveys is that, as of 2011, US household internet coverage is at 75% (National Telecommunications and Information Administration [NTIA], 2011). Among the households with internet, some individuals do not have the skills to use it, are not comfortable with it, or they don't use it very often (Stern, Bilgen, and Dillman, 2014). This can be remedied with an offer for a traditional mail delivery of the survey upon solicitation.

Dillman states that a tailored design approach is to be considered for any survey, particularly an electronic one. The aesthetics of a survey web page or the wording of a question can influence the response of an individual taking a survey. Attempts must be made to make the questions as neutral as possible, avoiding socially unacceptable sounding options (Dillman and Smyth, 2007).

METHODOLOGY

Background of Study Area

Yellowstone National Park became the world's first national park on March 1, 1872. It is located primarily in the northwest corner of Wyoming, with additional land in the northeast corner of Idaho and along some of the southern central border of Montana (Figure 1). The park was set aside for the "benefit and enjoyment of the people" and chosen for its unique and numerous hydrothermal features. The 2.25 million-acre park contains more than 10,000 thermal features (United States Department of the Interior, 2015).

Considered to be the heart of the Greater Yellowstone Ecosystem (GYE), which is 12 million acres in size, the park aids in the preservation of many wildlife species and geologic features (Oosterhous, 2000). Notable wildlife encounters include bison, elk, and moose. It is not uncommon to see black bears, grizzly bears, and wolves also. Grizzly bears and wolves are classified as threatened, although it is not uncommon for visitors to encounter these species (Yellowstone National Park, 2015). The GYE is one of the last and largest intact temperatezone ecosystems on earth and is currently managed by the National Park Service, U.S. Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service. (U.S. Department of the Interior, 2015).



Figure 1. Location of Yellowstone National Park (Grisham, 2018).

The park attracts visitors from all around the world and visitation continues to rise with a record breaking high of 4.2 million visitors in 2016. The peak visitation months of June, July, and August featured 2.6 million visitors collectively (U.S. Departments of the Interior, 2017). Since Tim Oosterhous' initial study in 1999, annual park visitation has increased by about 1.1 million individuals per year (Figure 2).

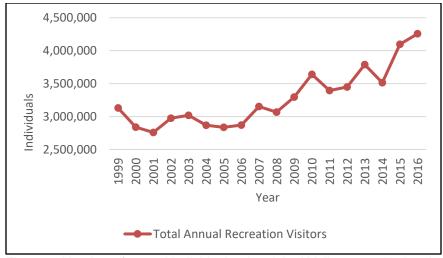


Figure 2. Number of annual individuals who visited Yellowstone National Park for recreation purposes.

Many visitors spend most or all their time in the park visiting frontcountry attractions. This includes gift shops, museums, visitor's centers, picnic areas, and scenic boardwalks such as the Old Faithful Geyser and Mammoth Hot Springs. These locations are accessible by automobiles or bicycles and the nature of these attractions tend to accumulate large crowds. These crowds are rarely far from park staff or response crews in case of an emergency.

A small percentage of visitors may seek a more challenging and secluded experience by spending some time overnight in the park's expansive backcountry. These are locations that are undeveloped and cannot be accessed by motorized vehicles. Visitors arrive at these sites by either hiking, riding pack animals, or by non-motorized boat. The number of backcountry campers per year in Yellowstone National Park have ranged from 37,292 to 46,087 between 1999 and 2016. While annual park visitation consistently increases, backcountry camper numbers have remained relatively stable. However, since 1999, about 77% of backcountry visitors come to the park during the peak season of June through August (Figure 3).

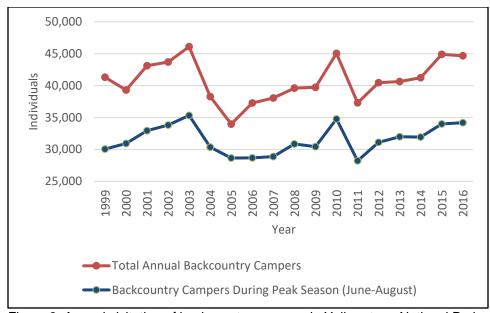


Figure 3. Annual visitation of backcountry campers in Yellowstone National Park for both the full year and for peak season.

With over 1,000 miles of trails in undeveloped areas and over 300 designated campsites, it is common for backcountry users to be a considerable distance, often many miles, from any form of civilized development or park employee. To minimize risk to the users' health and to minimize resource damage, backcountry management policies have been enacted. Backcountry visitors are expected to be knowledgeable and informed of these policies before

they embark on their overnight stay with many policies directed specifically toward bear safety.

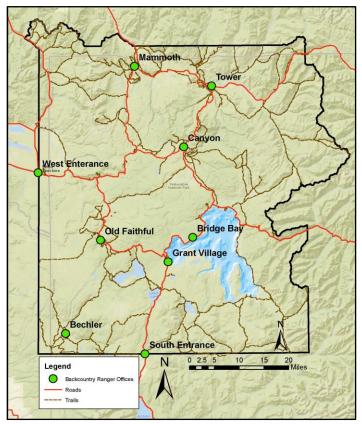


Figure 4. Backcountry ranger offices in Yellowstone National Park (Grisham, 2018).

Backcountry visitors can obtain an overnight permit from 11 backcountry offices which include Bechler Ranger Station, Canyon Ranger Station/Visitor Center, Grant Village Visitor Center, Bridge Bay Ranger Station, Mammoth Ranger Station/Visitor Center, Old Faithful Ranger Station, South Entrance Ranger Station, Tower Ranger Station, and West Entrance Ranger Station. The East Entrance and Lake Ranger Station also offer backcountry permits depending on the availability of the rangers on duty but were not in use during the 2016 summer season (Figure 4).

Study Methods

A modified quantitative social survey originally developed and used by Tim Oosterhous, the faculty at Stephen F. Austin State University (SFA), and backcountry managers in Yellowstone National Park in 2000 was revised and edited to reflect current management policies and additional demographic and safety queries. Questions in the survey were related to hikers' demographics and knowledge, trip planning, visitation history, trip behaviors, trail and backcountry use, trip characteristics, recreation preferences, crowding, and visitor experiences. This research is part of a larger study conducted by SFA in cooperation with Yellowstone National Park to determine the effectiveness of their media and literature. Concurrent studies on information obtained and retained by visitors through the park newspaper and the effectiveness of facilitated dialogue in ranger programs at Grand Teton National Park were also conducted during this time. These studies all aim to help Yellowstone management determine the characteristics of current users for management and future policy considerations.

When a backcountry user enters the park, they get their overnight permits at one of eleven backcountry offices. Upon receiving their permit, visitors are

required to watch a bear safety video, and beginning in 2015, they pay a permit fee. Historically, overnight backcountry permits were free of charge. The only payment necessary was a \$25 advanced reservation fee if one felt inclined enough to ensure a particular campsite. The revenue from these fees covered 17% of ranger station operating costs in the park. The new policy is expected to help cover 43% of ranger station operating costs. The new fees are \$3 per person per night with a cap of \$15 on any given group. Any individual with stock pays \$5 with no group cap.

A pilot study was conducted by five roaming researchers from Stephen F. Austin State University's Arthur Temple College of Forestry and Agriculture in the summer of 2015 in the Yellowstone backcountry. The purpose of this pilot study was to determine the best way to solicit surveys from backcountry hikers and to gather anecdotal data based on researcher observations. The locations surveyed were Heart Lake, Lamar Valley, and Cascade Lake. Researchers spent three days at each location and attempted to intercept hikers on the trail and to ask them about their trip. Researchers noted if the hikers appeared to be carrying bear spray and attempted to identify them by demographic. Some anecdotal data regarding these interactions include; (1) On average, hikers were willing to stop and talk for 2 minutes and 11 seconds before moving on down the trail, (2) 39.3% of hikers seemingly lacked bear spray or safety bells, and (3) only 9 of 236 observed individuals did not fall into the category of Caucasian.

The survey portion of the study was conducted through the summer of 2016, when upon registration for an overnight campsite, rangers were asked to gather party members' names and email addresses (Appendix A). Information was only obtained from willing visitors aged 18 years or older. Duplicate names and email addresses were not counted. These data were gathered personally from each backcountry office by a researcher on a three-day rotation in order to answer any questions that the park staff developed and to ensure Federal Office of Management and Budget compliance. After this initial stage, the Yellowstone backcountry office staff sent the solicitation information to the researchers via the United States Postal Service.

The survey was created and administered through Qualtrics (www.qualtrics.com), a survey software, and a link was emailed to all willing participants no sooner than 2 weeks after the completion of their trip. The email included a link to the survey, described the purpose of the survey, presented instructions for completing the survey, acknowledged participation anonymity, and provided contact details for inquiries on additional information. These data were used to complete the objectives of this research and were held confidentially. A total of 599 survey solicitations were successfully emailed to participants. Of those sent, 305 usable surveys were received for the study. This provided the researchers with a response rate of 50.9%.

Data was analyzed using the statistical software SPSS Version 23 by applying standard descriptive and inferential practices. Alpha is set at .05 to determine the significance of tested variables in inferential tests. Statistical analysis methods and the strength of statistical relationships were determined by using the guidelines provided by Robert Szafran's book, *Answering Questions With Statistics* (2012). Demographic research objectives were met by counting and comparing self-identified demographics of survey respondents. Qualitative survey questions regarding campers' views and opinions on their safety preparedness, experiences, and management preferences were analyzed to meet all research objectives (Appendix B).

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Two limitations can be identified with this study. First, this study will only be applicable to the Yellowstone National Park backcountry. Other National Parks offer their own unique experiences and resources, therefore alternate considerations must be made at every backcountry location across the United States. Visitor expectations, uses, demographics, and opinions are expected to vary from region to region. Second, this research is conducted under the

assumption that all park staff attempted to solicit information from every individual that arrived for an overnight backcountry camping permit.

RESULTS AND DISCUSSION

Demographic Characteristics

Home State and Region

Being the nation's flagship park, people travel from all around the globe to experience everything Yellowstone has to offer. Backcountry campers from nearby Montana (10.5%) were the modal representatives of home states. Generally, states from the West and Midwest had the highest backcountry campsite visitation rates. This is most likely due to the proximity of the park to their home state. Following Montana, California (7.5%), Idaho (7.1%), Colorado (6.8%), Texas (6.8%), and Washington (5.3%) were among the most abundant home states for visitors. There were 46 states represented by respondents in this study. Only four states were not represented by respondents: Alabama, Arkansas, Delaware, and Mississippi (Table 1).

	Home State	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MT	28	9.2	10.5	10.5
	CA	20	6.6	7.5	18.0
	ID	19	6.2	7.1	25.2
	СО	18	5.9	6.8	32.0
	ТХ	18	5.9	6.8	38.7
	WA	14	4.6	5.3	44.0
	WY	12	3.9	4.5	48.5

Table 1. Home states of backcountry campers in Yellowstone National Park.

Table 1. Continued on next page

Home State	Frequency	Percent	Valid Percent	Cumulative Percen
UT	11	3.6	4.1	52.6
MN	8	2.6	3.0	55.6
NC	7	2.3	2.6	58.3
OH	7	2.3	2.6	60.9
WI	7	2.3	2.6	63.5
NM	6	2.0	2.3	65.8
NY	6	2.0	2.3	68.
IA	5	1.6	1.9	69.9
MD	5	1.6	1.9	71.3
MI	5	1.6	1.9	73.
OR	5	1.6	1.9	75.
PA	5	1.6	1.9	77.4
AZ	4	1.3	1.5	78.9
IL	4	1.3	1.5	80.
MA	4	1.3	1.5	82.
MO	4	1.3	1.5	83.
VA	4	1.3	1.5	85.
FL	3	1.0	1.1	86.
GA	3	1.0	1.1	87.2
IN	3	1.0	1.1	88.
ME	3	1.0	1.1	89.
NH	3	1.0	1.1	90.
VT	3	1.0	1.1	91.
HI	2	0.7	0.8	92.
NE	2	0.7	0.8	93.2
OK	2	0.7	0.8	94.
RI	2	0.7	0.8	94.
SC	2	0.7	0.8	95.
SD	2	0.7	0.8	96.
AK	1	0.3	0.4	96.
СТ	1	0.3	0.4	97.0
KS	1	0.3	0.4	97.4
KY	1	0.3	0.4	97.
LA	1	0.3	0.4	98.
NJ	1	0.3	0.4	98.

Table 1. Home states of backcountry campers in Yellowstone National Park (Continued).

Table 1. Continued on next page

	Home State	Frequency	Percent	Valid Percent	Cumulative Percent
	NV	1	0.3	0.4	98.9
	TN	1	0.3	0.4	99.2
	WV	1	0.3	0.4	99.6
	ND	1	0.3	0.4	100.0
	Total	266	87.2	100.0	
Missing	NA	28	9.2		
	Outside USA	11	3.6		
	Total	39	12.8		
Total		305	100.0		

Table 1. Home states of backcountry campers in Yellowstone National Park (Continued).

After breaking the home states into the four basic United States regions of Northeast, Midwest, South, and West, it is clear that just over half of backcountry campers reside in the West (53.0%) (Table 2). Given Yellowstone's location in this region, it is logical that individuals from the West would be more abundant than other regions by assuming shorter travel times and distances. The Midwest and South regions each accounted for about 18% of respondents. For individuals residing in the United States, the Northeast region provided the fewest respondents (10.5%).

Several backcountry campers visited from outside of the United States (3.6%) (Table 3). Residents from Germany (n = 3) were the most common among outside USA visitors, followed by Canada (n = 2). Australia, Denmark, Ireland, Spain, Sweden, and Switzerland were represented by 1 visitor each in the responses.

	Region	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	West	141	46.2	53.0	53.0
	Midwest	49	16.1	18.4	71.4
	South	48	15.7	18.0	89.4
	Northeast	28	9.2	10.5	100.0
	Total	266	87.2	100.0	
	No Answer	39	12.7		
Missing		305	100.0		
Total					_

Table 2. The home region of backcountry campers in Yellowstone National Park.

Table 3. Country of residence for backcountry campers in Yellowstone National Park who do not reside in the United States of America.

United St	ales of America.	
	Country of	
	Residence	Frequency
Valid	Germany	3
	Canada	2
	Australia	1
	Denmark	1
	Ireland	1
	Spain	1
	Sweden	1
	Switzerland	1
Total		11

<u>Age</u>

The age of 2016 peak season backcountry campers responding to the survey ranged from 17-75 years old (M = 37.4, SD = 14.1). Respondents were asked to provide their birth year and responses were then divided into 6 different age groups (Table 4). The age group with the highest rate of responses was

26 - 35 (77.6%). The second most common, and also youngest, age group was of individuals aged 17 - 25 years (2.4%). Campers aged 36 - 45 years accounted for 16% of respondents, and individuals aged 46-55 years represented 13.5% of respondents. The category with the fewest number of individuals were the 66 -75 age range, accounting for only 5% of respondents. Almost 75% of respondents were age 45 or younger. Backcountry campers under the age of 18 were not asked to complete the questionnaire. The individuals claiming to be 17 experienced their 18th birthday between the date of solicitation and issuance of the questionnaire.

	Age (Years)	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17 - 25	63	20.7	22.4	22.4
	26 - 35	95	31.1	33.8	56.2
	36 - 45	45	14.8	16.0	72.2
	46 - 55	38	12.5	13.5	85.7
	56 - 65	26	8.5	9.3	95.0
	66 - 75	14	4.6	5.0	100.0
	Total	281	92.1	100.0	
Missing	NA	24	7.9		
Total		305	100.0		

Table 4. Age of backcountry campers in Yellowstone National Park.

When compared to the 1999 peak season from the Oosterhous (2000) report, which saw the largest percentage of visitors in the 17 - 25 age group, the 2016 season experiences its largest percentage of visitors in the 26 - 35 age group. After the 26 - 35 age group, visitation percentages of each age group decline as the participants increased in age. Therefore, in both years, the majority of campers were aged 17 - 35 years. Individuals aged 66 - 75 years had the fewest percentage of visits in both years (Figure 5).

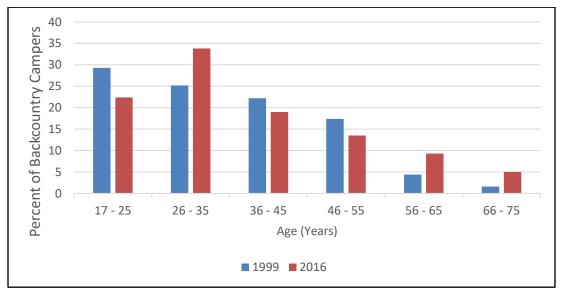


Figure 5. Age of backcountry campers in Yellowstone National Park for peak season in both 1999 and 2016.

<u>Gender</u>

When given the two common options of male and female, the majority of sampled backcountry campers in the 2016 season identified as male, making up 64.3% of respondents. Individuals identifying as female represented 35.7% of respondents (Table 5). These results are similar to the gender ratio of Oosterhous' (2000) study of campers during 1999, which denoted 71% male and 29% female.

However, since there was an increase in female visitation, several relationships were tested for significant relationships using chi² regarding gender. There were no significant relationships found regarding gender and adequacy of information received during the permit process, the number of previous trips to the backcountry, desired camping areas, nights spent, hours spent planning, degree of feeling crowded, enjoyment detractions, and opinions on commercial use.

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent			
Valid	Female	101	33.1	35.7	35.7			
	Male	182	59.7	64.3	100.0			
	Total	283	92.8	100.0				
Missing	No Answer	22	7.2					
Total		305	100.0					

Table 5. Gender of backcountry campers in Yellowstone National Park.

<u>Race</u>

The clear majority of overnight backcountry campers (93%) self-identified as white. The second most abundant ethnicity represented was Asian, accounting for 2.5% of respondents. Individuals identifying with the Native Hawaiian or Other Pacific Islander category accounted for 1.1% while the American Indian or Alaska Native and the Black or African American categories each represented an overwhelming minority at 0.7% and 0.4% respectively (Table 6). Additionally, when specifically asked if the respondents were Hispanic, 96% of backcountry campers identified as non-Hispanic (Table 7).

				Valid	Cumulative
	Ethnicity	Frequency	Percent	Percent	Percent
Valid	White	264	86.6	95.3	95.3
	Asian	7	2.3	2.5	97.8
	Native Hawaiian or Other Pacific				
	Islander	3	1.0	1.1	98.9
	American Indian or Alaska Native	2	0.7	0.7	99.6
	Black or African American	1	0.3	0.4	100.0
	Total	277	90.8	100.0	
Missing	No Answer	28	9.2		
Total		305	100.0		

Table 6. Ethnicity of backcountry campers in Yellowstone National Park.

Table 7. Backcountry campers self-identified as Hispanic in Yellowstone National Park.

				Valid	Cumulative
	Hispanic	Frequency	Percent	Percent	Percent
Valid	No	267	87.5	96.0	96.0
	Yes	11	3.6	4.0	100.0
	Total	278	91.1	100.0	
Missing	No Answer	27	8.9		
Total		305	100.0		

Education

Educational background was broken up into categories of highest degree attained. Respondents were generally well educated with 78.4% (n = 224) of them having attained a bachelor's degree or higher. Only 2 individuals (0.7%) had not obtained a high school diploma (Table 8).

An overwhelming majority of 95.9% (n = 274) of respondents had a history of at least some college. This is a continuing trend following Oosterhous' (2000) findings that in 1999, 96.3% of respondents had attained at least some college experience.

	Highest Attained Level of Education	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some High School	2	0.7	0.7	0.7
	High School Diploma	10	3.3	3.5	4.2
	Some College	50	16.4	17.5	21.7
	Bachelor's Degree	122	40.0	42.7	64.3
	Graduate Degree	102	33.4	35.7	100.0
	Total	286	93.8	100.0	
Missing	No Answer	19	6.2		
Total		305	100.0		

Table 8. Highest degree attained for backcountry campers in Yellowstone National Park.

Party Characteristics

Number of People Per Party

NPS policy, rangers, and the park website encourage backpackers to travel in groups of at least three individuals while in the backcountry. In bear management areas, parties of four are suggested. Larger parties cause more noise than solo hikers and reduces the likelihood of surprising a bear. If an emergency occurs, additional party members can also seek help or apply first aid. Although it is not mandatory, it is highly recommended. These factors may help explain why only 10.9% of backcountry campers go into the wilderness alone. The average group size for the 2016 peak season was just above 3 individuals per group (M = 3.14, SD = 2.44). The number of people per group ranged from 1 (10.9%) to 23 (0.3%), but most groups contained 5 or fewer individuals (90%). The modal number of individuals in a party was 2. Because the survey was offered to any individuals over the age of 18 and not just party leaders, it is unclear if any of these groups are represented multiple times

Table 9. Number of individuals per party of Yellowstone backcountry campers.						
	Individuals			Valid	Cumulative	
	Per Group	Frequency	Percent	Percent	Percent	
Valid	1	33	10.8	10.9	10.9	
	2	127	41.6	41.8	52.6	
	3	60	19.7	19.7	72.4	
	4	33	10.8	10.9	83.2	
	5	21	6.9	6.9	90.1	
	6	15	4.9	4.9	95.1	
	7	5	1.6	1.6	96.7	
	8	2	0.7	0.7	97.4	
	9	2	0.7	0.7	98.0	
	10	2	0.7	0.7	98.7	
	11	1	0.3	0.3	99.0	
	16	1	0.3	0.3	99.3	
	22	1	0.3	0.3	99.7	
	23	1	0.3	0.3	100.0	
	Total	304	99.7	100.0		
Missing	No Answer	1	0.3			
Total		305	100.0			

(Table 9). In the summer season of 1999, the modal party size of backcountry campers was 2 individuals, which represented 45% of all users.

Individuals Under 18

Most parties (85.7%) did not consist of any individuals under the age of 18. However, a total of 114 children were reported among these groups. Groups ranged from having 1 - 16 children within their parties. The modal number of children per group was 0 with a mean of 0.39 children per group (SD = 1.463). A very large majority of camping parties (96%) contained 2 or fewer children. A breakdown of children per party can be found in Table 10.

renowstor	e s backcountr	у.			
	Individuals				
	Under 18			Valid	Cumulative
	Per Group	Frequency	Percent	Percent	Percent
Valid	0	257	84.3	85.7	85.7
	1	15	4.9	5.0	90.7
	2	16	5.2	5.3	96.0
	3	5	1.6	1.7	97.7
	4	2	0.7	0.7	98.3
	5	1	0.3	0.3	98.7
	8	2	0.7	0.7	99.3
	11	1	0.3	0.3	99.7
	16	1	0.3	0.3	100.0
	Total	300	98.4	100.0	
Missing	No Answer	5	1.6		
Total		305	100.0		

Table 10. Number of individuals per party under the age of 18 in Yellowstone's backcountry.

Planning and Preparation

Time Spent Pre-Trip Planning

Pre-trip planning includes any time spent researching location, logistics, finances, gear, travel, or any other planning activity that took place before a trip begins. The amount of self-reported time spent planning for campers' Yellowstone Backcountry trip ranged from 0 to 168 hours. The average time spent was 11.2 Hours (SD = 20.46) and the modal times spent planning was 1 and 2 hours (Tables 11 and 12). About 57% of individuals spent 5 or fewer hours planning, and 76% of individuals spent 10 or fewer hours.

After categorizing hours spent planning into three groups, it became clear that the number of nights spent in the backcountry shares a significant relationship with hours spent planning ($\chi^2 = 44.211$, df = 6, p = <0.0005). The relationship is classified as moderate (V = 0.279). Generally, as the length of stay increased so did the time spent planning. About 55% of individuals who stayed only one night in the backcountry planned for 2 hours or less. About 69% of individuals who stayed for four or more nights spent 5 hours or more in pre-trip planning.

	Hours Spent Planning	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0.0	16	5.2	5.6	5.6
	0.5	5	1.6	1.8	7.4
	1.0	35	11.5	12.3	19.6
	1.5	3	1.0	1.1	20.7
	2.0	35	11.5	12.3	33.0
	2.5	3	1.0	1.1	34.0
	3.0	20	6.6	7.0	41.1
	4.0	21	6.9	7.4	48.4
	4.5	1	0.3	0.4	48.8
	5.0	24	7.9	8.4	57.2
	5.5	1	0.3	0.4	57.5
	6.0	12	3.9	4.2	61.8
	8.0	7	2.3	2.5	64.2
	10.0	34	11.1	11.9	76.1
	12.0	9	3.0	3.2	79.3
	12.5	1	0.3	0.4	79.6
	13.4	1	0.3	0.4	80.0
	15.0	5	1.6	1.8	81.8
	16.0	2	0.7	0.7	82.5
	20.0	16	5.2	5.6	88.1
	24.0	5	1.6	1.8	89.8
	25.0	2	0.7	0.7	90.5
	30.0	4	1.3	1.4	91.9

Table 11. Hours spent in pre-planning of Yellowstone National Park backcountry visits.

Table 11. Continued on next page

	Hours Spent Planning	Frequency	Percent	Valid Percent	Cumulative Percent
	36.0	1	0.3	0.4	92.3
	40.0	12	3.9	4.2	96.5
	50.0	3	1.0	1.1	97.5
	80.0	2	0.7	0.7	98.2
	100.0	2	0.7	0.7	98.9
	120.0	1	0.3	0.4	99.3
	168.0	2	0.7	0.7	100.0
	Total	285	93.4	100.0	
Missing	No Answer	20	6.6		
Total		305	100.0		

Table 11. Hours spent in pre-planning of Yellowstone National Park backcountry visits (Continued).

Table 12. Time ranges spent in pre-planning of Yellowstone National Park backcountry visits.

	Time Spent Planning	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-2 Hours	94	30.8	33.0	33.0
	2.5-5 Hours	69	22.6	24.2	57.2
	5.5 or More Hours	122	40.0	42.8	100.0
	Total	285	93.4	100.0	
Missing	No Answer	20	6.6		
Total		305	100.0		

Previous Overnight Camping Trips in Yellowstone

For most backcountry campers in the peak season of 2016, this was the individual's first time with an overnight camping experience in the Yellowstone backcountry. When asked how often respondents have hiked and stayed overnight in the Yellowstone backcountry including the current visit, 53.6% of individuals claimed that this was their first time. The second highest category, with only 24.5% of individuals, had been in the backcountry 4 or more times before their visit in 2016 (Table 13).

	Previous Overnight Stays	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Once	162	53.1	53.6	53.6
	2 to 4 times	66	21.6	21.9	75.5
	5 or more times	74	24.3	24.5	100.0
	Total	302	99.0	100.0	
Missing	No Answer	3	1.0		
Total		305	100.0		

Table 13. Number of previous overnight visits to Yellowstone's backcountry including this most recent trip.

It is unsurprising that age and previous overnight stays are significantly related (χ^2 = 30.893, df = 4, p = <0.0005). The relationship, according to Szafran's (2012) guidelines, is moderate (V = 0.261). Individuals between the ages of 17 and 39 were most likely to be experiencing their first trip into the Yellowstone backcountry (66.9%). Individuals between the ages of 60 and 75 were more likely to have been in the backcountry five or more times (51.2%) (Table 14).

Home region was also significantly related to previous overnight stays $(\chi^2 = 21.411, df = 6, p = 0.002)$. This relationship is of moderate strength (V = 0.202). Individuals from the West region were most likely to have been in Yellowstone's backcountry at least once before (58.3%). As stated in a previous section, the Western region also provided the highest number of respondents for this survey. Respondents making return visits from the Midwest (36.7%), Northeast (33.3%), and South (31.3%) were comparatively similar in percentages (Table 15).

	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Number c	Number of Times Individuals Experienced				
			the Backcountry				
		_	2 to 4	5 or more			
Age	Count	Once	times	times	Total		
17-39	Individuals	83	25	16	124		
	Expected Individuals	65.6	26.2	32.2	124		
	% of Individuals within Column	69.2%	52.1%	27.1%	54.6%		
40-59	Individuals	29	16	27	72		
	Expected Individuals	38.1	15.2	18.7	72		
	% of Individuals within Column	24.2%	33.3%	45.8%	31.7%		
60-75	Individuals	8	7	16	31		
	Expected Individuals	16.4	6.6	8.1	31		
	% of Individuals within Column	6.70%	14.60%	27.10%	13.70%		
Total	Individuals	120	48	59	227		
	Expected Individuals	120	48	59	227		
	% of Individuals within Column	100.0%	100.0%	100.0%	100.0%		

Table 14. Crosstabulation of age and number of visits to Yellowstone's backcountry.

Table 15. Crosstabulation of home region and number of visits to Yellowstone's backcountry.

		Including this visit, how often have you hike and stayed overnight in the Yellowstone backcountry?			•
				5 or	
Region	Count	Once	2 to 4 times	more times	Total
West	Individuals	58	33	48	139
11631	Expected Individuals	50 74	29.1	35.9	139
	% of Individuals Within Column	41.4%	60.0%	70.6%	52.9%
South	Individuals	33	11	4	48
	Expected Individuals	25.6	10	12.4	48
	% of Individuals Within Column	23.6%	20.0%	5.9%	18.3%
Midwest	Individuals	31	9	9	49
	Expected Individuals	26.1	10.2	12.7	49
	% of Individuals Within Column	22.1%	16.4%	13.2%	18.6%
Northeast	Individuals	18	2	7	27
	Expected Individuals	14.4	5.6	7	27
	% of Individuals Within Column	12.9%	3.6%	10.3%	10.3%
Total	Individuals	140	55	68	263
	Expected Individuals	140	55	68	263
	% of Individuals Within Column	100.0%	100.0%	100.0%	100.0%

Campers' gender, level of education, and race were tested for significant relationships as well, and none were found.

When comparing 2016 return visits with those in 1999, a very similar trend of first time visitors applied with 51.7% of backcountry campers experiencing their first visit. Similar trends continue with returning visitors having experienced 4 trips or more representing 28.4% of visitors for the peak season of 1999. Official National Park Website

Many individuals planning a trip to a National Park often use the Official Website (https://www.nps.gov) as a resource. Yellowstone National Park's specific website (https://www.nps.gov/yell/index.htm) includes a "Plan Your Visit" section that includes driving directions, transport/lodging/food options, current park conditions, safety precautions to consider, FAQs, printable brochures, and many more tools to aid in visitor trip preparation. When asked if the backcountry campers found the information they needed on the park website, 81.7% of visitors replied with Yes (Table 16). This means that 1 in 5 visitors to the website are not finding the information that they need. Visitors were also asked if they specifically looked at bear safety information on the YNP website, in which 67% responded yes, they had looked at it (Table 17).

pair websi	le.				
	Desired Info			Valid	Cumulative
	Found	Frequency	Percent	Percent	Percent
Valid	No	52	17.0	18.3	18.3
	Yes	232	76.1	81.7	100.0
	Total	284	93.1	100.0	
Missing	No Answer	21	6.9		
Total		305	100.0		

Table 16. Backcountry visitors who found information they needed on the park website.

Table 17. Backcountry campers who looked for bear safety information while visiting the official park website.

	Looked at Bear	_	<b>-</b>	Valid	Cumulative
	Safety Info	Frequency	Percent	Percent	Percent
Valid	No	95	31.1	33.0	33.0
	Yes	193	63.3	67.0	100.0
	Total	288	94.4	100.0	
Missing	No Answer	17	5.6		
Total		305	100		

# Pre-Trip Planning Information Sources

When considering pre-trip planning, there are many sources one can use for designing itineraries, schedules, and packing lists. Seven common sources of information were selected for the survey in which respondents could indicate which ones they had used for their trip. Respondents were allowed to choose multiple answers. Backcountry visitors acknowledged using these sources at least once a total of 1,049 times. This averages to 3.45 sources used for each respondent. The source used most commonly was Yellowstone staff, with 84.3% of respondents having used staff as a planning reference. The official Yellowstone website was used by 83.9% of backcountry visitors. The least used references were YouTube videos and magazines with 22.7% and 16.1% of visitors using these sources respectively, which is still a considerable amount of use as an information source (Table 18).

		Resp	oonses	
	Information Sources	N	Percent	Percent of Cases
	Yellowstone Staff	241	23.0%	84.3%
	Official Yellowstone Website	240	22.9%	83.9%
	Other Website	165	15.7%	57.7%
	Friends	153	14.6%	53.5%
	Books	139	13.3%	48.6%
	YouTube Videos	65	6.2%	22.7%
	Magazines	46	4.4%	16.1%
Total		1,049	100.0%	366.8%

Table 18. Information sources used in pre-trip planning of Yellowstone National Park backcountry trips.

The number of nights spent in the backcountry heavily influenced which sources of information were used in pre-trip planning. The official Yellowstone website was referenced a minimum of 75.9% of the time regardless of length of stay. Yellowstone staff and magazines were used as a source of information more often when the length of stay was short. As the length of stay increased, respondents were more likely to use the official website, books, and YouTube videos as trip planning references (Table 19).

				Nights	on Trip		
	Information					4 or	
	Source	Count	1	2	3	more	Total
	Yellowstone Staff	Individuals	71	69	58	43	241
		% Used	81.6%	87.3%	89.2%	78.2%	
	Official Website	Individuals	66	67	55	52	240
		% Used	75.9%	84.8%	84.6%	94.5%	
	Other Website	Individuals	46	49	37	33	165
		% Used	52.9%	62.0%	56.9%	60.0%	
	Friends	Individuals	39	48	36	30	153
		% Used	44.8%	60.8%	55.4%	54.5%	
	Books	Individuals	34	39	35	31	139
		% Used	39.1%	49.4%	53.8%	56.4%	
	YouTube videos	Individuals	12	18	21	14	65
		% Used	13.8%	22.8%	32.3%	25.5%	
	Magazines	Individuals	12	14	11	9	46
	2	% Used	13.8%	17.7%	16.9%	16.4%	
Total		Individuals	87	79	65	55	286

Table 19. Information sources used based on number of nights spent in the Yellowstone National Park's backcountry.

# Visitor Sense of Preparation

Given the availability and accessibility of pre-planning information sources, the effectiveness of their content was tested by asking respondents to indicate whether or not they felt "prepared for common safety situations (such as exposure to sun, heat, access to drinking water, flash floods, lack of proper footwear, etc.) ... encountered in the park." Out of 305 responses, only 4 individuals (1.4%) felt as though they were unprepared for common safety situations. These 4 individuals all claimed to have watched the NPS safety video at the permitting office as well. All other individuals or groups (98.6%) watched the safety video and felt as though they were adequately prepared to handle common safety situations (Table 20).

	Felt Prepared for	common care	y ondatione	Valid	Cumulative
	During Trip	Frequency	Percent	Percent	Percent
Valid	No	4	1.3	1.4	1.4
	Yes	284	93.1	98.6	100.0
	Total	288	94.4	100.0	
Missing	No Answer	17	5.6		
Total		305	100.0		

Table 20. Yellowstone National Park backcountry campers indicating whether or not they felt prepared for common safety situations.

# **Trip Experience**

### Location of Permit Issuance

Backcountry campers can receive their permits from any of the nine operational backcountry offices before beginning their trip into the wilderness. If they had more than one trip into the backcountry planned, visitors did not have to return to the same backcountry office. A permit can be acquired at any office regardless of where they choose to camp. Some individuals may have visited more than one office. More respondents reported using West Entrance (21.3%) as their permitting office than any other office. Other frequently used permitting locations include Canyon (14.0%), Mammoth (13.4%), Grant Village (12.2%), and Tower (11.6%). The fewest number of respondents acquired their permit at Bridge Bay (1.5%).

In 1999, Mammoth was the most frequented backcountry office for permits with 17% of visitor usage. This was followed by Old Faithful (15%), Grant Village (13%), South Entrance (11%), Canyon (10%), Lake (7%), Tower (7%), West Entrance (7%), Bridge Bay (7%), and Bechler (3%), with an additional 3% of backcountry campers who had forgotten where they obtained their permits (Table 21).

were obtained by backcountry campers.				
Permitting Location	Frequency	Percent		
West Entrance	70	21.3		
Canyon	46	14.0		
Mammoth	44	13.4		
Grant Village	40	12.2		
Tower	38	11.6		
Old Faithful	31	9.4		
South Entrance	29	8.8		
Bechler	26	7.9		
Bridge Bay	5	1.5		

Table 21. Backcountry offices in which permits were obtained by backcountry campers.

# Bear Safety Video

While obtaining a permit at a backcountry office, it is highly recommended, and in some cases mandatory, to watch a NPS provided video on bear safety. Most visitors (91.5%) did watch the safety video (Table 22). The most common reason individuals did not watch the bear safety video was that they had seen it

before. Some individuals thought that they had already acquired enough trail hiking experience and didn't think they would learn anything new, one individual was a staff member, and one individual was never made aware that a bear safety video existed (Appendix C).

of Yellowstone National Park.					
Watched			Valid	Cumulative	
Video	Frequency	Percent	Percent	Percent	
Yes	279	91.5	91.5	91.5	
No	26	8.5	8.5	100.0	
Total	305	100.0	100.0		

Table 22. Bear safety video views by backcountry campers

Additionally, respondents were asked how the video prepared them for their trip or if there were any improvements that they would like to see involving the video. Many responses were vaguely positive with responses such as "It was good" or "I learned a lot." Overall, of those who responded, 67.3% of individuals gave the video positive responses. One camper stated that they encountered a bear on their trip and knew exactly how to handle the situation only because they had watched the video beforehand.

Many visitors (n = 37) felt like they already knew all of the information presented in the video and gained very little from it. Areas visitors would like to see improvements regarding the video include updating the video since it looks and feels dated (n = 8), adding wilderness ethics or Leave No Trace values to the video (n = 6), adding trail navigation tips (n = 5), and others still wanted the video

to be shorter (n = 5). Several notable comments left by a maximum of four backcountry campers each include adding information on weather, adding more information on bear safety and the odds of encountering one, providing online access to the video, providing information on animal safety for species other than bears, providing general camping tips in the video, and to ensure that rangers do not speak to the visitors during the video (Appendix D).

## Information from Ranger/Permit Issuer

When asked if visitors received adequate information from the rangers in the permitting office, 93.8% of campers stated that they did receive adequate information. However, about 60% of respondents said that they wished they had received additional information. The most commonly identified lack of information was individuals wanting additional information on current trail conditions such as locations of downed trees, eroded trails, and access to water (n = 5). The second and third most common comments were for a desire of better maps (n = 4) and a desire for clear driving directions to the trailhead (n = 3) (Table 23). Additional comments include the lack of rangers' first-hand knowledge of the trails (some permit issuers have not been to all of the camping locations and trails), a misconception as to the availability of pit-toilets, a lack of warning to the abundance of mosquitos, difficulty locating bear boxes and poles, and an individual unaware that they were camping in a bear management area (Appendix E).

	Adequate Information			Valid	Cumulative
	from Ranger	Frequency	Percent	Percent	Percent
Valid	No	18	5.9	5.9	5.9
	Yes	286	93.8	94.1	100.0
	Total	304	99.7	100.0	
Missing	No Answer	1	0.3		
Total		305	100.0		

Table 23. Adequacy of information obtained by permit issuing ranger at Yellowstone National Park.

# Availability of Campsites and Parking

When asked if individuals already knew where they wanted to camp before they were issued their permit, the majority (73.8%) of backcountry campers had a preconceived idea of a particular campsite or area in which they desired to stay (Table 24).

Regardless of whether an individual knew where they wanted to stay before their trip or not, all respondents were given the opportunity to declare if they got a campsite in their desired area. Many campers (81.8%) did get a permit for their preferred location (Table 25). This still leaves about 1 in 5 backcountry campers in locations that they did not originally wish to camp in.

	Preselected			Valid	Cumulative
	Location	Frequency	Percent	Percent	Percent
Valid	Yes	225	73.8	74.0	74.0
	No	79	25.9	26.0	100.0
	Total	304	99.7	100.0	
Missing	No Answer	1	0.3		
Total		305	100.0		

Table 24. Backcountry campers in Yellowstone National Park who had a preselected campsite in mind.

Table 25. Availability of preselected campsites for Yellowstone National Park backcountry campers.

	Availability				
	of Desired			Valid	Cumulative
	Campsite	Frequency	Percent	Percent	Percent
Valid	Yes	248	81.3	81.8	81.8
	No	55	18.0	18.2	100.0
	Total	303	99.3	100.0	
Missing	No Answer	2	0.7		
Total		305	100.0		

There is a weak relationship (V = 0.141) between desired campsites and whether they obtained a permit for their desired locations ( $\chi^2 = 6.025$ , df = 1, p = 0.014). Individuals who did not have a desired campsite in mind at the beginning of their trip were more likely to get a site that they enjoyed (91%). Individuals who had a pre-planned site were less likely to get permits within their desired location (78.6%) (Table 26). This is logical because individuals who have pre-set expectations are more likely to have external influences affect these expectations than people who do not.

		Campsite Obtained in Desired Area			
Pre-Selected Site	Count	Yes	No	Total	
Yes	Individuals	176	48	224	
	Expected Individuals	183.2	40.8	224	
	% of Individuals Within Column	71.3%	87.3%	74.2%	
No	Individuals	71	7	78	
	Expected Individuals	63.8	14.2	78	
	% of Individuals Within Column	28.7%	12.7%	25.8%	
Total	Individuals	247	55	302	
	Expected Individuals	247	55	302	
	% of Individuals Within Column	100.0%	100.0%	100.0%	

Table 26. Crosstabulation of individuals with a pre-selected area in mind to camp and desired area obtained.

To the individuals who did not get a campsite in their preferred location (18.2%), the question was then asked how not getting their preferred campsite affected their experience. The large variety of responses can be found in Appendix E. During the 2016 season, wildfires and increased bear activity closed or restricted some campsites and areas. With these restrictions, it is possible that more campers did not get their desired sites than in previous years that did not experience such activity. Many of the comments indicate that the camper understood why these limitations and safety precautions were in place (Appendix F). For example, respondents stated "...this was due to a wildfire closure and completely understandable. We still had a great time at the campsite of our second choice" and "Due to bear activity in the campsite that we had booked we ended up having to relocate to a different campsite. The new location that was

provided to us was great and (we were) able to do more hiking and see more of Yellowstone then with our previous location."

When considering availability, parking is also an important aspect to examine alongside campsite availability. Since most visitors arrive by automobile, many campers must first find a place to leave their car before beginning the trail. Parking lots are often found in the park at most attractions such as Old Faithful, Mammoth Hot Springs, and Norris Geyser Basin. They are also found at most trailheads, ranger stations, utility stations, and scenic viewpoints. Backcountry campers were asked if they were able to find parking at all areas they wanted to visit while inside the park. While most campers were able to find parking spaces (83.1%), several had difficulty finding parking at one or more locations (16.9%) (Table 27).

Yellowstor	Yellowstone National Park.							
	Available			Valid	Cumulative			
	Parking	Frequency	Percent	Percent	Percent			
Valid	Yes	251	82.3	83.1	83.1			
	No	51	16.7	16.9	100.0			
	Total	302	99.0	100.0				
Missing	No Answer	3	1.0					
Total		305	100.0					

Table 27. Availability of parking for backcountry campers of Yellowstone National Park.

# Number of Nights

A large majority of respondents (81.3%) stayed three or fewer nights in Yellowstone's backcountry. It was most common for visitors to stay for a single night (30.6%), then two nights (28.3%), followed by three nights (22.4%). The largest reported number of nights camped is 13 (0.3%). The average number of nights stayed was 2.61 (SD = 1.88) (Table 28).

Seventeen years prior, in 1999, Tim Oosterhous reported that most campers stayed two nights (44.9%) instead of 2016's majority of one night. The next most common lengths of stay during the peak season of 1999 were three nights (14.9%), four nights (12.7%), and one night (9.5%). The average length of stay during peak season visitation is shorter in 2016 when compared to 1999.

Hationari	Nights	y -			
	Spent in Backcountry	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	93	30.5	30.6	30.6
	2	86	28.2	28.3	58.9
	3	68	22.3	22.4	81.3
	4	19	6.2	6.3	87.5
	5	12	3.9	3.9	91.4
	6	14	4.6	4.6	96.1
	7	5	1.6	1.6	97.7
	8	3	1.0	1.0	98.7
	10	1	0.3	0.3	99.0
	11	1	0.3	0.3	99.3
	12	1	0.3	0.3	99.7
	13	1	0.3	0.3	100.0
	Total	304	99.7	100.0	
Missing	No Answer	1	0.3		
Total		305	100.0		

Table 28. Number of nights spent per individual in the Yellowstone National Park backcountry.

Gender, race, education, and home region were all analyzed for significant relationships using the chi-square test and no significant relationships were found.

Campers' age and the number of nights spent in the backcountry were significantly related ( $\chi^2 = 26.857$ , df = 6, p = <0.0005). The strength of the relationship is moderate (V = 0.242). Generally, individuals over the age of 60 spent more time in the backcountry during their trip, with about 44% of them spending four or more nights camping. Alternatively, only about 9% of respondents between the ages of 17 - 39 spent more than three nights in the backcountry.

A one-way Analysis of Variance (ANOVA) displays two pairs of significant mean differences when comparing age with the number of nights spent in the backcountry (F = 3.525, df = 5 and 274, p = 0.004) (Table 29). Individuals aged 66 - 75 years (mean = 4 nights, SD = 1.8) differed significantly with both individuals aged 17 - 25 years (mean = 2.17 nights, SD = 1.6) and individuals aged 26 - 35 years (mean = 2.4 nights, SD = 1.586). For individuals aged 66 - 75, a post-hoc Tukey test reveals a mean difference of 1.8 nights and 1.6 nights for age groups "17 - 25" and "26 - 35" respectively. As age increased, the mean number of nights spent in the backcountry also increased (Figure 6).

	95% Confidence Interval for Mean							
Age		Mean Number of Nights Spent in	Std.	Std.	Lower	Upper		
(Years)	Individuals	Backcountry	Deviation	Error	Bound	Bound	MIN	MAX
66 - 75	14	4	1.84	0.492	2.94	5.06	2	7
56 - 65	26	3.19	1.674	0.328	2.52	3.87	1	7
46 - 55	37	3.05	2.527	0.415	2.21	3.9	1	11
36 - 45	45	2.71	2.052	0.306	2.09	3.33	1	12
26 - 35	95	2.39	1.586	0.163	2.07	2.71	1	13
17 - 25	63	2.17	1.642	0.207	1.76	2.59	1	7
Total	280	2.64	1.886	0.113	2.41	2.86	1	13

Table 29. Descriptive statistics for ANOVA of backcountry age ranges and mean number of nights spent in the backcountry of Yellowstone National Park.

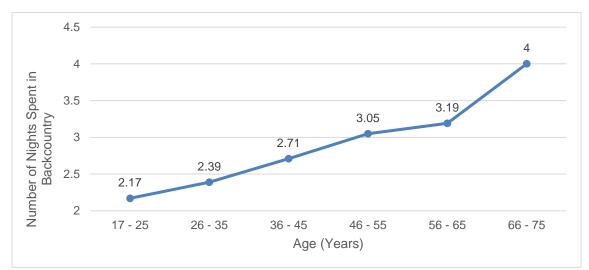


Figure 6. Age of backcountry campers compared to mean number of nights spent in Yellowstone National Park's backcountry.

## Mode of Transportation

While in the backcountry, several methods of travel are available

depending on the location, terrain, and availability of commercial tours.

Backcountry campers were asked to identify all forms of transportation that they

used while in the backcountry. The major forms of transportation included traveling by foot (hiking), horse, llama, motor boat, and non-motor boat. For this survey, no commercial outfitters were sampled so any results include only the use of private horses, llamas, and boats. All but two individuals used only one method of transportation. Two backcountry campers traveled by both foot and by non-motor boat. The most commonly used mode of travel was to hike by foot (95% of cases). Non-motor boat was the second most used mode of travel (5% of cases) and only five campers traveled by horse, motor boat, and llama combined (Table 30).

	Respo	Responses			
Mode of Transportation	Frequency	Percent	Percent of Cases		
Traveled by Foot	287	93.5	95.0		
Traveled by Horse	2	0.7	0.7		
Traveled by Llama	1	0.3	0.3		
Traveled by Motor boat	2	0.7	0.7		
Traveled by Non- motor boat	15	4.9	5.0		
Total	307	100.0	101.7		

Table 30. Yellowstone National Park backcountry campers' mode of transportation.

The summer season of 1999 had very similar results with 82.8% of backcountry campers traveling by foot, 10.2% of backcountry campers using non-motor boats, and 7.1% of backcountry campers using either horses, llamas,

or motorboats. Park policy both 16 years ago and now allows motor boats on lakes, but not on streams or rivers within the park. When it comes to traveling distances, it makes sense that individuals would rely more on hiking or using non-motorized boats to get to their campsites.

#### Locations Visited

Of all the popular attractions in the park, thirteen of the most popular locations were identified and used to determine which locations were most commonly visited by backcountry campers. Respondents were asked to indicate all of the areas in which they traveled. The top six locations were visited by 67% of respondents. These locations were Yellowstone River/Hellroaring (27.2% of cases), Old Faithful (23.9% of cases), Other (22.2% of cases), Canyon (18.9% of cases), Shoshone Lake (18.5% of cases), and Bechler (18.1% of cases). The least visited areas are Pelican Valley and Thorofare with five backcountry camper visits each (2.1% each) (Table 31). A total of 467 instances of these locations were identified, which means each respondent visited an average of 1.5 locations.

58

		Respo	nses	
	Locations Visited	Frequency	Percent	Percent of Cases
	Yellowstone River/Hellroaring	66	14.1	27.2
	Old Faithful	58	12.4	23.9
	Other	54	11.6	22.2
	Canyon	46	9.9	18.9
	Shoshone Lake	45	9.6	18.5
	Bechler	44	9.4	18.1
	Lamar	31	6.6	12.8
	Gallatin	29	6.2	11.9
	Heart Lake	29	6.2	11.9
	Yellowstone Lake	26	5.6	10.7
	Slough Creek	16	3.4	6.6
	Pebble Creek	13	2.8	5.3
	Pelican Valley	5	1.1	2.1
	Thorofare	5	1.1	2.1
Total		467	100.0	192.2

Table 31. Locations visited by backcountry campers in the Yellowstone National Park.

# Reasons for Choosing a Particular Trail

Many different reasons were given for why backcountry campers chose the trails that they did, all of which can be found in Appendix F. The five most common responses, when specifically stated, were that they were near water (n = 18), aesthetically pleasing (n = 17), recommended by a ranger (n = 10), recommended by someone other than a ranger (n = 9), and to see a specific named feature or attraction (n = 9). A list of all responses can be found in Appendix G.

## Reasons for Leaving the Trail

The National Park Service highly encourages hikers to stay on the trails while in the wilderness. This particularly applies to areas that have boardwalks and trails around thermal features. Thermal features are known to have caused many deaths and injuries in the park and the ground around them is incredibly unstable. The survey identified ten popular reasons why individuals would leave the trail while in the backcountry and asked respondents to indicate if they walked off the trail for any of these reasons. Individuals reported leaving the trail for a range of 0 - 8 reasons. The most common two reasons for leaving the trail were to go to the bathroom (81.2%) and to move out of the way of a horseback riding group (70.1%). Both reasons are fairly common because many campsites and trails don't have pit toilets so the only place to go to the bathroom privately is off the trail, and it is much easier for hikers to step off of the trail than it is for horseback riders to maneuver. The least common reason for leaving the trail was to shortcut a portion of the marked/signed trail (2.5%) (Table 32). Additional reasons were given for leaving the trail, the most notable being to avoid some form of animal on the trail. These animals were bison (n = 25), bears (n = 4), and unspecified animals (n = 3) (Appendix H).

Reason for Leaving Trail	Yes (%)	No (%)	Don't Know (%)
to "go to the bathroom"	81.2	17.8	1.0
to move out of the way of a horseback riding group	70.1	29.5	0.3
to take a photograph/get a better view	42.9	56.1	1.0
to move past or out of the way of others hiking on the trail	41.4	57.9	0.7
to explore an area that looked interesting	39.7	58.9	1.4
for another reason	29.9	65.0	5.1
to see an attraction or feature up close	26.4	72.5	1.1
accidentally because the trails were poorly marked	20.8	77.7	1.4
to get around a difficult part of the marked/signed trail	16.6	83.0	0.4
to shortcut a portion of the marked/signed trail	2.5	96.8	0.7

Table 32. Reasons for leaving the trail used by backcountry campers in Yellowstone National Park.

# Crowding

Because a desire for solitude is one of the many reasons people go into the backcountry, it is necessary to ensure that participants in the backcountry do not feel like they are overly crowded by other visitors. We asked respondents to identify an average number on roughly how many other groups they encountered while hiking per day. On average, 87.6% of individuals saw at least one other group on the trails per day. The average number of groups encountered per day was 2.65 groups (SD = 2.061). The modal number of groups seen per day is 2

groups (23.8%). The lowest number of groups seen was 0 (12.4%) and the highest number of groups seen was 12 (0.3%) (Table 33).

Dackcourr	Groups				
	Seen Per			Valid	Cumulative
	Day	Frequency	Percent	Percent	Percent
Valid	0	37	12.1	12.4	12.4
	1	53	17.4	17.8	30.2
	2	71	23.3	23.8	54.0
	3	57	18.7	19.1	73.2
	4	35	11.5	11.7	84.9
	5	23	7.5	7.7	92.6
	6	11	3.6	3.7	96.3
	7	2	0.7	0.7	97.0
	8	2	0.7	0.7	97.7
	10	6	2.0	2.0	99.7
	12	1	0.3	0.3	100.0
	Total	298	97.7	100.0	
Missing	No Answer	7	2.3		
Total		305	100.0		

Table 33. Number of groups seen per day by Yellowstone National Park backcountry campers.

However, since visitor experience is the emphasis of this research, the actual number placed on the amount of people seen per day is not as significant as how crowded the individuals felt while in the wilderness. Only 11 individuals felt "moderately crowded" (3.0%) or "extremely crowded" (0.7%). The most common response was that backcountry campers felt "not at all crowded" (83.3%), followed by "slightly crowded" (13.1%) (Table 34).

	Degree of Feeling Crowded	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all crowded	254	83.3	83.3	83.3
	Slightly crowded	40	13.1	13.1	96.4
	Moderately crowded	9	3.0	3.0	99.3
	Extremely crowded	2	0.7	0.7	100.0
	Total	305	100.0	100.0	

Table 34. Degree of feeling crowded for backcountry campers in the Yellowstone National Park.

The locations visited by individuals who reported feeling moderately crowded or extremely crowded were noted and their frequencies are as follows: Bechler (n = 4), Old Faithful (n = 4), Yellowstone River (n = 2), Heart Lake (n = 2), Pelican Valley (n = 1), Shoshone Lake (n = 1), Slough Creek (n = 1), and Yellowstone Lake (n = 1).

A one-way ANOVA compared the means of campers' reported degree of feeling crowded with the number of other hiking groups encountered in the backcountry (Table 35). Four significant mean differences were discovered (F = 13.988, df = 3 and 294, p = <0.005). The mean number of other groups seen in the backcountry for individuals who felt "Not Crowded at All" (mean = 2.37 other groups seen, SD = 1.861) differed significantly from individuals who felt "Slightly Crowded" (mean = 3.70 other groups seen, SD = 2.039), "Moderately Crowded" (mean = 5.00 other groups seen, SD = 3.162), and "Extremely Crowded" (mean = 7.50 other groups seen, SD = 3.536). Post-hoc Tukey analysis at a 95% confidence interval shows a mean difference of 1.3 groups seen between individuals who reported feeling "Not at All Crowded" and "Slightly Crowded." Tukey results indicate a mean difference of 2.6 groups seen between individuals who felt "Not at All Crowded" and "Moderately Crowded", as well as a mean difference of 5.1 groups seen between individuals who felt "Not at All Crowded" and "Extremely Crowded". There were also significant differences between individuals who felt "Slightly Crowded" and "Extremely Crowded", with a Tukey analysis reporting a mean difference of 3.8 groups seen.

The two individuals who felt extremely crowded saw 5 and 10 other groups while in the backcountry. In general, as the number of groups individuals encountered in the backcountry increased, the degree of feeling crowded increased (Figure 7) and the more results deviated from the mean.

encountereu i	IT THE DACKCOU	intry.						
						nfidence for Mean		
Degree of Feeling Crowded	Individuals	Mean Number of Hiking Groups Encountered	Std. Dev.	Std. Error	Lower Bound	Upper Bound	MIN	MAX
	mumuuais	LIICOUIIIEIEU	Dev.	LIIUI	Dound	Dound	IVIIIN	
Not at all crowded	250	2.37	1.861	0.118	2.14	2.6	0	10
Slightly crowded	37	3.7	2.039	0.335	3.02	4.38	1	10
Moderately crowded	9	5.0	3.162	1.054	2.57	7.43	2	12
Extremely crowded	2	7.5	3.536	2.500	-24.27	39.27	5	10
Total	298	2.65	2.061	0.119	2.41	2.88	0	12

Table 35. Descriptive statistics for ANOVA of degree of crowding and number of hiking groups encountered in the backcountry.

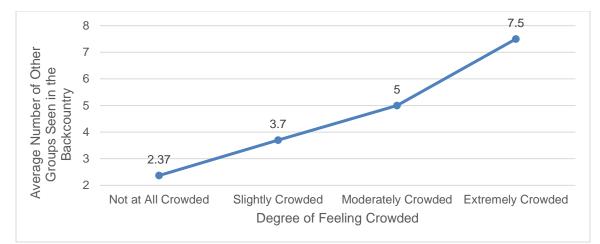


Figure 7. Degree of feeling crowded based on number of other groups seen in Yellowstone National Park's backcountry.

Next, respondents were asked to point out which time of day they could remember feeling crowded. The day was broken into sections including between 4 a.m. and noon, between noon and 6 p.m., and 6 p.m. to midnight. Although many individuals could not remember at which times they felt crowded (38.9% of cases), the most commonly identified time was between noon and 6 p.m. (47.9% of cases) (Table 36).

		Respo	Responses		
				Percent	
	Time of Day Felt			of	
	Crowded	Frequency	Percent	Cases	
	4 a.m. to noon	18	10.3	10.8	
	Noon to 6 p.m.	80	46.0	47.9	
	6 p.m. to midnight	11	6.3	6.6	
	Can't Remember	65	37.4	38.9	
Total		174	100.0	104.2	

Table 36. Time of day backcountry campers felt crowded in	۱
Yellowstone National Park.	

Finally, concerning crowding, visitors were asked how many nights they were able to see or hear other visitor groups staying overnight near their campsite/cabin during this overnight backcountry trip. Respondents could enter any whole number. The responses ranged from 0 groups (82.8%) to 3 groups (1.3%). The mean number of groups seen at night from their campsite is 0.21 groups (SD = 0.523). While 97.4% of visitors saw only one or zero groups while in the backcountry at night, 8 total visitors could see or hear 2 to 3 groups from their camp (1.3% each) (Table 37).

	Number of Nights				
	Seeing or Hearing			Valid	Cumulative
	Others	Frequency	Percent	Percent	Percent
Valid	0	251	82.3	82.8	82.8
	1	44	14.4	14.5	97.4
	2	4	1.3	1.3	98.7
	3	4	1.3	1.3	100.0
	Total	303	99.3	100.0	
Missing	No Answer	2	0.7		
Total		305	100.0		

Table 37. Number of nights seeing or hearing other individuals while in the Yellowstone National Park backcountry.

# Ranger Encounters

While rangers monitor the trails and occupy backcountry ranger stations, it is not usually expected to observe a continuous ranger presence while in the backcountry. While in the backcountry, almost two-thirds of campers did not encounter a ranger during their time in the wilderness (64.6%) (Table 38).

Ranger	ulial Park S Dau	KCOUIIII y.	Valid	Cumulative
Encountered	Frequency	Percent	Percent	Percent
Yes	108	35.4	35.4	35.4
No	197	64.6	64.6	100.0
Total	305	100.0	100.0	

Table 38. Rangers encountered by backcountry campers in<br/>Yellowstone National Park's backcountry.

#### Bear Encounters

With such an emphasis on bear safety during the permitting process, it is no surprise that some individuals would encounter a bear while on their trip. These are usually exciting and sought-after moments by wilderness users and typically do not result in dangerous scenarios. While in the backcountry, 57 individuals (19.9%) encountered a bear from any distance (Table 39). Visitor descriptions of these encounters can be seen in Appendix I. A few comments related to bear encounters given by the respondents are, "We saw a grizzly sow with two cubs about 100 yards away from the trail and up a hill. They noticed us but did not approach us" and "...a bear came in (and) chewed our water bags up. We never heard anything, and were camped quite a ways away."

Only one encounter was considered remotely hostile, which resulted from a mock charge from a surprised grizzly bear. The encounter was described as follows: "I saw two grizzly bears. One of them never saw me and moved out of sight. The other I surprised at close range and came towards me in a mock charge before running away." No backcountry campers indicated that they had to use any form of defensive measure, such as bear spray, and one respondent indicated that they knew exactly what kind of action to take given the bear safety video they were required to watch.

National F	aik.				
	Bear			Valid	Cumulative
	Encountered	Frequency	Percent	Percent	Percent
Valid	No	230	75.4	80.1	80.1
	Yes	57	18.7	19.9	100.0
	Total	287	94.1	100.0	
Missing	NA	18	5.9		
Total		305	100.0		

Table 39. Bears encountered by backcountry campers for Yellowstone National Park.

Significant relationships were tested for the likelihood of encountering a bear. No demographic characteristics explored in this research displayed any signs of significant relationships. Surprisingly, party size and length of stay both showed no indication of significant relationships either. There was, however, a weak relationship (V = 0.206) between how many groups a party encountered while in the backcountry and bear encounters ( $\chi^2$  = 11.924, df = 2, p = <0.003). Individuals who encountered 2 - 3 other groups while in the backcountry were more likely than others who saw less or more other groups to encounter a bear (Table 40). There are countless other factors that could influence the odds of encountering a bear, but according to the data, the amount of human activity in the backcountry could have an effect on bear sightings.

		Bear Encount	ered in Back	country
Hiking Groups	_			
Seen	Count	No	Yes	Total
0-1 Groups	Individuals	76	10	86
	Expected Individuals	68.8	17.2	86
	% of Individuals Within Column	33.9%	17.9%	30.7%
2-3 Groups	Individuals	87	36	123
	Expected Individuals	98.4	24.6	123
	% of Individuals Within Column	38.8%	64.3%	43.9%
4 or More Groups	Individuals	61	10	71
	Expected Individuals	56.8	14.2	71
	% of Individuals Within Column	27.2%	17.9%	25.4%
Total	Individuals	224	56	280
	Expected Individuals	224	56	280
	% of Individuals Within Column	100.0%	100.0%	100.0%

Table 40. Crosstabulation of groups seen in the backcountry and bears encountered.

# Visitor Opinions and Preferences

# Backcountry Permit Fee

Before the summer of 2016, the only fee for camping in the backcountry was a \$25 fee for reserving a particular campsite. If a visitor simply arrived and chose a site from those that were available, no fee was charged. As of 2016, a new backcountry permit fee was implemented, and the National Park Service wished to determine visitor opinions of the fee and to see whether or not they supported it. The question was used to determine visitor attitudes and opinions, but also to serve as a way to educate backcountry campers on the new fee. The question was worded as follows:

This is the first year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per

person, per night for stock parties). Prior to 2015, the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office staffing. Do you support or not support this change?

Both parties that either support or not supported the new fee were asked to explain their answers, which can be found in Appendices J and K.

Over 90% of respondents (93.5%) support the fee, many citing that they were happy to contribute to the park and that the fee was not too much. Of those who opposed the backcountry permit fee (6.5%), the top reasons given for their opposition included the fact that they already paid gate and reservation fees and believed that they shouldn't owe any more money (n = 5); the idea that backcountry campers are the least destructive of Yellowstone visitors and its not their responsibility to make up for these costs (n = 4); the idea that the fee discriminates against the poor (n = 4); and skepticism of the appropriation of funds (n = 4) (Table 41).

overnight permit	166.				
				Valid	Cumulative
	Overnight Fee	Frequency	Percent	Percent	Percent
Valid	Support	272	89.2	93.5	93.5
	Not Support	19	6.2	6.5	100.0
	Total	291	95.4	100.0	
Missing	No Answer	14	4.6		
Total		305	100.0		

Table 41. Backcountry camper support or opposition of Yellowstone National Park's overnight permit fee.

# Number of Trails in Backcountry

Yellowstone National Park has over 900 miles of trails. Backcountry campers were asked their opinions on the number of trails and given the options of "too many," "just right," and "too few." Only two individuals believed that there were too many trails (0.7%). Both the average and the median number of campers who believed that the number of trails in YELL was just right was about 83%. The final option, too few, made up 16.1% of all responses (Table 42).

	Opinion on				•
	Number of Trails	Frequency	Percent	Valid Percent	Cumulative Percent
	Trailo	ricqueriey	rereent	reroont	1 crocin
Valid	Too many	2	0.7	0.7	0.7
	Just right	248	81.3	83.2	83.9
	Too few	48	15.7	16.1	100.0
	Total	298	97.7	100.0	
Missing	No Answer	7	2.3		
Total		305	100.0		

Table 42. Backcountry campers' opinions on the number of trails in Yellowstone National Park's backcountry.

## Experience Detractions

Visitors usually have high hopes for their trips into the backcountry and seek out the experience for a variety of reasons including solitude, challenges, scenery, and much more. The park works tirelessly to try and deliver the opportunity for visitors to achieve these goals and obtain their desires. For this purpose, backcountry campers were asked if there was anything at all that detracted from their experience. While over two-thirds of individuals did not have any detractions from their enjoyment while in the park (69.7%), about 30% of campers had a negative experience detract from their stay (Table 43). There was a variety of different detractions given by respondents, all of which can be found in Appendix H, but the most commonly given answers specifically mention crowding (n = 12), too many horse groups and too much horse feces on the trails (n = 10), dangerous or poorly maintained trails (n = 9), poorly marked trails and campsites (n = 8), smoke from the 2016 wildfires (n = 8), and unwelcome human visitors in campsites (n = 5). A list of all responses can be found in Appendix L.

	Detracted from				
	Enjoying Backcountry	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	212	69.5	69.7	69.7
	Yes	92	30.2	30.3	100.0
	Total	304	99.7	100.0	
Missing	No Answer	1	0.3		
Total		305	100.0		

 Table 43. Backcountry campers' who experienced detractions from their

 enjoyment of their Yellowstone National Park backcountry experience.

Experiencing detractions from one's experience during their stay and highest level of education attained were significantly related ( $\chi^2 = 5.111$ , df = 1, p = 0.024). This relationship is weak (V = 0.134). Individuals who had attained at least a bachelor's degree or higher were more likely to have stated that there was some element that detracted from their enjoyment of Yellowstone's backcountry (34.4%) than those with less education. Only about 19.4% of individuals who have experienced some college or less stated that some element detracted from their enjoyment. Age, race, home region, and gender were also tested for significant relationships to experience detractions, but none were discovered.

#### Commercial Use

Another question posed was, "What is your opinion about commercial use in the backcountry?" and offered response options of "Commercial use is not acceptable" and "Commercial use is acceptable." This was followed by an opportunity to give a free written explanation of the individual's answer.

Almost two-thirds of individuals (61.4%) believed that commercial use in the backcountry was not acceptable. A large variety of reasons were cited, many of which included a desire for lower traffic in order to preserve the natural features and a desire to avoid overcrowding in the backcountry (Appendix M).

Backcountry campers who found commercial use to be acceptable (38.6%) offered the reasoning that it is one of the few ways to get some people outdoors. Many respondents who agreed with commercial use in the backcountry still added the stipulation that it be regulated or limited in some fashion (Appendix N). Two such examples state, "In a very limited amount that is low impact, commercial use could help to fund some of the maintenance" and "It is acceptable, but only on a small scale."

73

There was a significant relationship between highest level of education attained and opinion on commercial use ( $\chi^2 = 4.610$ , df = 1, p = 0.032). The relationship is of weak strength (V = 0.131). Those backcountry campers without a college degree were most likely to be of the opinion that commercial use is not acceptable. Backcountry campers with a bachelor's degree or higher were most likely to support some form of commercial use (Table 44). About 43% of respondents with a bachelor's degree or higher stated that commercial use was acceptable, while only about 27% of respondents having attained some college or less stated that commercial use was acceptable. Age, home region, gender, and race were also tested for a significant relationship with opinions towards commercial use, but none were revealed.

		Camper Opinion on Commercial Use				
Highest Level of Education	_		Not			
Attained	Count	Acceptable	Acceptable	Total		
Bachelor's						
Degree or Higher	Individuals	91	123	214		
	Expected Individuals	84	130	214		
	% of Individuals Within Column	85.8%	75.0%	79.3%		
Some College or						
Less	Individuals	15	41	56		
	Expected Individuals	22	34	56		
	% of Individuals Within Column	14.2%	25.0%	20.7%		
Total	Individuals	106	164	270		
	Expected Individuals	106	164	270		
	% of Individuals Within Column	100.0%	100.0%	100.0%		

Table 44. Crosstabulation of highest level of education attained and opinion of acceptability of commercial use in the backcountry.

This question, "What is your opinion on commercial use in the backcountry," had the highest number of missing responses (About 9% of all respondents) for the entire survey (Table 45). Of those who answered the question, about 7% stated that they did not understand the question. The intended definition of commercial use included privately owned, professional guided tours and trips into the backcountry, including any length of time, mode of travel, or intended destination.

Table 45. Backcountry campers' opinions on the acceptability of commercial use in Yellowstone National Park's backcountry.

				Valid	Cumulative
	Commercial Use	Frequency	Percent	Percent	Percent
Valid	Acceptable	107	35.1	38.6	38.6
	Not acceptable	170	55.7	61.4	100.0
	Total	277	90.8	100.0	
Missing	No Answer	28	9.2		
Total		305	100.0		

## Desirable Aspects

Campsite and management preferences among backcountry visitors vary widely. Respondents were given seventeen common backcountry features ranging from activities, amenities, and policies. They were asked to rate the desirability of these elements from (1) Very Undesirable, (2) Undesirable, (3) Neutral, (4) Desirable, and (5) Very Desirable. As the mean gets higher, up to a maximum of five, desirability is more strongly indicated. The percentage of each response within a category was recorded and an average of the scores was determined and placed in descending order (Table 46).

"Food Poles at Campsites" and "Directional Signs" were the two most commonly desired backcountry elements, scoring a mean of 4.55 and 4.15 respectively for "Desirable."

Ten backcountry elements received an average rating of between "(3) Neutral" and "(4) Desirable. These elements included "Limiting Party Size" (3.89), "Orange Trail Markers on Trees" (3.89), "Having Designated Campsites" (3.89), "Bridges Across Creeks" (3.84), "Rangers on Patrol" (3.64), "Food Boxes at Campsites" (3.57), "Cabins for Ranger Use" (3.57), "Pit Toilets at Campsites" (3.38), "Research Equipment in the Backcountry"(3.28), and "Pack Rafting" (3.09).

Four backcountry elements received an average rating of between "(2) Undesirable" and "(3) Neutral." These elements include "Hitching Rails and Campsites" (2.99), "A Few Trees Blown Down Across the Trail" (2.96), "Providing Your Own Bear Resistant Canisters" (2.72), and "Prohibiting Wood Fires" (2.64).

The least desirable element, "Aircraft Overflights" scored between "(1) Very Undesirable" and "(2) Undesirable" with a mean of 1.91.

Yellowstone Nat							
Preference Item	(1) Very Undesirable (%)	(2) Undesirable (%)	(3) Neutral (%)	(4) Desirable (%)	(5) Very Desirable (%)	Mean (%)	SD
Food Poles	(70)	(70)	(70)	(70)	(70)	(70)	50
at Campsites	0.7	0.0	6.8	28.1	64.4	4.55	0.68
Directional Signs	1.0	3.1	8.6	54.3	33.0	4.15	0.78
Limiting Party Size	2.7	7.9	18.5	39.0	31.8	3.89	1.03
Orange Trail Markers on Trees	2.1	4.5	19.7	49.5	24.2	3.89	0.89
Having Designated Campsites	3.4	7.2	15.2	45.4	28.6	3.89	1.01
Bridges Across Creeks	1.7	5.5	20.3	52.2	20.3	3.84	0.87
Rangers on Patrol	2.4	5.2	32.3	46.0	14.1	3.64	0.87
Food Boxes at Campsites	6.8	10.3	25.0	34.9	22.9	3.57	1.15
Cabins for Ranger Use	2.4	4.8	50.2	31.5	11.1	3.44	0.84
Pit Toilets at Campsites	7.6	14.1	28.9	31.3	18.2	3.38	1.16
Research Equipment in the							
Backcountry	2.1	4.8	64.4	20.4	8.3	3.28	0.77
Pack-Rafting	7.0	4.9	68.8	15.0	6.3	3.09	0.85

Table 46. Backcountry campers' opinion on the desirability of backcountry elements in Yellowstone National Park.

Table 46. Continued on next page

renowstone na	ational Park (Co	/					
	(1) Very	(2)	(3)	(4)	(5) Very		
Preference	Undesirable	Undesirable	Neutral	Desirable	Desirable	Mean	
Item	(%)	(%)	(%)	(%)	(%)	(%)	SD
A Few Trees Blown Down Across the Trail	1.7	14.8	72.9	7.6	3.1	2.96	0.64
Providing Your Own Bear Resistant Food Canister	17.1	21.2	40.8	14.4	6.5	2.72	1.11
Prohibiting Wood Fires	21.2	28.1	26.4	14.0	10.3	2.64	1.25
Aircraft Over- Flights	33.2	46.2	18.9	0.3	0.4	1.91	0.81

Table 46. Backcountry campers' opinion on the desirability of backcountry elements in Yellowstone National Park (Continued).

# Trip Satisfaction

Finally, concerning visitor experiences and opinions, backcountry campers were asked "How satisfied or dissatisfied were you with the following aspects of your backcountry trip?". Nine trip aspects were provided, and responses were designated a value from 1 - 5. The values represented (1) Very Dissatisfied, (2) Somewhat Dissatisfied, (3) Neutral, (4) Somewhat Satisfied, and (5) Very Satisfied. The mean score was determined for each trip aspect and placed in descending order of satisfaction (Table 47).

Every backcountry trip aspect had means greater than (4) Somewhat Satisfied. The highest average of satisfaction among backcountry campers was for "Overall Satisfaction" with a mean rating of 4.74. This was closely followed by high satisfaction with "Courtesy of Person Providing Permit" (Mean = 4.71). The "Courtesy of Person Providing Permit" also received the highest percentage of (5) Very Satisfied responses (84.3%).

The highest percentage of (1) Very Dissatisfied responses occurred in "Ease of Finding Trailhead" (2.6%), which follows the trend of open ended responses indicating poorly marked trails as an element that detracted from some visitors' stay. The lowest mean rating for trip satisfaction still scored above (4) Somewhat Satisfied. With a mean satisfaction score of 4.31, "Length of Time to Obtain Permit" received the lowest satisfaction score out of all the items provided on the list. Overall, satisfaction levels for all elements were quite high.

	(1)	(2)	(3)	(4)	(5)		
Trip	Verý	Somewhat	(-)	Somewhat	Very		
Satisfaction	Dissatisfied	Dissatisfied	Neutral	Satisfied	Satisfied	Mean	
Item	(%)	(%)	(%)	(%)	(%)	(1-5)	SD
Overall							
Satisfaction	1.7	1.0	0.7	14.7	81.9	4.74	0.66
Courtesy of Person Providing Permit	2.0	1.7	3.7	8.3	84.3	4.71	0.79
Ease in Finding Trailhead	2.6	2.6	3.0	18.0	71.8	4.57	0.89
				Table 4	7. Continue	d on next	t page

Table 47. Degree of backcountry campers' satisfaction with Yellowstone National Park trip aspects.

aspects (Cont	inueu).						
	(1)	(2)	(3)	(4)	(5)		
Trip	Very	Somewhat		Somewhat	Very		
Satisfaction	Dissatisfied	Dissatisfied	Neutral	Satisfied	Satisfied	Mean	
Item	(%)	(%)	(%)	(%)	(%)	(1-5)	SD
Condition of							
Campsite(s)	1.7	3.0	6.0	20.3	69.0	4.52	0.87
Knowledge							
of Person							
Providing Do resit	4 7	2.0	0.0	45.0	74.0	4 5 4	0.00
Permit	1.7	3.0	9.0	15.3	71.0	4.51	0.90
Condition of							
Trail(s)	1.7	3.3	6.7	21.1	67.2	4.49	0.89
Trail(5)	1.7	5.5	0.7	21.1	07.2	4.43	0.09
Face in							
Ease in Finding							
Campsite(s)	0.7	6.4	4.4	21.1	67.4	4.48	0.90
Campolic(3)	0.7	0.4		21.1	07.4	4.40	0.00
Ease in							
Following	. –	. –					
Trail(s)	1.7	3.7	5.3	24.3	65.0	4.47	0.88
Length of							
Time to							
Obtain							
Permit	2.3	5.0	14.2	16.6	61.9	4.31	1.04

Table 47. Degree of backcountry campers' satisfaction with Yellowstone National Park trip aspects (Continued).

## Visitor Knowledge of Wildlife and YELL Source Material

The following section of the survey is part of another study to determine how much visitors are exposed to National Park safety media and to determine how well they retain that knowledge, especially concerning wildlife safety. Throughout the park, fliers and videos are available to provide visitors with safety precautions and information about wildlife, camping, thermal features and terrain dangers. The fliers are commonly found at trailheads, visitor centers, ranger offices, bulletin boards, and restrooms, and in newspapers. These often give brief but detailed explanations of wildlife behavior such as how fast bison can sprint and how much distance an individual should maintain from a given animal species.

Fliers and website information recommend that an individual should leave 100 yards between themselves and predators such as a bear or wolf. Respondents could enter an open-ended answer to the question "How far away should individuals stay from bears and wolves." The correct answer of 100 yards was entered by 55.1% of respondents. Because the survey was taken up to several weeks after the campers' trips, this indicates that at least some NPS materials are retained by visitors. Only 11.3% entered a response that was below 100 yards, this could potentially put these individuals at a greater risk of a dangerous animal interaction. About 18% of individuals provided a response that was non-numeric, such as "very far", or lacking units of distance (Table 48).

	Responses	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 100 Yards	32	10.5	11.3	11.3
	100 Yards	156	51.1	55.1	66.4
	Over 100 Yards	43	14.1	15.2	81.6
	Non-Numeric or Unitless	52	17.0	18.4	100.0
	Total	283	92.8	100.0	
Missing	No Answer	22	7.2		
Total		305	100.0		

Table 48. Backcountry campers' knowledge of the recommended distance they should keep between themselves and bears or wolves.

Backcountry campers were asked the same question concerning ungulates such as bison, elk, deer, and moose. The recommended minimum distance given by the National Park Service for ungulate safety is 25 yards. Although about half of the respondents knew the answer for the charismatic megafauna, the amount of correct answers dropped considerably for ungulates. Only 29.0% of backcountry campers provided the correct answer. Fortunately, the majority of individuals over-estimated the safe distance (50.2%) (Table 49). Even though they did not enter the correct answer, they still may be maintaining more than enough distance between themselves and the animal.

				valid	Cumulative
	Responses	Frequency	Percent	Percent	Percent
Valid	Under 25 Yards	20	6.6	7.1	7.1
	25 Yards	82	26.9	29.0	36.0
	Over 25 Yards	142	46.6	50.2	86.2
	Non-Numeric or Unitless	39	12.8	13.8	100.0
	Total	283	92.8	100.0	
Missing	NA	22	7.2		
Total		305	100.0		

Table 49. Backcountry campers' knowledge of the recommended distance they should keep between themselves and other animals such as bison, deer, elk, and moose.

The next question, "Bison can sprint _____ times faster than humans can run," was posed as a multiple-choice question with possible responses of Two, Three, Four, and Five. The correct answer is Three. The answers were generally evenly distributed across the board, with 32.5% (n = 92) of individuals, a small majority, entering the correct response of Three. Many individuals (54.1%) overestimated the running speed of bison, possibly putting them at even less of a risk for a dangerous interaction (Table 50).

	Responses	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Two	38	12.5	13.4	13.4
	Three	92	30.2	32.5	45.9
	Four	84	27.5	29.7	75.6
	Five	69	22.6	24.4	100.0
	Total	283	92.8	100.0	
Missing	NA	22	7.2		
Total		305	100.0		

Table 50. Backcountry campers' knowledge of how many times faster a bison can run compared to a human.

The last set of wildlife safety questions consisted of several true or false questions based on both Yellowstone National Park media and common sense. More individuals reported the correct answers in all of these questions compared to the open-ended and multiple-choice questions. Over 90% of individuals reported the correct answer to each of the true/false questions, with the exception of "If a person observes a bear or bear sign, the information should be reported to a park ranger as soon as possible" (TRUE, 79.5%) (Table 51).

		Correct Responses
Question	Answer	(%)
When encountering a bear, one should run away as fast as one can.	FALSE	99.7
Coyotes can be fed.	FALSE	98.9
It is recommended that individuals stay in groups of three or more.	TRUE	98.2
If a bear charges, a person should stand his or her ground.	TRUE	93.3
Ravens can unzip and unsnap packs.	TRUE	92.7
If a bear charges and makes contact with a person, the person should fall to the ground and "play dead."	TRUE	91.9
If a person observes a bear or bear sign, the information should be reported to a park ranger as soon as possible.	TRUE	79.5

Table 51. Correct responses given by backcountry campers on true/false questions related to Yellowstone National Park.

# General Comments

Finally, at the end of the survey, respondents were asked to "write any comments, complaint, or suggestions pertaining to Yellowstone's backcountry that may help us improve the backcountry experience." There was a total of 153 unique responses, all of which can be found in Appendix O. Although all of the responses have merit, and should each be considered on an independent basis, several recurring elements were revealed.

# Rangers and Staff

The most frequent element specifically stated by respondents during their opportunity for general comments was to praise Backcountry Rangers and staff (n = 20). Several comments singled out individual employees and offices while

others acknowledged rangers and the National Park Service in general. Some examples are:

"The Ranger was amazing! He was helpful and took the time to answer questions. He also helped us pick out a campsite that was perfect!"

"... The ranger I spoke with when getting the permit was very helpful, informed, and cheerful."

"Our ranger at the Tower station was very helpful and even loaned (his/her) bear spray. Thank you everyone we had a great time and salute you etc etc."

#### Trail Markers

Another recurring element throughout the general comments concerned a lack of trail markers. There were ten comments stating that there were too few trail and campsite markers, and two additional comments that state the signs are difficult to read. Although many hikers believe that trail markers and signs can be intrusive to the backcountry experience, almost 8% of respondents to this openended question reported specifically on an issue regarding trail markers. Some responses were:

"More frequent trail markers on long trail, like every mile or every other mile. Just so you know you are on the trail and haven't (wandered) off it."

"...the lack of signage on the trail made us worried..."

"Please keep trail markings updated! This was the only part that detracted from our experience. Otherwise, the trip was fantastic."

#### Permits and Reservations

Individuals commenting on the permitting process generally felt that the permit took too long to obtain or it involved an unnecessary complication (n = 8). Multiple concerns about advanced reservations occurred as well (n = 6). These responses vary and should be examined on an individual basis.

#### Horse Traffic

Because horse traffic and horse droppings were noted ten times when asking individuals what detracted from their enjoyment of their trip, it is unsurprising that horse traffic and horse related concerns are mentioned here (n = 6). Although there's a long history of horse traffic in Yellowstone, it is sometimes seen as intrusive to the backcountry experience because hikers are forced off the trail to let them pass and too much equestrian use can make the trails rutted or difficult for hikers to maneuver. At least three separate individuals in this study felt as though there were far too many horse droppings along the trails and in the campsites of the backcountry.

## Additional Open-Ended Comments

The availability of backcountry maps was addressed five times in the comments. Free backcountry maps to campers, putting the trails on google

maps, and making them available online were several notable recommendations offered by backcountry campers.

The availability of pit-toilets at campsites was addressed three times in the comments, all responses requested them in greater number.

## SUMMARY AND CONCLUSIONS

## **Demographic Characteristics**

As of 2016, annual visitation to Yellowstone park is at an all-time high. Although annual recreation visits for the entire park have risen from around 3 million people to over 4 million people since 1999, backcountry visitation numbers have remained somewhat stagnant. There were just over 4,000 more visitors to the backcountry than there were in 1999, which reported about 30,000 total campers in peak season.

In Oosterhous' (2000) study of Yellowstone backcountry campers for the 1999 peak season, it was discovered that most of them were young, white, and male. They were also particularly well educated, with only 4% of them never having experienced any college. When comparing this study's data to that of Oosterhous' (2000), it is surprising to find that very little has changed at all concerning backcountry demographics over the past 17 years. In fact, they're remarkably similar. The most prevalent demographic characteristics of backcountry campers during the 2016 peak season were young (~75% aged 45 years or less), white (95%), and male (64%). They were also particularly well educated. Only 4% of them had never attended college as well. Most backcountry campers visited from the West region of the United States (51%).

These demographic findings reinforce multiple studies conducted by Taylor and Mackay (1980), Hughes (1985), Roggenbuck and Lucas (1987), and Oosterhous, Legg, and Darville (2000). These reports are all consistent in stating that these demographics are dominant in public wilderness areas dating as far back as the 1960s when research in this field truly took shape. It is likely that these demographics have historically always been the most prevalent in backcountry attractions. If the National Park Service desired to attract backcountry visitors of more various demographic pools, additional research should be conducted into each specific demographic culture to determine why backcountry activities are less prominent within these communities. Additionally, a large shift in outreach and cultural appropriation would likely need to be addressed, the extent and methods of outreach would vary based on the results of several dedicated studies.

#### Party Characteristics

Most backcountry campers traveled in groups of 2 – 3 people. Parties of 3 are recommended by the National Park Service, and parties of 4 or more are recommended particularly when traveling in bear country. However, about 11% of backcountry campers hiked solo. This may be an acceptable number for the National Park Service, but continuous monitoring of human/bear interactions may be necessary to evaluate safety conditions in the backcountry. There were also several large parties of 8 or more individuals. One party consisted of 23

individuals. Parties this size have the potential of creating severe wear and tear impacts at designated campsites. This kind of concentrated use also creates the potential for overcrowding other backcountry campers. Parties of this size may cause less degradation of the campsites if they are dispersed between several campsites, which is congruent with NPS regulations stating a 12-person cap per campsite.

#### Planning and Preparation

Just over half of the campers were experiencing the backcountry for their first time. However, almost 99% of them felt prepared for common safety situations that could occur on their trip. This could be partially contributed to park staff/employees and the official website, both of which were heavily used by individuals during their planning. Not only were these sources abundantly used, but visitors were largely satisfied with the information that they had obtained while in the permitting office or by visiting the website, regardless of their length of stay. Because of the liberal use of the park website as a planning tool, it is recommended that the information on the site be continuously reviewed and updated as policies and conditions change. The information found on the website is extensive, but ease of use and navigation on the page can make it difficult to seek out specific information. Specific issues affecting the park at any one time, such as unusual bear activity or smoke from nearby fires, should be made clear and visible on the front page of the website.

#### Trip Experience

Most individuals watched the bear safety video in the permitting office before beginning their trip. Although not every visitor benefits from the video, it has proven useful for less experienced campers. One individual who encountered a bear in the backcountry specifically credits the video for giving them the knowledge of how to respond to such an encounter. It may be beneficial to update the video to a more modern quality, since the fact that it felt "dated" caused some individuals' focus to wander. The video primarily focuses on bear safety and many campers suggest adding additional information such as trail ethics, navigation tips, and additional wildlife preparation methods. However, because the length of time that it takes to obtain a permit according to respondents is the least satisfying element of one's backcountry trip, it may be detrimental to the visitor experience if the video is made any longer than it already is. As an optional measure, for visitors who desire this extra information and who are willing to spend a little extra time in the permitting office, perhaps supplemental videos can be made available for viewing in all of the ranger offices. Rangers can then give visitors the option of watching additional videos after they have viewed the mandatory bear safety video. This would also be an appropriate time for rangers to distribute maps or literature reinforcing wildlife safety guidelines. Because of the large majority support of the permit fee, it might be possible to slightly raise the fee to offset map and literature costs.

About 3\4 of backcountry campers already knew the area in which they desired to camp before they got to the permitting office. However, about 20% of individuals did not get a site in their desired area. This could indicate that some additional work could be done to avoid disappointing visitors. Perhaps the reservations system could include particular campsites or more campsites could be made available. However, because 2016 had more campsite closures than previous years due to wildland fires and increased bear activity, it may be wise to observe more traditional years of activity before deciding to make any changes.

When campsites in the front-country reach maximum capacity, sometimes individuals choose to camp in the backcountry as an alternative option. These individuals are may be less prepared for the challenges that come with backcountry camping. To keep other individuals in their desired area, it may be worth considering charging campers who do not show up to their reservation to deter no-shows. This could possibly reduce the number of empty, but reserved, campsites in both the front-country and the backcountry.

About 20% of respondents had difficulty finding a parking space at some point during their trip for locations found either in the backcountry or in the frontcountry. While this may serve to limit the number of individuals who can be at an attraction at one time, effectively reducing human impacts on the resource, this means that potentially 1 in 5 individuals do not get to experience a particular attraction when making the journey to Yellowstone. It is recommended that the

number of parking spaces at popular attractions could be increased. Other forms of regulation of human impacts could be implemented such as a line for entrance, groups entering attraction areas at designated time intervals or volumes, or infrastructure designed to accommodate greater numbers of people.

Although most campers stayed only one night (31%), the average length of stay was 2.6 nights and more than 80% of individuals stayed for three nights or less. These statistics also mirror the demographic, length of stay, and party size averages discovered by Roggenbuck and Lucas (1987). It was discovered that, typically, as individuals increase in age so does their length of stay. Respondents between the ages of 17 - 35 usually spent less than three nights in the backcountry, while individuals over the age of 60 are more likely than any other age group to spend four or more nights camping.

The most popular locations for backcountry campers to visit while in the park were Yellowstone River/Hellroaring, Old Faithful, Canyon, Shoshone Lake, and Bechler. All of these locations appeared in about 20% of backcountry respondent reports. All of these locations were likely reached by foot from a parking lot or trailhead, because hiking was reported in 95% of all cases for a method of travel. Non-motorized boats are also a popular form of transportation within the park, accounting for 5% of all cases for method of travel.

Trails were chosen by campers for a large variety of reasons, but the most commonly stated reasons, provided by an open-ended question, were that they

were near water, aesthetically pleasing, recommended by someone, or to see a specific named feature or attraction.

Individuals walked off the trail for several reasons, but two specific reasons occurred in great numbers. Individuals left the trail to use the bathroom (81% of all cases) or to move out of the way of horseback riding groups (70% cases) more often than for any other reason. With a lack of pit toilets at most campsites, it is expected that individuals leave the trail to use the bathroom. If this is an unwelcome activity in the backcountry by NPS standards, additional pit toilets should be placed periodically along the trail or in more campsites. Because many of the campsites are near water, and toilets are not readily available at the campsites, water quality measurements at popular streams and ponds should be considered for future studies to ensure that unacceptable levels of e-coli and feces aren't entering these bodies of water where individuals often restock water.

Individuals leaving the trail to avoid horseback groups, however, is less expected. In fact, the presence of horses and horse droppings along the trail and in campsites was one of the most commonly reported elements that detracted from visitor experience (n = 10) and an issue specifically mentioned in the general comments several times (n = 6). While horseback riding is a traditional and historic use of public lands within the National Park Service, their presence may be detrimental to the overall backcountry hiker experience. It may be

appropriate to ask horseback riding groups to remove droppings from trails and campsites while in the backcountry. In order to minimize hikers leaving the trail, NPS may consider widening and reinforcing trails that are known to receive heavy equestrian use. Additionally, due to the large number of reports that horses were rutting, damaging, and polluting trails and campsites, it would be beneficial to the overall quality of the campers' experience if LAC and VUM monitoring were regularly conducted in high horse traffic areas. This way a baseline is established for acceptable levels of measurable equestrian use is established and impact relief can be implemented if the effects become too great.

As far as crowding is concerned, almost 90% of individuals saw at least one other group of hikers while in the backcountry and about 15% of individuals saw five or more groups. This could indicate a high level of crowding on trails, but additional research should be conducted to see if these trails are traditionally known for heavy day-hiker use. In terms of how backcountry hikers felt about seeing other groups, only 3.7% of individuals felt like they were moderately or extremely crowded at some point during their trip. The individuals who reported feeling crowded indicated that they visited Bechler, Old Faithful, Yellowstone River, and Heart Lake. These locations would be a good place to start if one were to continue research specifically towards visitors' sense of crowding. On average, when a visitor saw five or more groups a day on the trail, they began to

feel moderately crowded. Visitors began to feel extremely crowded when they encountered about seven groups per day on the trail.

All but one bear encounter reported were peaceful and non-life threatening. About 1 in 5 visitors saw a grizzly or black bear while they were in the backcountry. No campers reported having to use their bear spray or any other form of protection during their encounter. In most cases, there was plenty of distance between the visitors and the bear unless it was a surprise encounter. Because of the recommended safety video during the permitting process, almost all campers believed they were prepared for such an encounter and knew what to do in their particular situation. It is highly recommended that the safety video continues to be shown during the permitting process. Many variables were tested to determine under which conditions campers were more likely to see a bear while in the backcountry. Demographics, length of stay, and party sizes surprisingly did not show any significant statistical results. The only significant relationship found was that when individuals saw 2 - 3 other groups on the trails, they were also more likely to see a bear. This indicates a possibility that the amount of human activity in an area can somehow influence the conditions in which a visitor is more likely to encounter a bear.

#### Visitor Opinions and Preferences

The new backcountry permit fee implemented in 2015 has proven to be overwhelmingly supported by backcountry campers. Almost 94% of backcountry campers support this fee. Opposition to the fee includes the reasoning that campers already paid an entrance fee, the idea that the fee discriminated against the poor, and a skepticism over the appropriation of funds. With such high levels of positive support for the permit fee, it is suggested that the fee remain in place to supplement backcountry operation costs.

About 83% of campers believed that the number of trails in the backcountry was just right and 16% of campers believed that there were too few trails. With only 0.7% of campers believing that there are too many trails, it would most likely be nondetrimental to the backcountry experience if more trails were made available. This could also help campers avoid obtaining permits for locations that they did not primarily plan on visiting and reduce the number of hiking groups encountered while in the backcountry. However, it may not be necessary given the high levels of visitor satisfaction with the number of trails.

Individuals with at least a bachelor's degree reported elements that detracted from their experience more often than individuals who experienced some college experience or less. About 30% of individuals experienced some form of detraction from their enjoyment of their trip. The most commonly stated reasons were crowding, too many horses and horse droppings on the trail and campsites, poorly marked and poorly maintained trails, and smoke from the 2016 wildfires.

Trails that are poorly marked are of a particular safety concern, because over 20% of backcountry campers reported leaving the trail on accident because of poorly marked trails. A few individuals even stated that they got lost. All but one of the general comments regarding trail markers state that there were not enough of them. Additionally, directional signs were the second-most desirable element to backcountry campers just after food poles at campsites and it is one of the main factors that can diminish visitor satisfaction of their experience (U.S. Department of the Interior, 1994). It may be prudent to place easily visible markers at more frequent intervals along the trails to minimize safety risks and to reassure worried hikers. The presence of trails created by bison in some areas such as Lamar Valley can also contribute to hiker confusion. Precise trail maps or regular signage could potentially assure hikers that they are on the right trail.

Another issue that tends to worry campers is the acceptability of commercial use in the backcountry. Just over one-third of backcountry campers believe that commercial use is acceptable in the backcountry. Even then, among the campers who found it acceptable, stipulations were often recommended to limit or regulate commercial use in some way. Some campers suggested a limited number of outfitters, limited party sizes, and low impact requirements. Campers who obtained a bachelor's degree or higher were more likely to support some form of commercial use, while campers with less formal education tended to be more resistant to the acceptability of commercial use.

Overall, campers were somewhat satisfied to very satisfied with their trip into the backcountry. Overall satisfaction was overwhelmingly high with a mean percentage of 4.74 out of 5. When converted to a hundred-point scale, this is almost a 95% success rate for visitors being very satisfied. Backcountry campers were also very satisfied with Ranger/staff courtesy, ease in finding trailheads, the condition of campsites, and the knowledge of permit issuers.

#### Visitor Knowledge of Wildlife and YELL Source Material

One in ten backcountry campers underestimated the recommended safe distance to maintain between themselves and charismatic megafauna such as bears and wolves. Almost as many underestimated the safe distance to keep between large ungulates and themselves. About 13% of all campers also underestimate the speed that bison can run. While most individuals know to maintain a safe distance from wildlife, one in ten individuals is a slightly alarming number for potentially dangerous wildlife encounters. It may be wise to have permit issuers and the safety video verbally reinforce these safe distances to individuals entering the backcountry in addition to the informative fliers and signs around the park.

#### General Comments

Many campers used their opportunity for general comments to praise Rangers and staff. It is clear that the bar is high concerning visitor expectations within the park, but due to the knowledge and courtesy of professional rangers

and staff, these expectations are generally being met. However, several individuals were surprised to discover that permitting rangers sometimes had never been to the campsites and trails that they were sending campers to, limiting visitor knowledge on what to expect. Backcountry permit issuers should be encouraged to visit some of the more popular trails and campsites so they can give first-hand accounts and information to campers who may need it.

Additional recommendations and comments given by respondents in large numbers were requests for more trail markers, simplifying and shortening the process for obtaining a permit, frustrations over horse traffic and horse droppings, easier access to maps, and requests for more pit toilets. Yellowstone National Park Management Recommendations

While reviewing the comments supplied by backcountry campers and analyzing the data, several recurring themes and elements resulted in ideas for small changes in management policy. It is recommended that Yellowstone National Park review these suggestions and implement them based on feasibility, resource protection, and optimal visitor experience. The recommendations are as follows:

 With such extreme dependency on the park website in trip planning, it is recommended that the website be reviewed at regular intervals and changed to reflect any policy changes. Any immediate issues in the park that affect visitor plans should be clear and visible on the main page.

- The backcountry safety video should be updated in quality so as to maintain visitor attention. The video should contain current information and precautions to take for bear safety.
- As an optional means of providing quality information to backcountry visitors, additional videos could be produced for and provided by backcountry offices to show to visitors who seek additional knowledge.
- 4. Since fliers and pamphlets about wildlife precautions are not always seen and retained, it would be wise for rangers to verbally reinforce safe distances that visitors should keep from wildlife. This can be done during the permitting process.
- 5. It is recommended that rangers and permitting staff are encouraged to visit many of the popular backcountry trails and campsites so they have first-hand knowledge to provide to visitors.
- Clear, accurate trail maps created using GIS should be provided in print or on the park website.
- 7. The advance reservation system could include the reservation of particular campsites selectable on the website.
- The number of parking spaces available at both front-country attractions and popular trailheads should be increased to accommodate individuals trying to visit particular locations.

- An increased number of pit toilets could reduce the number of individuals leaving the trail.
- 10. Horseback riding groups should be encouraged to remove feces from the trail or campsites to provide optimal hiker satisfaction.
- 11. LAC and VUM should be conducted on popular horse trails to ensure that hikers do not have to walk off the trail in the event of heavy rutting.
- 12. Additional trail markers should be placed regularly and clearly along the trails. Individuals are getting lost in the backcountry and this will alleviate some serious safety concerns. Perhaps one marker every mile or two would suffice.
- 13. The backcountry permit fee is well supported by backcountry campers. This fee should be kept in place and used to improve and maintain backcountry operations and offices.
- 14. Limit commercial use entering the backcountry with defined measurements of acceptable use.
- 15. Please review the comments in the appendices of this report. The best way to provide for the people who use the park is to listen to their opinions and suggestions in their own words.

#### Additional Research Recommendations

Several notable ideas for opportunities for continued research presented themselves during this project. While this study is limited to its own objectives, new studies could be proposed to improve the quality of visitor experience and resource protection. Recommendations for consideration to additional research include:

- Research into the effectiveness of Dillman and Smyth's (2007) tailored design with email surveys could be implemented to see if there are better ways to reach backcountry campers for questioning. Although this method worked better than other attempts, there is still room for improvement.
- Cultural research could identify why individuals that are not found to be among the dominant demographics visit the park in such small numbers. This could also aid in outreach efforts for these demographics.
- 3. It would be interesting to see what factors contribute to backcountry campers seeing bears while on their trips. These are highly sought-after moments for backcountry campers and information on favorable conditions for bear viewing would be appreciated by visitors.
- 4. Water quality measurements at popular re-supply points along the trails and at campsites should be recorded and monitored for e-coli and feces because a significant lack of pit toilets allows visitors to defecate wherever they choose.
- 5. Because this was a difficult year for visitors to get their desired campsites due to unusual bear activity and nearby fires, additional years may be monitored to see if more individuals get to camp in their desired areas. If,

during normal years of activity, campers are still being relocated then it may be time for Yellowstone National Park to consider the addition of more trails.

 Visitor opinions on commercial use can be additionally defined so measurable parameters can be implemented to regulate the magnitude of commercial groups in the backcountry.

#### Study Design and Limitations

Because this is a partial replication of a previous study, some of the study designs were implemented to ensure as close of a comparison to the source material as possible. If this study were to be conducted again under similar circumstances, very little would be done differently. Although instructions were left to collect non-response numbers at the back office, published visitation numbers and reported individuals who did not want to be surveyed did not correlate to each other. It is understandable that with such high volumes of individuals in the permitting office during the peak season that it would be very difficult to ensure a record of all these numbers, but more thorough analyses could be done with the data if non-response bias was more heavily accounted for. It would also be beneficial to present fewer questions to survey respondents in order to obtain more complete surveys and to keep the respondents engaged.

The information requested in the survey, however, was consistent with Lucas and Stankey's (1984) method for determining limits of acceptable change.

Many of the comments and suggestions given by respondents to this survey can be used to measure campsite and trail degradation while setting the bar for what campers find acceptable. These questions (1) determined wilderness visitors' perception of the relative importance of various aspects of the resource and social setting by inquiring into the desirability of backcountry elements and conditions, (2) showed how visitors evaluate various degrees of resource impact by defining the acceptability of certain backcountry elements and conditions, and (3) tests and evaluates visitor perception of a wide variety of management practices.

Dillon and Smyth's (2007) tailored design method also seems to remain the most effective method for collecting survey responses. During the pilot study, it was discovered that roaming researchers did not usually maintain enough authority or interest to backcountry campers who were still in the middle of their experience. Visitors were also difficult to find in the middle of the backcountry, and if questioned at the trailhead most of them had not completed their overall backcountry experience and the surveyors would only obtain partial information on visitor experience. Emailed surveys and a tailored design of the survey provided a very high response rate for a social survey, and this method should be implemented into future research conducted into backcountry dynamics.

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Appendix A

Survey Solicitation Script

## Survey Solicitation Script

Yellowstone National Park managers are interested in learning more about your Yellowstone backcountry experience and your perceptions of Yellowstone's backcountry. To learn more about your trip experiences, your opinions, and experiences, we are conducting a brief electronic survey this summer, which will take about 10 minutes to complete. Questions will be asked about your trip and personal characteristics as well as your perceptions, opinions, and experiences of this backcountry trip. We are asking all backcountry hikers to participate. If you are willing to participate in this important survey, please print your name and your email address on this form. You will receive further details about the survey about two weeks from now. Results of this survey will be used by backcountry managers to improve the backcountry experience in Yellowstone.

If "YES". If the individual answers "yes", ask, "have you already been asked to participate in this survey?"

If the answer is "yes", (previously agreed to participate), then say, "Thank you for agreeing to participate in this study. When you receive your email requesting participation in the survey, we hope you will complete the questionnaire. Have a great day."

If the answer is "no", (have not previously agreed to participate), then say, "Thank you for agreeing to participate. Most of our questions are in the electronic survey, but I have a few questions I need to ask you now. (The surveyor will ask them the non-response bias questions and record their answers in the spaces provided on the survey log and non-response bias form.

If "NO" (soft refusal), then say, "That's fine. We will not send you the electronic survey, but would you be willing to take just a minute to answer a couple of questions for us now so that we can better understand Yellowstone backcountry hikers?" (The surveyor will record responses in the spaces provided and thank them for their time.)

In "NO" (hard refusal), then say, "Thank you for your time. Have a great backcountry trip.

Appendix B

Backcountry Survey Questionnaire

## Yellowstone National Park Backcountry Survey Questionnaire Summer, 2016

## Backcountry Hiking Experience

- 1. Where did you receive your backcountry permit?
  - $\bigcirc$  Bechler
  - Bridge Bay
  - Canyon
  - Grant Village
  - $\bigcirc$  Mammoth
  - $\bigcirc$  Old Faithful
  - $\bigcirc$  South Entrance
  - $\bigcirc \, \text{Tower} \,$
  - West Entrance
- 2. Did you watch the video on backcountry trips before beginning your trip?

Yes. If you watched the video, how did this video prepare you for your backcountry trip?
No. If not, why not?
What additional information or approach would improve the video?

- 3. Did you receive adequate information from the permit office before beginning your backcountry trip?
  O No. Why not?
  O Yes
- 4. Before you were issued your backcountry permit, did you know where you wanted to camp?

 $\bigcirc$  No

 $\bigcirc$  Yes

Did you get a campsite in this area?  $\bigcirc$  No  $\bigcirc$  Yes

If you did not, how did this affect your backcountry experience?

- 5. What was your mode of travel on your backcountry trip? (select all that apply) O Foot
  - $\bigcirc$  Horse
  - $\bigcirc$  Llama
  - Motor boat
  - $\bigcirc$  Non-motor boat
- How many nights did you spend in the backcountry of Yellowstone on this overnight backcountry trip?
   _____ number of nights
- 7. How many people were in your group, including you?
- 8. How many of these individuals were children (under age 18)? ______ number of individuals under age 18
- 9. About how many hours did you spend in pre-trip planning?
- 10. Please indicate in which area or areas you traveled during your recent backcountry trip. (Select all that apply to your trip)

Area of Yellowstone Backcountry Traveled	No	Yes
Bechler	0	0
Canyon	0	0
Gallatin	0	0
Heart Lake	0	0
Lamar	0	0
Old Faithful	0	0
Pebble Creek	0	0
Pelican Valley	0	0
Shoshone Lake	0	0
Slough Creek	0	0
Thorofare	0	0
Yellowstone Lake	0	0
Yellowstone River/Hellroaring	0	0
Other	0	0

11. Why did you and your personal group choose the trails you did?

- 12. About how many hiking groups did you see <u>per day</u> while you were hiking on the trails in the backcountry?
  - O _____ number of hiking groups per day or
  - $\bigcirc$  Did not see any hiking groups
- 13. Please indicate how crowded you felt on your trip?
  - $\bigcirc$  Not at all crowded
  - Slightly crowded
  - $\bigcirc$  Moderately crowded
  - ○Very crowded
  - OExtremely crowded
- 14. While inside the park, were you able to find parking at all the areas you wanted to visit?
  - $\bigcirc$  No
  - $\bigcirc$  Yes
- 15. How many nights were you able to see or hear other visitor groups staying overnight near your campsite/cabin during this overnight backcountry trip?
  - Did not occur any night
- 16. At which times of day did you and your personal group feel crowded? Please mark all that apply
  - $\bigcirc$  4 a.m. to noon
  - $\bigcirc$  Noon to 6 p.m.
  - $\bigcirc$  6 p.m. to midnight
  - $\bigcirc$  I can't remember
- 17. What is your opinion of the number of trails in Yellowstone?
  - $\bigcirc$  Too many
  - Just right
  - Too few

18. Please indicate if you walked off the marked/signed trails during this overnight trip for any of the following reasons?

I walked off the marked/signed trails	No	Yes	Don't Know
To move past or out of the way of others hiking on the trail	0	0	0
To move out of the way of a horseback riding group	0	0	0
To "go to the bathroom"	0	$\bigcirc$	0
To explore an area that looked interesting	0	0	0
To get around a difficult part of the marked/signed trail	0	0	0
To take a photograph/get a better view	0	0	0
To see an attraction or feature up close	0	$\bigcirc$	0
To shortcut a portion of the marked/signed trail	0	0	0
Accidently because the tails were poorly marked	0	0	0
For another reason (please specify)			

- 19. Did you encounter a ranger during your trip?
  - $\bigcirc$  No
  - $\bigcirc$  Yes
- 20. Including this visit, how often have you gone into the Yellowstone backcountry?
  - $\bigcirc$  Once
  - $\odot$  2 to 4 times
  - $\odot$  5 or more times
- 21. Did you anything detract from your enjoyment of Yellowstone's backcountry on this trip?
  - $\bigcirc$  No
  - $\bigcirc$  Yes

How did it detract from your enjoyment?

## 22. How satisfied or dissatisfied were you with the following aspects of your backcountry trip?

Backcountry trip? Backcountry Feature	Very Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Very Satisfied
Length of time to obtain permit	0	0	0	0	0
Courtesy of person providing permit	0	0	0	0	0
Knowledge of person providing permit	0	0	0	0	0
Ease in finding trailhead	0	0	0	0	0
Ease in following trail(s)	0	0	0	0	0
Condition of trail(s)	0	0	0	0	0
Ease in finding campsite(s)	0	0	0	0	0
Condition of campsite(s)	0	0	0	0	0
Overall level of satisfaction with trip	0	0	0	0	0

### **Backcountry Preferences**

 This is the first year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per person, per night for stock parties). Prior to 2015 the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office staffing. Do you support or not support this change?

○ Support

○ Not Support

○ Please explain your answer.

Open-ended

2.	Within Yellowstone's backcountry, how desirable or undesirable are the	
	following?	

Backcountry Features	Very undesirable	Undesirable	Neither	Desirable	Very Desirable
A few trees blown down across the trail	0	0	0	0	0
Aircraft over- flights	0	0	0	0	0
Bridges across creeks	0	0	0	0	0
Orange trail markers on trees	0	0	0	0	0
Directional signs	0	0	0	0	0
Pit toilets at campsites	0	0	0	0	0
Food poles at campsites	0	0	0	0	0
Providing your own bear resistant food canister	0	0	0	0	0
Food boxes at campsites	0	0	0	0	0
Limiting party size	0	0	0	0	0
Prohibiting wood fires	0	0	0	0	0
Having designated campsites	0	0	0	0	0
Hitching rails at campsites	0	0	0	0	0
Research equipment in the backcountry	0	0	0	0	0
Rangers on patrol	0	0	0	0	0
Cabins for ranger use	0	0	0	0	0

3. What is your opinion about commercial use in the backcountry?
O Commercial use is acceptable?
Why do you believe commercial use is acceptable?
O Commercial use is not acceptable?
Why do you believe commercial use is not acceptable?

## **Backcountry Safety**

- On this trip, did you feel prepared for common safety situations (such as exposure to sun, heat, access to drinking water, flash floods, lack of proper footwear, etc.) that you encountered in the park?
   No
  - $\bigcirc$  Yes
- Did you find the information you needed on the park website?
   No
   Yes
- 3. During your trip preparation, did you specifically look at bear safety information on the Yellowstone National Park website?
   O No
   O Yes

### 4. What sources did you use in preparing for your backcountry trip?

Source	No	Yes
Official Yellowstone website (www.nps.gov/yell)	0	0
Other website	0	0
YouTube videos	0	0
Books	0	0
Magazines	0	0
Friends	0	0
Yellowstone Staff	0	0

- Did you encounter a bear on your trip?
   No
  - ⊖ Yes

Describe your experience

- 6. We would like to ask you some questions about wildlife.
  - a. How far away should individuals stay from bears and wolves? Fill in blank (100 yards or 91 meters)
  - b. How far away should individuals stay from other large animals such as bison, elk, deer, and moose?
     Fill in blank (25 yards or 23 meters)
  - c. Bison can sprint ____ times faster than humans can run.
    - Twice
    - $\bigcirc$  Three
    - $\bigcirc$  Four
    - $\bigcirc$  Five
  - d. When encountering a bear, one should run away as fast as one can.
    - $\bigcirc$  False
    - True
  - e. If a bear charges, a person should stand his or her ground.  $\bigcirc$  False
    - O True
  - f. If a bear charges and makes contact with a person, the person should fall to the ground and "play dead."
    - False
    - $\bigcirc \, {\rm True}$
  - g. If a person observes a bear or bear sign, the information should be reported to a park ranger as soon as possible
    - $\bigcirc$  False
    - True
  - h. Coyotes can be fed.
    - $\bigcirc$  False
    - True
  - i. Ravens can unzip and unsnap packs.
    - $\bigcirc$  False
    - $\bigcirc$  True
  - j. It is recommended that individuals stay in groups of three or more.

    - $\bigcirc$  True

## **Demographic Questions**

- What is your gender?
   Female
   Male
- 2. Are you Hispanic or Latino?
  - $\bigcirc \, \mathrm{Yes}$
- 3. What is your race?
  - O American Indian or Alaska Native
  - $\bigcirc$  Asian
  - Black or African American
  - Native Hawaiian or Other Pacific Islander
  - $\bigcirc$  White
- 4. In what year were you born? _____
- Please indicate the highest level of education you have completed?
   O Some high school
  - High school diploma/GED
  - $\bigcirc$  Some college
  - Bachelor's degree
  - Graduate degree
- 6. Where do you live?
  - City
  - State
  - Zip

List any comments, complaint, or suggestions pertaining to Yellowstone's backcountry that may help us improve the backcountry experience.

Appendix C

Unedited "No" Responses to Question 2:

"Did you watch the backcountry video before beginning your trip? If not, why no?"

# Appendix C: Unedited "No" Responses to "Did you watch the backcountry video before beginning your trip? If not, why no?"

- 1. I was on staff, and the ranger didn't make me watch it
- 2. I had already seen it.
- 3. Did not know there was one
- 4. I have seen it before
- 5. I have seen the video before
- 6. I am a park employee and had already seen it
- 7. I am hiking the Continental Divide Trail and have been in by backcountry with bear safety for a month and a half.
- 8. Had already watched before another trip and was not trip leader so didn't have to
- 9. Was not required / were already prepared
- 10. because I had already seen it and done other backcountry trips
- 11. Have seen many times. Park employee.
- 12. Saw the video before
- 13. Been to yellowstone backcountry several times
- 14. Seen it before and I'm not sure the video was available in the small Tower ranger station
- 15. Watched earlier this year
- 16. I've been there before.
- 17. Seen it many times
- 18. Seen it before
- 19. Had seen it several times before.
- 20. I watched it last year.
- 21. my hiking partner had seen it recently and we had discussed the video.
- 22. have been backpacking in yellowstone many years and rangers knew me and were aware of my history
- 23. seen it before
- 24. our trip leader watched. I have previously watched the video.
- 25. Already have seen it a lot.

## Appendix D:

Unedited "Yes" Responses to Question 2:

"Did you watch the backcountry video before beginning your trip? If you watched the video, how did this video prepare you for your backcountry trip? What additional information or approach would improve the video?" Appendix D: Unedited "Yes" Responses to "Did you watch the backcountry video before beginning your trip? If you watched the video, how did this video prepare you for your backcountry trip? What additional information or approach would improve the video?"

- 1. Scared the shit out of me about bears which is good because I was already scared shitless. I would definitely remake the video. It's out dated and hard to take seriously with the poses and graphics.
- 2. I thought it was sufficiently helpful.
- 3. It seemed thourough
- 4. I thought it prepared me relatively well. There was good and thorough explanation concerning bears and what to do if encountered. I wish there was more information specific to the trail I was hiking, though I realize that isn't realistic to expect from this type of informational.
- 5. The video prepared me very well. Wouldn't change anything.
- 6. It informed us of the dangers of camping as well as the beauty. It would be nice to show how to properly secure food on the branches and beginner techniques for those who are not familiar to camping.
- 7. Most of the information, I had already read online. Maybe more information about navigation and following trails, particularly on unmarked forks.
- 8. I knew most if not all of the info that was on the video.
- 9. Well. Talk about how quickly the weather can change. We got caught out In a thunderstorm in the Lamar valley on top of a mountian. Shit got weird
- 10. Not sleeping in your cooking clothes
- 11. I think the information provided was helpful and to the point. It was pretty dated however and it may be beneficial to update with crisper video/audio and simple motion graphics.
- 12. I thought it did an excellent job of informing backcountry goers of everything to expect. It could have been shorter without the corny skits however.
- 13. Gave me extra information about animals and how to camp appropriately.
- 14. We watched the video after going with others. I learned a lot from watching other people set up a site.
- 15. Video was fine
- 16. The video made us aware of our surroundings.
- 17. The video had a lot of information in it. I had seen a similar video before in glacier, so I knew most of it already or it was just common sense. May be a bit boring, but it's good to remind people about this stuff.

- 18. It made me much more aware of the dangers of bears and thermal features, and how to be safe around them. It ran a little, long though. If you could make it either shorter or more engaging, that would help.
- 19. I thought the video was informative. During my trip I did not feel like I was missing any important information.
- 20. It gave you good information on how to set up camp and how to handle bear encounters. It might be good to show people how to read topo maps.
- 21. Great video
- 22. To be honest I did not learn any new information from the videos. I am an Eagle Scout and have been camping and hiking for a long time in the northern wilderness. The info was spot on though so I can't think of additional improvements.
- 23. It reinforced everything I had already learned about back country safety. There were a few things I had not heard, such as peeing on rocks instead of the ground. Overall it was well done.
- 24. Reinforce how cold it can get at night.
- 25. It was fine
- 26. Adequately
- 27. Taught me how to fight of a bear with my bare hands (pun intended)
- 28. Good, covered all bases
- 29. I felt comfortable in the backcountry
- 30. Update
- 31. After watching the video and discussing with the park ranger, we all took the threat of bears much more seriously. I do not have any suggestions for additional information for the video. I do believe talking to the ranger was very effective - face-to-face lecturing is more stimulating than a video.
- 32. I am an avid backcountry hiker, so the information provided was a good reitaration/refresher
- 33. It prepared me to be alerthe and to walk with a group
- 34. It was very informative, particularly the bear sections
- 35. I thought it was useful and thorough.
- 36. safest way to react to a bear encounter/attack.
- 37. Taught us about dealing with bear activity. Should mentioned the slim chance of bear encounter.
- 38. yes, i took some notes on what kind of materials i needed before camping
- 39. It reminded me of bear awareness. The video would be much more useful if the ranger did not talk through the entire thing.
- 40. Had good information on bear encounters

- 41. It confirmed what I already knew. Seemed geared towards those with little experience in grizzly bear back-county. Which is a good thing, since most people entering the Yellowstone back-county do not.
- 42. It informed me of wildlife to be mindful of, as well as basics about the area I would be traveling in, since I had not been to yellow stone before. It made me feel more prepared.
- 43. useful tips, especially what to do during a hike (clapping hands, loud speaking)
- 44. Info on grizzlies was great as it was my first time packing in an area they inhabit. Other than that it was standard but quality information.
- 45. Most helpful was to feel safe and secure if my group did in fact come in contact with a bear. We did and we knew what to do because of the video.
- 46. Bear safety awareness
- 47. Because members of my party were unfamiliar with bear safety and preparedness. I feel everyone that comes into the park should be made to watch a video informing them of the actions that are allowable and ones that are outlawed.
- 48. It was helpful to realize what we may encounter in the backcountry and how to practice Leave No Trace in accordance with Yellowstone protocol.
- 49. It really prepared me for the water thing.
- 50. Just update it to be more modern
- 51. I backpack a lot so the video didn't really present anything I didn't already know. It would be useful if people were going in without prior experience though.
- 52. Update the gun law on the video as it is incorrect.
- 53. Had good bear country behavior overview
- 54. Very well, covered all the needs of back county knowledge.
- 55. It was good to get an overview on the park's policies for bear canisters, etc. Every park is a bit different so it was good to know the rules at Yellowstone.
- 56. The video was long and older footage, espically in comparison to Grand Teton National Parks backcountry video. Some useful points but could have been summarised shorter.
- 57. Made me more aware/cautious about bears
- 58. The video was informative, but we had a guided trip. Our guide served as the main source of information.
- 59. Bear warnings

- 60. It was informative but nothing new to us. We back country quite a bit. I think it is great for those who visit Yellowstone and back country for the first time.
- 61. General overview is always a good idea.
- 62. The bear awareness tips, including noisemaking, were helpful. The video was just a good mental primer to prep for all the things we might encounter. No recommendations!
- 63. Good video. Great graphics! I'm very scared of bears now. Would have been nice to have a pamphlet included with the video that contained similar information.
- 64. There was some very useful reminder tips about how to interact with and respect wildlife and nature populations. In particular, I thought the tips on camping in the backcountry (illustrating the differences with a campground), were good for novices.
- 65. I think the video provides a crucially concise review of backcountry ethics. As a seasoned hiker, I used the information as a reminder of what to do in a sticky situation. I think the video does the job of preparing hikers, but nothing prepares them more than talking with down to earth Rangers who have lived the Yellowstone way for years.
- 66. It help backpackers understand the risks of the backcountry and what they can do to avoid such risks. Very informational.
- 67. The video was too long.
- 68. Bear safety, what to expect.
- 69. Great reminders for back country travel and stressed bear safety.
- 70. It was good for a first time visitor. Being a frequent backcountry user in yellowstone having to watch it is a good refresher.
- 71. It would be good to have an environmental approach in this video. It could give tips on how to limit trash and how to manage trash in the back country.
- 72. I'm already fairly experienced in backcountry camping, so the video was mostly redundant.
- 73. The video covered all the bases just fine. Kinda cheesy but not bad. Good bear info.
- 74. Let us know how to store our food. Video was great, but we already knew the information so it was a little boring. But important content for people new to backcountry camping!
- 75. The video was helpful
- 76. No new additional information

- 77. We have watched bear safety videos at other parks, but thought this one in particular was very well done! We enjoyed the humorous interjections.
- 78. Nice information on what to expect at the campsite (bear hang, etc.). Much information was simply reminder, but well done, easy to watch.
- 79. The video was very helpful in providing and reviewing basic information needed for the trip. It was also helpful to have a ranger there with us to address additional questions.
- 80. It didn't really tell me anything I didn't already know. 80% of it was how to avoid bears which I think was good. You can probably take out the shot of the shirtless guy soaping himself got a laugh out of the park police in the station.
- 81. I watched the video online before going to the back country office but watching it again with my group of 6 was still important, I feel.
- 82. Already prepared for trip so our group had all of the needed information. Staff was very informative on the lesser known local input.
- 83. Grizzlies very menacing. We bought bear spray as a result.
- 84. Nothing
- 85. I appreciated the information on bear safety. Even though it is dated, I thought it was good. Concise and informative.
- 86. I have seen this video many times. So it was more of a reminder of the parks policies, however they are practices I incorporate in my regular backcountry travel.
- 87. It is a very helpful video, I had seen it once before (at Glacier) and thought it simply outlined useful tips along with important details.
- 88. Yes, it informed me of backcountry elements and proper safety procedures.
- 89. It informed our group about bears and how to store our food.
- 90. I have watched this video before. However, I think it addressed the need for diligence in bear awareness.
- 91. online access
- 92. I didn't like how it included historical/touristic information. It was almost like an orientation video for the park in general. I wish it had been shorter and just contained the necessary safety info for backpacking.
- 93. Covered the safety basics.
- 94. I thought it was very good and informative.
- 95. We knew pretty much everything in the video already. We didn't know to pee on hard spots like rocks/fallen trees instead of soft ground. We actually thought the opposite. Everything else was a review for us.

- 96. Video was excellent. Some basics of backcountry navigation (following trail marks, what they look like, etc.) would be helpful.
- 97. Yes, the contents of the video were great. Additional sources of information would help to improve the video (e.g. if you want to know what to expect from bears...see this resource). Explain what to do to prepare for camp in the dark and what to do if you feel threatened by an animal in the backcountry (not just a bear).
- 98. It primarily repeated stuff we had already read online, so we felt well prepared.
- 99. Good info but things that I was already aware of.
- 100. If a person has never done a backcountry trip it would be useful but I think it was all common sense stuff and things I already knew.
- 101. Im glad i got more info on the bears and how to stay safe
- 102. The video was for people less familiar with backcountry camping and bear country. Didn't find it helpful.
- 103. The video was fine. If you're experienced in the backcountry there is nothing new in it, but for first-time campers it's helpful.
- 104. It showed me what to look for and how to properly store food to avoid attracting bears.
- 105. Gave good tips for bear safety, camp cleanliness, and other safety issues (like staying clear of thermals) that I would otherwise not have known.
- 106. I know we took away a couple lessons, but being back in the city, we have forgotten what it was!
- 107. Appropriate planning and what-if scenarios
- 108. The video was thorough and sufficient.
- 109. This video helped us to be aware of bear security, including encounters with bears. In addition it helped us to be very consciously to the nature conditions, and the preservation of the NP.
- 110. The video was extremely thorough.
- 111. Bear preparation Caring for the land
- 112. same basic knowledge received in other national parks. It was a decent review and probably helpful for the novice backcountry enthusiast.
- 113. Info on bison. They were aggressive multiple times towards us in sense of facing us, walking towards us, and grunting despite being 100 yards away and trying to avoid.
- 114. Yes. I think additional information about food storage and cleaning techniques would have been helpful.
- 115. It helped me understand bear safety
- 116. Comfort of navigating through bear country.

- 117. Bear safety, food storage, etc. As an avid backpacker and repeat backcountry visitor in the park, the truth is that I don't really pay attention to the video, although I understand it's purpose.
- 118. Have seen the vid several times before (prior years visits) but it still had good tips that I forgot about. I don't feel that any changes are needed at this time.
- 119. It's informative, I've seen it many times over the many years I've been coming and backcountry camping. Some rangers insist you watch with no talking in the room others are happy to let you watch, chat amongst others and with the ranger. I believe it serious enough that it should be watched by all levels of experienced hikers with no distractions. Key items can be missed in an instant. Although I've seen it a lot, it never hurts to freshen up
- 120. I remember getting some useful information from it
- 121. It was what I expected, which is fine. Most of the info there was already in other documents I had read and should be familiar to an experienced backpacker. No real suggestions for improvement.
- 122. Had seen it many times before, so not much.
- 123. We've seen it dozens of times at this point.
- 124. It was especially helpful for my children to watch, as it reinforced all we'd been teaching them about backcountry camping, bear safety, etc. But they played closer attention to the video than they do to us!
- 125. We had close encounters with bison and didn't know what to do. The video was mostly focused on bears but could have contained more information on bison (and wolves).
- 126. I've seen it a few times over the years and it's not too annoying to have to sit through each time.
- 127. I am an experienced backpacker, so no, the video didn't really tell me anything I didn't know already.
- 128. Better than in 1996 my previous backcountry camping.
- 129. yes it was fine and reiterated the importance of bear safety.
- 130. Video was fine. Example bear rope a bit ridiculous (full size climbing rope).
- 131. It was helpful.
- 132. It did not prepare us for the backcountry. The 4 adults (and 3 children) in our party have extensive backcountry experience and were familiar with all the topics covered. 2 of us work for the Wyoming Game and Fish Department.
- 133. It helped although I would make it available to watch online before getting the permit to allow proper preparation before getting to Yellowstone.

- 134. I thought the video was adequate.
- 135. Food hanging info helped
- 136. it was informative
- 137. Video was well done. We had already watched similar videos prior to coming.
- 138. Covered everything.
- 139. update the video with correct regulations and proper procedures
- 140. Understanding the rope shown in video was way to big/heavy. More importantly what to do in a lightning storm.
- 141. Excellent reminders the humor was very effective.
- 142. Taught me what I needed to know on how to camp in backcountry such as hanging food and camping 100 yards away from food/cooking area.
- 143. If toilets are provided on site then maybe tips regarding what can and cannot be put in them.
- 144. Information on how to use the bear spray. It also provided several safety decisions.
- 145. The video was good basic knowledge. There could be some information about the trail markers.
- 146. It was thorough.
- 147. Was already pretty backcountry savvy.
- 148. I think the video was fine.
- 149. very little, preparation is done well before I get to Yellowstone, and I have seen it at least a dozen times.
- 150. Seen it several times before.
- 151. A good reminder of most things we know.
- 152. We have been to YS several times to back pack, so I can't say whether or not this video helped. I read the back country rules previously so understood what I was getting myself into.
- 153. I think the video was very well done. It presented the information well, it wasn't to long and was interesting from me and the whole family. Nice Job!
- 154. Not enough info on bears.
- 155. It was fine. We had seen the movie several times before.
- 156. Good video. Very informative.
- 157. It had a lot of good information. I was a Boy Scout, but growing up in Hawaii did not prepare me for the back country.
- 158. This served as a good reminder as to how to handle different emergency situations.
- 159. Some good reminders.

- 160. It helped with knowing what do if encountering a grizzly. However, I have seen this video every year for at least 4 or 5 yrs. It would be nice if they could keep track of this from year to year.
- 161. I knew it all already.
- 162. Good prep for bears.
- 163. More information on what to do when encountering horses on the trail.
- 164. We backpack regularly in YNP; it's always good to get a refresher on the do's and don'ts of the backcountry. The most common thing I see in the backcountry is camp sites too close to the food area/pole. Sometimes it can't be helped because there are no other sites. YNP video could stress the distance recommended and add thoughts on what to do if one needs to camp closer to the food area.
- 165. Any spilled liquids must be dug up and packed out. Use a minimum of toothpaste and do not spit.
- 166. Already watched it at home before I left, but saw it again. Cant hurt to remember all the facts. Keeps you safe.
- 167. It basically confirmed what I had already known and read.
- 168. Revise the part where the lady is throwing her pot cleanup waste water in the grasses.
- 169. The video was a great reminder. I've been backpacking for many years, so there really wasn't anything new.
- 170. We knew how to hang the bear bag but for novices it could be tricky to get the right height from ground and pole. Overall, a good video.
- 171. The video is informative and touches on many important areas...have seen it multiple times over the years. One possible items to address...what should a person do/say if they encounter other backcountry campers who are not following the rules (eg. "cowboy camping" in a non-designated area, walking off-path in fragile thermal areas, etc.) It's a touchy situation, but doing/saying nothing doesn't seem right...the rules are there for a reason.
- 172. We have backpacked in YNP several times over the years, so we have seen the video before. Although we didn't learn anything new it does serve as a reminder to be careful and vigilant when in the back country.
- 173. Knew the material beforehand
- 174. I had already watched it numerous times
- 175. I've seen it many times. I have no suggestions.
- 176. Video information conflicted with verbal discussion with ranger regarding disposal of cooking waste. no discussion of bison. Bear info helpful.

- 177. Video didnt provide any info we didnt already know. We were well prepared already. Prior similar trip had been several years before
- 178. The video confirmed research we had done in an entertaining way.
- 179. Improved awareness of what to expect in the back country and how to protect it.
- 180. Good video. I'd seen it before and it covers a lot of important information in a fairly entertaining way.
- 181. I already knew the safety info. But was a good video. Thx
- 182. Reinforced understanding of dangers inherent in backpacking trips, especially as it relates to bear encounters in a wild place such as Yellowstone.
- 183. Improved food and bear safety
- 184. had seen it several times before...not necessary to see the same video over and over.
- 185. good info, but seen it several times.
- 186. We pretty much knew what was in it, both from experience and from seeing it before. It's pretty good.
- 187. good basic information I dont see that additional info is neeeded
- 188. I had seen this before. Knowing that bears will get into water bags on the ground would have been good to know.
- 189. We travel a lot in the backcountry, so the information was not new to us. The video is important for anyone who does not have experience or anyone who would benefit from a refresher.
- 190. Already knew the info
- 191. Emphasized bear safety to prepare us.
- 192. Bear safety
- 193. It actually gave me a bit more information then I already had on bear encounter safety.
- 194. I became more aware of how to handle wildlife and avoid any unwarranted encounters with animals.
- 195. How to be respectful of the area you're in, how to avoid startling dangerous animals -- like bears -- and how what to do if you do.
- 196. It gave me a fair warning about wildlife and storing my food
- 197. it gave me great bear safety tips and general backcountry tips
- 198. Pretty prepared.
- 199. Details on how to ford a river on foot.
- 200. Helped us prepare for a bear encounter and how to treat the area

- 201. I think this video is good for people who have never been in the backcountry. However, I've backpacker hundreds of miles throughout yellowstone and the video didn't provide any meaningful information..
- 202. Good info in vid, nothing new to me but for lesser-traveled b/c users this info is crucial. Please continue to emphasize wildlife encounters can and will happen on the trail, and be certain to follow safe practices at all times, not just in camp

#### Appendix E:

Unedited "No" Responses to Question 3:

"Did you receive adequate information from the permit office before beginning your backcountry trip? If no, why not?"

# Appendix E: Unedited "No" Responses to "Did you receive adequate information from the permit office before beginning your backcountry trip? If no, why not?"

- 1. Weren't able to locate bear box/ pole at our grebe lake site
- 2. I wish that better info was available online , including up to date and accurate maps of where we went.
- 3. While the spot was reserved, the office did not give adequate trail conditions information
- 4. We were not aware of the terrain we would be traveling. We also did not receive a detailed map of the camp sites or trail markers.
- 5. When asked if water would be abundant for Rescue Creek, we were told it wouldn't be a problem. In actuality, I was very nervous because we didn't see any water until reaching our campsite.
- 6. Difficult to reach Bechler Ranger Station (the directions given were inadequate). As well as information about mosquitoes, which were very common at Bechler Trail.
- 7. The ranger talked through the video. Fortunately we were all experienced. If not, I would not have been familiar with nearly all of the info in the video.
- 8. Because neither of the two women working there have ever been in the backcountry before. It is mind-boggling how they could obtain that job or maintain it without having done that. They didn't tell us about river crossings and said the elevation gain over Bliss Pass was about 1000 feet. My partner and I quickly knew that was not the case when we started hiking it. Luckily, we can handle 2800 feet of gain over 6 miles but what if we couldn't? We decided to ask the backcountry office worker in Mammoth the next day about river crossings and a few other things we forgot and she too had never been in the backcountry! We laughed because we could not believe this was so common in Yellowstone, of all places. It really left a bad taste in our mouths.
- 9. The first permitting required me to ask all the questions as a rookie was issuing the pass. Later, at West Yellowstone entrance, I found far more passionate and informative folks. Having the issuing ranger show interest in what the hikers know/have experience opens great dialogue between the two parties. I think this is important as small details(trail, campsite and park secrets) are divulged during the permit issuing process!
- 10. One BC ranger had no experience in the backcountry. Another had really great info, so it was 50/50
- 11. I wished we would have known we were in a BMA

- 12. There was no information on water and if creeks were dry or flowing.
- 13. The backcountry office failed to mention the road to our trailhead was closed due to forest fires
- 14. It would have been good to have a map to our campsite. One was not provided and we got a bit lost on the way.
- 15. Some in our party felt unclear about the availability of pit toilets.
- 16. See above.
- 17. parking directions were poor and maps would have been helpful

Appendix F:

Unedited "No" Responses to Question 5:

"Did you get a campsite in your desired area? If not, how did this affect your backcountry experience?"

## Appendix F: Unedited "No" Responses to "Did you get a campsite in your desired area? If not, how did this affect your backcountry experience?"

- 1. Still had a great time. The employee was very helpful and we found a great location.
- 2. Surprises are always the best.
- 3. Still had a great time, however we never got to the outpost early enough to reserve the desired spot.
- 4. we didnt have a desired area, but the places we were given were amazing!
- 5. It was still fine. We worked everything out. They were very helpful
- 6. We camped in the backcountry more than once and did not always get to reserve the spot we wanted. Wherever we went was exciting and new.
- 7. We wanted to go to Slough to fish, but it was already booked. We fished the Yellowstone from the Hellroaring entrance and it was a great time.
- 8. We had to change our route due to fire. We ended up having to double back instead of making a loop.
- 9. i got 3 out of the 4 campsites, it caused me to have to skip climbing electric which I was dissapointed about.
- 10. My desired area was closed because of grizzly activity.
- 11. We were able to find another suitable location that was available.
- 12. it was fine.
- 13. It wasn't exactly the site I wanted, but it was close. I knew what I was in for when I went for the walk up permit. I think it actually made the trip more enjoyable since we saw an area we wouldn't have otherwise seen.
- 14. Always able to find a backup campsite, not a problem.
- 15. Second day hike was much longer and more elevation than desired but still able to accommodate
- 16. The advanced reservation system does not work well. I tried 4 sites that were supposedly booked before getting one. I went to those sites and NONE had campers. Improvements need to be made I suggest either fining people for not showing up and/or sending an email a week prior to reserved trips to confirm that the person/group still intends to camp.
- 17. We had 4 backcountry trips planned. 2 were affected by fires and bear activity requiring replanning. Staff were helpful and flexable where possible, considering the busy season we were there.
- 18. We got a site close to our desired area, and the ranger aided us in redesigning our itinerary. However, it meant having to do a hike-in/hike-out rather than a loop, as we had hoped to do.

- 19. Had to hike longer distances than planned but still enjoyed the experience.
- 20. The site was taken but still had a pleasant experience.
- 21. Reserved site before hand
- 22. Not much. The group I was with preferred camping in the second meadow on Slough Creek as our aim as to fish, many of us had made this trip before. As the entire meadow was full I had to call an audible and ended up picking Hells Roaring, which ended up being fantastic. The hike was great, the fishing was better.
- 23. We were reccomended an excellent site available and it did not negatively affected our experience.
- 24. Our first night's campsite was much further into the Lamar Valley than we had wanted. This meant we had to start out our hike earlier in the day for fear that we wouldn't make it before dusk. However, in the end, it was amazing! I'm so glad that we were forced to go deeper into the valley and away from the sites closest to the road. 3L7 is an incredible site and we were very isolated and felt really happy to be so far from other people. 3L3 was a good site to have on the second day as it was back in the direction of our car. But we ended up preferring 3L7. It would be nice to be able to reserve back country campsites in person at the Park in advance. I understand the two day rule, but if you are already at the park, it would be nice to be able to plan further than 2 days in advance. Also, we had planned to do some camping in Slough Creek, but unfortunately it was closed.
- 25. But this was due to a wildfire closure and completely understandable. We still had a great time at the campsite of our second choice.
- 26. We had a couple of sites identified, and one was unavailable. Didn't effect our trip too dramatically, just disappointed we couldn't get our first preference.
- 27. I think it's important to be flexible, as there are a limited number of spots available on certain days. We went in to the experience with this in mind, so it was no big deal.
- 28. It didn't really. We still had a really good experience.
- 29. But we put in for permits months ago.
- 30. The fires changed our campsite but the ranger at the backcountry office was so helpful in helping us find another campsite
- 31. The ranger was very helpful in finding an alternative camping location.
- 32. We originally planned to stay at Heart lake but had to be moved 2 days before our trip due to bears. The ranger at the station helped us find new

spots at Shoshone Lake and we ended up having a really great time there! Possibly even better than our original plans.

- 33. I had several trip plans. Was not able to get Heart Lake but was able to get my other choice near Electric Peak. It makes it harder to plan supplies and equipment if you can't be sure which kind of backpacking trip you'll be going on.
- 34. Due to bear activity in the campsite that we had booked we ended up having to relocate to a different campsite. The new location that was provided to us was great and where where able to do more hiking and see more of yellowstone then with our previous location.
- 35. We got the only permit left in the park
- 36. There was bear activity, so the ranger helped us come up with a new route, which ended up being a fine substitute.
- 37. Experience was great. But not the site we wanted. Waited too late to,reserve ? No matter. No place is unacceptable in YNP
- 38. The first night we were not able to get a site a reasonable distance from our desired trailhead.
- 39. It did affect our experience, but was completely understandable since 2 of the areas we wanted were closed due to fire and a carcass.
- 40. Still had an experience
- 41. We were rerouted due to fires but still had a great trip.
- 42. Made last day coming out longer.
- 43. We wanted something closer to a certain waterfall. Also there was a bunch of horse poop all over, not in designated areas.
- 44. Didn't get to do the trip we hoped or maybe landed for
- 45. Site was taken, but it worked out fine.
- 46. We were not able to make camp, hike to the hot spring, and hike back to camp before the sun went down. Note to self: When requesting 9D1 over the phone, say "D as in dog" so it won't be mistaken for 9B1.
- 47. We didn't have a desired area.
- 48. ALTERNATE WAS FINE
- 49. Our original route was impacted due to fires in the area. Park staff was helpful and patient as I researched an alternative plan.

Appendix G:

Unedited Responses to Question 12:

"Why did you and your personal group choose the trails you did?"

## Appendix G: Unedited Responses to "Why did you and your personal group choose the trails you did?"

- 1. Proximity to dorms
- 2. River access and good views
- 3. Waterfalls.
- 4. To see cool stuff
- 5. Mr. Bubbles, union falls, scout pool
- 6. We wanted to hike where we had a nice view of the sunrise in the morning
- 7. Looked cool.
- 8. for the sights
- 9. short length, on a lake, in the canyon area
- 10. I wanted an easy, relatively flat route with consistent water access for my first solo overnighter.
- 11. We were hiking Electric
- 12. internet recomendation
- 13. With the ranger after trail and error
- 14. Mountains
- 15. Allowed a loop with hitchiking and provided some elevation and challenge.
- 16. Nearby/heard from others they were good sites
- 17. Views and technical difficulty
- 18. It was said to be one of the best spots for fishing and wildlife viewing
- 19. For the sights/fiance wanted to propose
- 20. There were campsites available.
- 21. We were working in the park and exploring different areas.
- 22. Online reports of trail
- 23. Our original trails made a loop. Upon arriving at the backcountry office, we learned about fire in the area. Our backcountry ranger set us up with a new trail even though we spent countless hours planning our old route.
- 24. Pretty location and wanted to hike Electric Peak
- 25. Because they looked pretty
- 26. Beautiful landscapes
- 27. Based on availability, and presence of geographical features that we liked (lakes, thermals)
- 28. We took the advice of the ranger, solely.
- 29. They seemed cool
- 30. Close to the Yellowstone river
- 31. The park ranger asked what I wanted my campsite to look like. I asked him to give me an example. He replied "Would you want it to be in a

meadow or next to a stream?". I told him "why not both?" And that's how I wound up camping in a meadow next to a stream.

- 32. Because that was where my friends could drop me off, and I finished where my sister was driving through
- 33. CDT
- 34. Adventure
- 35. one car loop, available permits
- 36. I had heard great things about the Hellroaring area, and I was looking for some canyon-like views.
- 37. It seemed like an interesting trail
- 38. We were conducting fisheries research
- 39. Wanted to see a variety of the park as it was our first time adn these seemed like the best options.
- 40. Beauty and lack of people
- 41. Long distance (7miles), remote
- 42. Recommended by others, good sights.
- 43. Water access and beauty
- 44. Recommended at the backcountry office
- 45. They were a part of the Continental Divide Trail
- 46. We wanted a relatively light and short hike with a campsite by the water.
- 47. Near like and ideal distance
- 48. Hike less than 5 miles from parking to campsite, campsite was near a lake - Beaula Lake
- 49. They were in the skillset and area our group wanted to hike
- 50. Because we thought it would be a nice area to see beautiful countryside
- 51. The ranger suggested it
- 52. short hike to an isolated lake
- 53. lakefront
- 54. Recommended
- 55. easy trail
- 56. Mr. Bubbles
- 57. It was accessible and contained thermal features
- 58. Because the trail heads were close to where my sister was working in Yellowstone for the summer, made the shuttle easy.
- 59. A guide informed us of union falls and how beautiful it was, and because we wanted to see a waterfall we decided on this area. It was also the distance we wished to hike.
- 60. summit lake
- 61. Check out different areas of the park

- 62. Fishing
- 63. Never been there before
- 64. Online reviews
- 65. Wanted to canoe
- 66. Falcon guide to Yellowstone trails
- 67. I didn't choose it, but I would hike it again!! The river is beautiful!
- 68. Wanted to camp in the backcountry on a lake and was the distance we wanted to travel while hiking.
- 69. I have stayed in the area befor and it was a very nice secluded yet easily accessable area.
- 70. The most direct
- 71. I chose based off were it was likely to be quiet.
- 72. The potential for wildlife viewings and the lack of traffic.
- 73. Because we have done the Bechler River trail in the past and wanted to do it again.
- 74. Denanda falls and hot springs. Little elevation gain. Lots of water. No bugs.
- 75. It looked like easy hiking with multiple other trails to explore after we were done hauling our stuff
- 76. Suggested by back country office
- 77. Camping spots were full so we decided to do backcountry instead.
- 78. Special nature
- 79. HEard it was a beautiful hike
- 80. Lots of research. Beautiful scenery, animals, less toruisty trails
- 81. Close to North Exit
- 82. Guided
- 83. advice from ranger
- 84. Most remote, SW corner
- 85. Yes
- 86. Skyrim trail
- 87. Recommendations from staff
- 88. Based on the recommendation of the ranger!
- 89. Technical skill of hiking matched our group, plus a desire to be near a lake.
- 90. Relative location to final destinations, seasonal weather hospitality, and "coolness" of locations
- 91. Recommandation by volunteer cheyenne and there is mr. Bubbles
- 92. Less people
- 93. Yes

- 94. Located near hot springs.
- 95. hot springs! quiet corner of the park
- 96. Thermal soaking and waterfalls
- 97. its length, no hills, and possibility to stay more than 1 night to hike other trails around the campground
- 98. Theough hiking the continental divide trail
- 99. To see Union Falls
- 100. Convenience I was spending the night before heading down to the Wind Rivers
- 101. Lake view camping
- 102. recommended
- 103. Beautiful area
- 104. Gradual elevation changes
- 105. CDT
- 106. CDT
- 107. Hot springs and remoteness
- 108. We wanted to do a thru-hike that included a great amount of landscape variation, as well as some key landmarks like Mr. Bubbles and Lone Star Geyser.
- 109. Few people, varied terrain.
- 110. Ratings of campsites and difficulty of hikes
- 111. All the car camping sites were taken. We got a spot at Mallard Lake because it was a short hike and there were available spots.
- 112. Ease of trail and lottery system
- 113. Less traveled
- 114. Fishing opportunity
- 115. Was available and short
- 116. Geysers
- 117. Distance and location
- 118. Views and unique experiences
- 119. Recommendation of the park ranger
- 120. past trips to these sites
- 121. We sought a medium-length hike to a campsite near a fishable waterway.
- 122. Diversity of scenery
- 123. We were hiking the CDT
- 124. Waterfalls!
- 125. mr bubbles dunanda falls
- 126. My friend had been to the Lamar valley and loved it. He saw a lot of wildlife and said it wasn't as popular.

- 127. Distance from people
- 128. Falcon Yellowstone Hiking Guide Book
- 129. They coordinated with our availability and length of stay. We also wanted to do a loop trail, not an out and back.
- 130. Close proximity to water. Easy trail difficulty.
- 131. high likelihood of wildlife
- 132. Natural beauty, and difficulty level
- 133. We are hiking the CDT
- 134. I enjoy being on the water and away from crowds
- 135. Wildlife and Waterfalls
- 136. it was available and recommended by the ranger
- 137. Available campsite, close to water.
- 138. Fishing access
- 139. Location
- 140. They were short, easy hikes.
- 141. we wanted to see wildlife and be near water.
- 142. We researched the areas and liked this option best
- 143. Recommendation of Ranger, available campsites for amount of time desired on trail, further away from the crowds.
- 144. we wanted to see the main areas of the park
- 145. access to backcountry gyser basins
- 146. Near water
- 147. Choose easy trails because I had a begginer with me
- 148. It seemed quiet, perfect hiking distance
- 149. CDT hikers
- 150. temp and scenery
- 151. From a book
- 152. Remote location
- 153. My companions wanted to do a loop trail, but we only had about 4-5 days to work with.
- 154. Ease of trip, time limitations
- 155. we picked sites that were under 3 miles since we have small children. It would have been great to have more loops that are manageble with kids (ie 3-4 miles between sites)
- 156. Availability. Terrain.
- 157. available sites that were not long distance
- 158. View at the camp site.
- 159. Ease of access with poor weather forecast

- 160. views and the fire issues really kept our options down. Also we prefer less human traffic so we chose this area for that reason as well
- 161. Because we hadn't hiked them or the area previously and due to fire closures
- 162. I knew i wanted to hike for 4 or 5 days and when i did research, the Bechler river trail met that desire and sounded amazing. I read that at was in the heart of bear country and i wanted to see a bear
- 163. Easy hike for the kids, good animal spotting
- 164. Online reviews, magazine articles
- 165. Fishing
- 166. Previous trips.
- 167. Wanted something close to home that was not booked up. OD5 is generally open and is only 1.3 mi out.
- 168. Wanted to see the Canyon away from the crowds and the 5-mile hike in was manageable for our small children.
- 169. For the diversity of scenery and wildlife
- 170. less crowded
- 171. We wanted to be near a river.
- 172. to go camping
- 173. Tried out new areas/trails but with a main focus of having a chance to see wildlife and hikes of 5-6 miles per day max if possible.
- 174. Through hike away from people.
- 175. Less people in NE part of park and along water sources
- 176. we didn't have much choice since we had to move last minute, but the ranger helped guide us based on our wanting to have a good hike and be remote.
- 177. views and scenery
- 178. Close to where we entered park
- 179. Did the research and knew that's where we were interested in going
- 180. We were on water the whole time, except for the Shoshone Geyer Basin Trail
- 181. Beautiful valley, not a lot of traffic in that portion of the park.
- 182. Proximity to Big Sky, convenience.
- 183. Bechler has been in my bucket list for 20 years
- 184. water falls
- 185. past experience
- 186. Scenery and wildlife
- 187. location, scenery, low use
- 188. To see the various waterfalls

- 189. I'm the author of two guidebooks to the park and I needed to do some research on the trails. I also needed a night at a backcountry site near the road because campgrounds were all booked up.
- 190. easy first backpacking trip with a big payoff (Cascade Lake) at the end
- 191. Wanted to be in that particular area
- 192. Availability and weather timing constraints
- 193. Shoshone lake was the perfect place for our kids, I've camped there before and knew about it.
- 194. Geyser basin on Shoshone lake and also wanted to hike at least 7 miles to our campsite.
- 195. see wildlife, not too strenuous
- 196. Wanted to climb Electric Peak, listen for bugling elk
- 197. view
- 198. Wasnt involved in choosing.
- 199. Familiar with Lamar area
- 200. We tead about it in a book. 5
- 201. Waterfalls
- 202. thermo features & waterfalls
- 203. convenience
- 204. Only available campsite
- 205. Wanted to see Dananda Falls.
- 206. topography and remoteness
- 207. wildlife / scenery
- 208. No options
- 209. we wanted a backcountry canoe trip
- 210. Research
- 211. Yes
- 212. Backwood away from people.
- 213. We were hoping to see wolves/bears, but now we know we should get a scope and view from the road in certain areas/times of the park.
- 214. Ease of hike and recommendation from a book
- 215. Wilderness experience we actually only spent one of our six nights in YNP. Our hike started 40 miles north of the Slough Creek TH, in the Beartooth-Absaroka Wilderness.
- 216. Thorough mathematical calculations
- 217. easy hike and access to river
- 218. Location
- 219. Adventure
- 220. Fishing

- 221. Ease of hiking
- 222. I have hiked these trails before, and wanted to take a new backpacker on a hike that she could be successful at
- 223. Advise of the backcountry office.
- 224. we haven't been on those particular trails before
- 225. It went straight there
- 226. Friend recommendation
- 227. Interested in the area.
- 228. We love Pebble Creek.
- 229. Low mileage, riverfront campsite
- 230. Did not want one too vigorous as we not in the best of shape. Took advice from Miles Meyers. He is awesome. Very knowledgable about back country.
- 231. Fishing on slough creek
- 232. This was a bucket list hike.
- 233. Availablility and scenic views
- 234. interest in the area, returning to a favorite spot
- 235. They are old favorites; I hike in Yellowstone every summer. This was my 32nd year.
- 236. Bechler Trail is highly regarded
- 237. We chose Shoshone Lake for the solitude and because it allows us to canoe into a gorgeous area.
- 238. New area
- 239. Only available campsite
- 240. Fishing
- 241. We wanted to see the Hoodoos and upper Lamar.
- 242. River
- 243. For solitude
- 244. fishing/high country
- 245. love pebble creek area
- 246. never canoe camped before
- 247. Seeking isolatio and had never seen this part of the park.
- 248. fishing
- 249. we were in a boat
- 250. Prior experience
- 251. Because of the Pioneer fire in ID, we did not go to the White Clouds.
- 252. We hiked Electric Pass/Sportsman Lake. Info indicated it was more remote (less crowded) and good wildlife viewing access.
- 253. Near to Yellowstone Lake campsites

- 254. water falls
- 255. seclusion, riverside, buffalo
- 256. Wanted to enjoy solitude and wildlife viewing possibilities.
- 257. beautiful area and less elevation changes than the Tetons
- 258. fishing, remoteness, wildlife
- 259. Like the area and lake.
- 260. solitude. scenery
- 261. for boating and day hiking
- 262. from U.S.G.S topos
- 263. Wanted dunanda falls
- 264. To go where we hadn't been before, and to do a loop.
- 265. We used canoes to get to our campsite, so trails were not involved.
- 266. Loop potential
- 267. Remote area.
- 268. Accessible by boats
- 269. It look like a good spot
- 270. Never been to Bechler
- 271. It was on our list of hikes to do.
- 272. We didn't get there in time for a Lamar Valley permit, so we heard Hellroaring was beautiful
- 273. Looked fun, but not too difficult, and were located in really cool areas.
- 274. ONLY SUITABLE SITE
- 275. Ranger recommendation
- 276. Books
- 277. Best reviews
- 278. Logistics and Scenery
- 279. It was suggested to us.
- 280. Flat trails and hot springs
- 281. Proximity
- 282. Pre-trip research indicated good scenery and wildlife
- 283. its very desolate
- 284. To avoid bad wearher in Beartooths, also know the area fairly well
- 285. felling alone in the wild, geyser and wildlife

#### Appendix H:

Unedited Responses to Question 19:

"Please indicate if you walked off the marked/signed trails during this overnight trip for any of the following reasons. For another reason: Please specify:" Appendix H: "Please indicate if you walked off the marked/signed trails during this overnight trip for any of the following reasons. "For another reason: Please specify:""

- 1. Going down to the river to fish
- 2. My soul wamders.
- 3. Trail was full of Bison.
- 4. To get out of the way of bison
- 5. Bison
- 6. To avoid a bear
- 7. Avoiding Bison
- 8. Electric peak
- 9. To hike around a buffalo that was walking on the trail. Also, to swim in the creek.
- 10. to access Miller Creek at certain reaches for sampling
- 11. To pass a buffalo
- 12. bear
- 13. To avoid wild animals, especially bison
- 14. Bears
- 15. Firewood collection
- 16. There was an animal in the way and I didn't want to disturb them.
- 17. To take breaks
- 18. Firewood
- 19. to walk around a lake
- 20. Bison blocking path on two occasions
- 21. saw an antler on the side of the trail and checked it out
- 22. to store food
- 23. Filter water
- 24. To explore features marked on the map. Waterfalls thermals
- 25. to avoid a group of bisons on the trail
- 26. To avoid a flooded portion of a meadow
- 27. Fishing
- 28. Avoid a buffalo herd
- 29. To avoid bison
- 30. We moved off the trail in order to fish the Hells Roaring at the bridge (3mi) and at our campsite
- 31. Trails on the water???
- 32. Bison
- 33. Avoid bison and to fish

- 34. confused with animal trails and also to avoid animal interaction.
- 35. To give bison space
- 36. Get around aggressive bison, three times!!!
- 37. Fishing
- 38. To fish
- 39. To search for a more suitable campsite other than designated. Regs state 100yd min distance from bear pole to tents. Yet both backcountry campsites had designated campsite marker within 50 and 30yds respectively
- 40. Bull bison in the middle of the trail
- 41. To avoid a bison.
- 42. To get to water
- 43. To avoid bison which were close to the trail.
- 44. Grizzly bear on day hike from base camp in back country 4h8
- 45. To swim!!!
- 46. we were in canoes. Not applicable
- 47. Hike up Electric Peak
- 48. avoid spooking buffalo
- 49. Fishing
- 50. to skirt Bison or other wildlife
- 51. go around a herd of bison
- 52. Keep safe distance from bison
- 53. To avoid a dangerous animal
- 54. Bison on trail
- 55. Rain made the trail a creek, had to walk on the rims
- 56. fishing
- 57. Fishing
- 58. Move out of way for buffalo.
- 59. to rest briefly
- 60. took wrong turn
- 61. To climb Pollux Peak
- 62. To get to a hiking trail from a canoe camp site
- 63. To explore untrailed country
- 64. at camp
- 65. Several herds of bison all along the designated trail.
- 66. fishing
- 67. hiked from the campsite to get to a trail on day hikes from camp
- 68. Horse poop on the trail
- 69. To get to good fishing hole

Appendix I:

Unedited "Yes" Responses to Question 32:

"Did you encounter a bear on your trip? (Please describe your experience)"

#### Appendix I: Unedited "Yes" Responses to "Did you encounter a bear on your trip? (Please describe your experience)".

- 1. Griz Bear + Cub: just waited for them to pass, then kept going down the trail. Large male grizzly: came swimming out of Ice Lake straight toward our campsite, within 50 ft. We shouted at him and he just changed his course and ran past us into the woods.
- 2. One came near our campsite at night. We saw clear tracks in the morning
- 3. It was our last two miles and I was eating some apricots and BOOM black bear. He was chill, I was chill. We had moment. The bear just ran off and stared at us and I kept eating and then the bear walked away.
- 4. Hiking to Coyote Creek. Large grizzly atop a hill--we made a large detour and caught back up with the trail (about a mile and a half from campsite).
- 5. Not while in the backcountry, however we did see one while driving to our parking spot on the side of the road.
- 6. Saw a mama grizzly and a cub at cascade lake.
- 7. Once a few feet off trail at a low elevation. He was eating huckleberries and a ranger was close by watching him. The second time was at a higher elevation and we just scared it away without getting much of a view. We just heard it snort and scamper off.
- 8. Black bear sever yards off the trail ran away when we passed it. Did not know it was there until we were next to it.
- 9. As we we're at the tail end of our trip, on the last mile of our trail to Delacey creek trail, we saw a bear in the distance running in an open path away from the trail. He looked to be a mature black bear, but he was a little less than 100 yds
- 10. across the cove on mallard lake, he was sitting and drinking, I yelled to him then he got up and took the path to my camp. I was all packed and ready to go so I put the lake between us and kept all the way around it and took the trail out
- 11. I saw two grizzly bears. One of them never saw me and moved out of sight. The other I surprised at close range and came towards me in a mock charge before running away
- 12. A couple of times. First time, plenty of signs on the area to be on the look out(pelican creek area). We were able to spot it in advance and had to go off trail. Second time, grizzly bear came up over a hill just as we were reaching the same peak of the hill. We had bear spray already out and ready and took some steps backwards. We then started slowly walking up an incline to the right of the trail and let the bear continue to use the trail.

We watched as the bear smelled us from a far and then he just continued. He was within 50 yards of us. Poor weather conditions and he may have just eaten a carcass nearby...

- 13. Only from a pretty far off distance. He was running away from our direction.
- 14. He scared the crap out of me for like a split second and he/she was gone. (Black bear.)
- 15. We saw a young black bear from about 100 feet away, about 1.5-2 miles from the Pebble Creek area, descending from Bliss Pass. He was walking away from us and never noticed our presence. Because of this, we remained silent and once we walked away, we kept making noise.
- 16. Grizzly was on the trail but was not interested in us and moved away as we made noise.
- 17. About 150 yards away from Shoshone lake in a field
- 18. We saw a grizzly sow with two cubs about 100 yards away from the trail and up a hill. They noticed us but did not approach us.
- 19. We saw a black bear about 100ft off the trail in Grand Teton NP and a Grizzly from a pull off in Yellowstone.
- 20. On our second day in the backcountry, we were at the base of Mount Sheridan. We knew a grizzly had been in the area. We stopped so one member of our party could pee. After she did, she was drinking some water and spotted the grizzly about 50 yards away, up the mountain. He was eating, he had to have heard us, and seemed completely uninterested in us. We still hiked away pretty quickly for quite a while to be safe. The next day, we were off Heart Lake on another one of the loop trails, about to cross a river. We were looking for the most shallow portion when I heard a grunt noise behind me. I turned around and saw nothing. I heard the grunt again, and then a mama grizzly stood up on her back legs about 25 yards away from me, looking right at me. Her cub was right beside her and began walking away from us. I turned around to tell my friends that we needed to move quickly and when I turned back around, I didn't see her. She then popped up on her hind legs again, and we immediately crossed the river to get on the other side, and followed the trail up a ridge. She didn't charge or follow us, but we definitely startled her. We had been making noise while hiking but I think the river noises drowned us out.
- 21. We did not encounter a bear on our backcountry trip, although quite a few other hikers mentioned encountering bears. I was thankful not to see one up close. We were clapping a lot! Yes, we did encounter bears during our

trip throughout the park, but these were encounters of Black Bears near the car/road and we could see Grizzly Bears from afar on kills in the Lamar Valley and in Hayden Valley through scopes.

- 22. I didnt see the bear, but there were fresh tracks all around my campsite in the morning (Ice Lake)
- 23. Only in the car.
- 24. A black bear 100 yards away. It never saw us and was not an issue.
- 25. Sort of. We saw very recent bear tracks. We felt prepared for a bear encounter.
- 26. Saw one running about half a mile away. A black bear
- 27. We were alarmed to see a family of bears quite close to the campsite. The bears were aware of us but did not approach. They were roughly 50 meters from our campsite on the slope to the North foraging for food.
- 28. We had two separate sightings of grizzly bear. One was a young male and the other was a mother and cub. This made us nervous, but the situation turned out fine.
- 29. while we were driving, so not in the backcountry
- 30. We were fishing on the Yellowstone River and a grizzly bear came down to the water on the other side of the river from us. The bearwas curious about our group of four but not act scared at the site of human, nor and did it act threatening to us. The bear kept walking upriver stopping to watch us occasionally.
- 31. Seen from a car after passing canyon falls. Many cars parked on and off the roadway and we stayed in the car. We tried to stay moving through traffic and only caught a glance of the bear while stopped but didn't want to inconvenience others by stopping and liking orngetting out and looking.
- 32. I was coming around a curve by Bechler Falls and I seen a black about 50 feet away. I think it seen me first and had stood up. When I looked over at it, it ran into the tall grass in the direction I came from and I just kept going the direction I was going.
- 33. I saw a young black bear about 100 yards above the trail. As soon as we made eye contact, it took off up the mountain.
- 34. Grizzly on the other side of the river not interested in us at all
- 35. Saw a black bear in a tree by the road and saw a grizzly in the river eating a bison carcass.
- 36. saw one driving in
- 37. Heard then saw Grizzly along Hellroaring creek about two miles north of out last campsite on day hike.
- 38. We hike with four loud kids so we see no bears .

- 39. It was walking across the street while we were driving. Loved it.
- 40. While standing in camp one evening observed a black bear come across ridge 1/4 mile outside of camp.
- 41. 2 trips, the Thorofare, 3 black bears; Pebble Creek one Grizzly. All sightings were more than 300 yards away
- 42. I made them aware of my presence so I felt as prepared as I could be and the experience was incredible
- 43. Seen in the distance, no issue
- 44. Small little black bear; it ran like heck.
- 45. My sister saw one off the trail moving away from us. No direct encounter
- 46. The bear was about 50 yards away from our campsite in a meadow at about 7 pm. It walked around and we didn't see it again.
- 47. Flushed up a good sized griz along a trail close to the Montana border. He heard us coming and slipped into the river, crossed over and ran up the hill on the other side. Was awesome.
- 48. along side of trail up a scree field after we had followed the tracks for a bit...
- 49. Encountered a bear on the road when we were in the car leaving the Bechler ranger station. The bear was afraid of humans and scampered away into the woods.
- 50. in our 2 previous trips to pebble we encountered a black bear 2 years ago and a grizzly sow and her cub last year
- 51. A bear apparently unsuccessfully tried to open our bear proof food canister (found tracks and canister had been moved).
- 52. We observed a grizzly bear from our campsite at Sportsman Lake. The bear was approx 300 yds away and ran when we yelled.
- 53. :(
- 54. The first night, a bear came in & chewed our water bags up. We never heard anything, and were camped quite a ways away.
- 55. We thought that containers that had never contained food would not be bothered by bears. The bear wanted to find out anyway.

Appendix J:

Unedited "Support" Responses to Question 24:

"This is the first year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per person, per night for stock parties). Prior to 2015, the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office. Do you support or not support this change? (Please explain your answer)"

Appendix J: Unedited "Support" Responses to "This is the first year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per person, per night for stock parties). Prior to 2015, the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office. Do you support or not support this change? (Please explain your answer)"

- 1. While I think backpacking in National Parks should be free because it is everyone's land, I understand that the cost of the permit is used to help the park's land and wildlife and I realize the need for it.
- 2. Small price to pay for supporting parks
- 3. It's a small price to pay for quality trails and back county offices
- 4. It's a very small amount to pay for a beautiful trip. I know the money I'm paying (roughly the amount of a single coffee) is going to good use.
- 5. It is worth paying the \$3 for the service of trail and campsite maintenance.
- 6. The fee was minimal, and if it goes to supporting the park, then I am all for spending money for the permit.
- 7. I do support the change, hopefully back country camping could provide better maps as to where the trails are for the back-country campers
- 8. Improvements in the backcountry will be good for hikers, and the permit is not so costly as to dissuade most people.
- 9. I am willing to pay a small fee to support the park service so they can continue doing their jobs. Conservation work is underfunded as it is. I do worry that such fees may limit access for lower income visitors, however.
- 10. I think that the fee is small enough that it is so small that it shouldn't deter anybody serious about camping. If the money helps park wildlife, than it is money well spent.
- 11. Cheaper than other parks. Is used for necessary maintenance
- 12. I understand why the trails do not get enough funding from the main park budget due to their lack of popularity. If they were to get more money for maintenance perhaps that could improve the trails and their popularity. And honestly, most people have paid so much to come to yellowstone the additional fee is typically negligible. Although a student discount would be awesome and a great advertising point.
- 13. I always support funding for natural resource management and this seem like a far way to take care of the backcountry is to charge a minimal fee to those who use it.

- 14. I support--what kinds of improvements will be made? How does someone find a job working in the backcountry office?
- 15. If the fees can go towards better trail markings and maintenance I am all for it.
- 16. It helps to provide more money for the park itself.
- 17. It is not expensive and it will help to improve the trails and campsites
- 18. If just a few dollars helps out, I think it is fine. Paying a small fee to backcountry camp in yellowstone is worth it.
- 19. I am fully in support of paying a fee to help facilitate the maintaince of trails and payment of employees
- 20. If the money goes to proper signage and topographical maps to give to each group, I will support this.
- 21. National parks are underfunded, so I am ok with paying a towards my experience in the park
- 22. I am willing to support the park for an extra \$3
- 23. It's an inexpensive price to pay to support programs I'm utilizing
- 24. The fee is small, and if it's making the park better, I'm happy to pay it.
- 25. I support the idea of charging a minimal fee to the people who are using the park because ultimately, those people probably want to support the parks system some way.
- 26. \$3 a night isn't too much to ask for. I would like to see improved trail markers in the back country. maybe with maps of the area and including campsites down trail. Even with a local topographic map we had some difficulty following the trail in the lamar valley and also in hellroaring.
- 27. It's a really reasonable price and I think the extra revenue would be good for the backcountry department
- 28. The uniqueness of Yellowstone should be maintained. The backcountry experience is excellent and must be tried by everyone! But humans do inflict damage upon the environment every time do hiking, ever if only minor. I look at it as an economist would. The price of \$3 is a fair tax if the money made from it will go directly back into keeping the land pristine.
- 29. I think a fee to be able to use the land is understandable, and it is obvious that there needs to be constant upkeep, and that they need to collect money somewhere for it.
- 30. Take my money and open another national park.
- 31. I support improvements, and backcountry staffing. The rangers were very helpful when we needed to leave due to wildfire.
- 32. \$3 per person per night is a very affordable price, especially compared to the Tetons. This price ensures that people will follow through with their

plans and actually use the sites that they reserve so that good sites don't go unused. This fee also funds backcountry operations that improve all backcountry experiences (whether that be day hikes or overnights). This fee supports the park, its users, and its wildlife.

- 33. All the parks are underfunded and I believe spending this money goes towards a good cause. The money ensures that my hiking and backcountry experience is set to a high standard.
- 34. The \$3 is small and it comparable with most other national parks I've visited. If it helps support trail work and backcountry campground maintenance I'm happy to pay the fee.
- 35. It is incredible expensive to maintain trails and we don't have enough federal funding
- 36. \$3 is a trivial fee, it's more of a hassle to have to pay than an expense... The outrageous free is charging separate application fees for each trail I backcountry camped on. If I spent the same number of nights in one campsite on the same trail it would have been \$75 cheaper.
- 37. As long as the revenue directly goes towards better backcountry camping experience, it's good.
- 38. I am all for supporting the National Parks in the United States. Of course I would want it to be free, but doesn't really bother me to pay for what I received in terms of access to back country and support for NPS.
- 39. I was very happy to pay this amount as the other campsites through private companies cost much much more and are a less valuable experience in my mind
- 40. Our parks can always use more funding!!
- 41. Even though there was a fee, the fee was not high in comparison to other parks.
- 42. Yes, as long as it helps maintain the backcountry or the park.
- 43. I support funding parks so that they can be maintained, clean, enjoyable, and well functioning. I'd prefer if federal and state funds were allocated to fund the parks; however, I do not mind paying a modest fee until that happens.
- 44. If this helps Yellowstone keep up their standards for trails and backcountry maintenance then I absolutely support these fees.
- 45. I think it will be good to help with the trails
- 46. This is so cheap that anyone not supporting it is complaining solely to hear the sound of their own voice. The money goes to a great cause
- 47. yes because it isn't much and if it helps support improvments to the trails and camps that is good to have.

- 48. This is very cheap relative to state park camping permits which offer nothing in comparison to the backcountry experience we had. I don't mind paying for the maintenance of that sort of natural beauty.
- 49. It is a natural habitat, I think there's more appreciation when you pay.
- 50. I realize it costs money for upkeep.
- 51. It takes funds to maintain and manage the permit system, trails and campsites for such a world class back-county destination. If anything the fee could be increased.
- 52. \$3 is not a hardship to pay at all, and I believe it is money well spent if it goes to the preservation of the park trails.
- 53. \$3 is really cheap. I'd pay even 5\$ for having such good trails
- 54. Got to pay to play.
- 55. Always willing to pay a little so the trails are well maintained and the experience is more enjoyabke
- 56. It's a fair price for upgrades in the back country
- 57. It's consistent with many other national parks. I've spent enough time in the parks that I'm confident that the NPS will put the money to good use.
- 58. It is a small price to pay and yellowstone attracts many first time backpackers who do need more help from staff
- 59. I support any contribution of money that helps make backcountry experiences more safe and enjoyable.
- 60. What you're doing with the money is positive. You could have an option for people who don't have the money to pay, some volunteer options perhaps, or a scholarship fund.
- 61. I am in full support of anything that provides protection and preservation of our amazing park.
- 62. Its a very small expense, and its well worth it for the service being provided.
- 63. I think that having the backcountry as pristine and kept as possible requires adequate staffing and work. If this is able to be done by the charge, I will gladly pay the small fee.
- 64. Look the NPS is underfunded and we have to find ways to get it better. I just don't want a whole bunch of people using the back country. I wanna keep that part quiet ;)
- 65. I am using the resources and should help support the national parks to keep it going.
- 66. So many people use the park, I'm surprised this was the first year they charged for permits. The cost is very reasonable, I 100% support the charge.

- 67. I have support for helping our parks. I work for the park system and am deeply saddened that employees that work for NPS, Forest Service, BIA, BLM and any other government agencies don't get some kind of discount into the park and campsites.
- 68. This is considerably cheaper than staying at the Yellowstone campsites. To be honest, if the park felt the there was need to further improve trails, I wouldn't be opposed to higher fees.
- 69. It is a small fee and if it helps then I am happy to pay it.
- 70. Important to have knowledgable staff in this area.
- 71. The money has to come from somewhere.
- 72. Seems reasonable
- 73. If people pay there will be less parties obtaining permits just to be safe and then not using them. Plus you guys work hard and deal with a lot of tourist bullshit and the more revenue you generate the better IMO.
- 74. While you are paying 50 dollars to enter both parks I think what is 3 more dollars. But I think the back country folks add more wear and tear to the trails so they should be the ones paying it.
- 75. Having funds to improve trails and create new trails is a great thing.
- 76. The cost is so nominal and the increased number of people visiting the park more than justifies the cost. It's important to support our parks!
- 77. If Yellowstone needs money to keep up their excellent services I'm more than happy to pay it
- 78. It is an affordable fee, I don't mind supporting the park service for trail maintenance etc.
- 79. I support the minimal fee as all trails users wear the trail. I do, however, believe that the fee for boaters and stock parties should be "significantly" more than hikers as these folks are impacting the area in a much more time consuming way. Say \$1 for hikers per night and \$5/night all the rest...Be it noise pollution or waste, the amount of baggage associated with either of the latter mentioned recreating parties obviously demands more attention than a guy wandering around with a pack on his back.
- 80. Imho. All national parks are cost money?
- 81. If it's something you really want to do, it's really not that much money. It also supports the National Park System.
- 82. Gotta keep the trails and campsites nice bro!
- 83. I agree that a small fee should be charged especially in heavy use parks. I enjoyed the aspect that single groups were assigned separate sites so as to not crowd strangers together in backcountry sites when most people are looking for solitude.

- 84. the price is extremely reasonnable. And to make people pay is a good way to make them understand that they shouldn't take the park for "granted" and efforts need to be made to preserve its beauty.
- 85. I support this as the extra revenue will help maintain and further advance the trails and campsites.
- 86. I'm always happy to support out National Parks
- 87. Small fee for maintnence of backcountry trails is fine by me, so long as its significantly less then a night in a prepared camp ground
- 88. We were pleased with how inexpensive the backcountry permit was! Please keep the price low and we will support!
- 89. Good to keep up on maintaining the trails and sites
- 90. Money to help fix trails
- 91. Trail maintenance is hard work and the gub'ment spends their money elsewhere.
- 92. Seems a very small fee for the services received
- 93. I will always and happily support any effort to maintain access to this beautiful place and compensate the wonderful folks who keep it running.
- 94. I don't particularly feel much where we traveled needed additional "improving," but certainly a certain level of management is necessary to help keep the wild "wild," so a minimal fee like \$3 is quite welcome. Also, the Rangers we encountered (both on the trail and at the office) were very knowledgeable and helpful.
- 95. This is a minor fee that will fund improvements which I support.
- 96. Maintenance takes a lot of effort. I understand the need for a fee and gladly will pay it if it keeps quality up.
- 97. I think that this fee is perfectly reasonable. If someone has an issue with paying it then maybe they shouldn't be on a back country trip. It all goes towards a worthy cause. I'm all for it!
- 98. Nothing is free... even nature. It's takes our efforts to keep it natural with human interaction. Charge the fee. It's worth it for the people who want to experience.
- 99. I don't mind paying to play. I would rather pay a small fee and have nice trails and campsites than to not pay and have poor trails, signage and inadequate backcountry sites
- 100. Everyone else is doing it
- 101. A nominal fee is acceptable for improvements related to the charge.
- 102. For use it is perfectly appropriate, the value far exceeds the cost. However, we have serious concerns about poeple with less means. Everything adds up. The parks should be as exessible as possible

- 103. I want to ensure these backcountry trails and experiences are around for generations to come! \$3 is not much to ask to make this possible.
- 104. I didn't mind paying the fee--the harder part was having to pay \$25 to make a reservation ahead of time. But, overall I would still do it.
- 105. Absolutely. The services provided were easily worth \$3.
- 106. It is a bit stiff when you add up all of a trips expenses, but if I have a nice shitter, my site is well maintained, and the rangers in my area are happy then I think it is worth it.
- 107. I strongly support efforts such as these as I believe the National Parks are just about the best thing going in recreation in this country. Also, I think charging a small fee changes the mindset that this is something you're paying for, a privilege, not something free to be taken advantage of.
- 108. Please use these funds to support the wonderful staff of YSNP.
- 109. \$3 per night is a very minimal charge for a national park
- 110. I support this fee because 1) It isn't year round-only during "peak" months.
  2) The revenue "should" go back into the park. That is never a bad thing.(Maybe provide LONGER backpacking trails) 3) Maybe it will discourage loads backpackers... I like to have the place to myself ha!
- 111. everyone should pay their part. trails were great
- 112. It's still much cheaper than car camping. However, I wish the reservation fee wasn't so expensive. The ranger's should encourage that. I also wish that people with reservations did not have to wait for people without reservations to check in. We had to wait a long time while the couple in front of us debated what site and then the ranger's had to call another office to check if it was available.
- 113. I think it important to contribute to the park being maintained. I thought all the pricing was very fair!
- 114. The fee isn't high, and we are using the space. It seems fair.
- 115. The increased traffic and pressure on the park mandate maintenance. The fee is very small and serves a good purpose.
- 116. Absolutely, a \$3 charge is so little and I am happy to support improvements in the backcountry sites and office! However, I feel there should be a little flexibility in this depending on the weather. Would there be a way to shift the fee to another day if the weather changes? To be honest though, \$3 is nothing, so go on and do it!
- 117. This is a very minor expense compare to the rest of our trip cost. We are happy to support the maintenance of the backcountry camp sites and trails!

- 118. Don't really have a reason but I guess i am in favor of a little more campsite upkeep
- 119. I am happy to pay a small fee for backcountry improvements
- 120. if the money goes towards improvements then i have no issue with paying
- 121. This is a modest cost, and as long as it goes to pay for backcountry trails and management, I support it.
- 122. Yellowstone backcountry trails and campsites are a great asset and \$3 a night is still a wonderful deal!
- 123. If additional revenue is needed to maintain or increase the quality of the experience, I support it.
- 124. Provides additional revenue for park upkeep and staff, besides its very affordable.
- 125. I want to see these places continue to be in as good a shape as possible while still making our impact on the landscape as minimal as possible, if that means a small fee I fully support it. I think these parks are incredibly important not only to me sentimentally, but to preserve these resources in a pristine state.
- 126. The trails were clearly marked and the campsites were wonderful. This was by far one of the best backcountry experiences I've ever had (albeit it was my first time backpacking in a national park), and I was greatly impressed by how well maintained the trails were. I don't mind paying a fee, especially since the money goes to adequately staff offices and maintain trails.
- 127. It is a marvelous NP, we think that is worthy to preserve it, so then if that money goes to the NP we will always support it.
- 128. The fee is fair and I had no problem with the expense.
- 129. Fee is reasonable
- 130. It takes a lot to maintain such pristine land. I am willing to support that maintenance, so Yellowstone can be preserved for as long as possible.
- 131. I will always support fees that go towards out National Parks. They are underfunded and overly crowded. For that reason, I prefer hiking in Wilderness Areas
- 132. I fully support maintenance of the backcountry sites and trails.
- 133. It's a small fee; it doesn't seem large enough to prohibit anyone from using the backcountry
- 134. It's so inexpensive and it helps the park.
- 135. The fee is so minimal I was happy to pay it. I think it would be great to create a few more loop trails that are family friendly. It's such a beautiful

park, and going back country there are no crowds which is amazing. I'm happy to contribute to making that possible. Thank you for all that you do!

- 136. The fee is minimal. I acknowledge that the park has expenses to upkeep the amenities that might not come from federal funding.
- 137. minimal fee and well worth supporting the park. I wish there were more backcountry sites available. especially shorter distances into the park
- 138. Off set the cost to run backcountry program.
- 139. The park is underfunded, and if expenditures are made where they benefit the vast majority of users, the backcountry resources and facilities will be neglected. The fee is minimal and is used for a good cause. It would have been nice to know the purpose of the fee when we paid it.
- 140. I understand that gov't resources are now limited to maintain trails and additional funding is necessary. However, I think the charges should be "per group" and the size of the group.
- 141. I think it's great! I feel close to trailhead, backcountry sites were often used by inexperienced hikers looking for a no-cost way to stay inside the park. As opposed to paying the rather high fees to stay at an in park campground. I think this will keep some people from staying at the sites. But I also feel it's a small price to pay for a campsite, considering the work required to build and maintain the sites. Now I don't want to be paying \$10 a night, but I feel a small fee is certainly agreeable.
- 142. I think you should charge more. I wouldn't hesitate to pay 20 dollars a night
- 143. It's a modest fee, and maintenance and staff do cost money. I would hope that it not increase, however.
- 144. It's a nominal fee that does not dissuade me from backpacking and if it helps make my experience better, I'm all for it.
- 145. Happy to pay a small amount to support backcountry operations
- 146. The backcountry fee is incredibly reasonable, and not more than it would cost to stay at a campground. If that money can be used to help improve Yellowstone and our NPS, I am all for it.
- 147. Yes, if it goes to a good cause. People tend to take care of things more if they pay for it.
- 148. Prices are still very reasonable compared to cost of gas and other expenses required to visit the park.
- 149. It worth it! very cheap.
- 150. I'm on board with the idea of paying a reasonable fee so long as that fee goes to maintaining the backcountry sites and trails.
- 151. The backcountry sites could use a little help.

- 152. seems nominal compared to the other costs of putting the trip together.
- 153. Fees seem reasonable. Backcountry campsites clearly require more maintenance. Please use funds to better maintain pit toilets!
- 154. I have no issue with the fee. I would pay to camp in designated site...the back country camps are much nicer and peaceful.
- 155. Support, in general, but overall, getting tired of fee increases for all of these experiences, primarily very unhappy that the entrance fee to GTNP and YNP are no longer combined. While it will not detract us from enjoying these parks, I fear that it will detract many families, despite record-setting use of these parks. We live in Lander, WY and there are plenty of families that avoid the national parks in our 'backyard' due to inability to pay these ever-increasing fees.
- 156. Anything to help NPS.
- 157. I support affordable usage fees at national parks as a way of funding the operation of the park.
- 158. I appreciated the toilets at the popular sites. I'd pay extra for that. Someone needs to dig that hole and maintain it. It's better than a bunch of holes and toilet paper all over.
- 159. At first I wasn't pleased to pay for the fee, but upon understanding what it is for, it sounded reasonable. But it did make it more expensive for our youth group.
- 160. Well worth it.
- 161. Provided the funds are used to improve the park according to my wants....:) like everyone else...lol
- 162. It was clear that the money was being used to better my expierence
- 163. Yes, \$3 per night pp is not expensive, especially considering that my backcountry permit in Grand Teton cost \$25, even for a solo backpacker staying only one night. As a solo backpacker I appreciate that it is a per person fee, not a per reservation fee and I think it's good that it is a per night fee and not per trip fee. I think this is a fairer system than Grand Teton and that it doesn't really bring in less revenue compared to GTNP. I also support the \$25 annual cap for backcountry fees this is a good idea for frequent visitors.
- 164. I think it's fair to ask users to help pay for maintenance.
- 165. As long as 100% of the \$ goes into the BC.
- 166. I've been hiking the backcountry in Grand Canyon for years and they always have charged a fee. We pay \$10 per permit and \$8 per person per night so no big deal for us. However we went aftet Sep 10th and did not

have to pay a fee. We would have gladly done so given Congress notoriously underfunds the National Park Service in general.

- 167. I support any kind of funding for Yellowstone. It's a small fee and if it helps I am all for it.
- 168. I liked the free permits, but am willing to pay for staffing need
- 169. I would like to keep the campsite beautiful.
- 170. I support the upkeep of the trails and backcountry system for future generations to enjoy.
- 171. I depend on the backcountry office to be staffed with people that know the trails and their conditions. I also fully support the trail crews that keep the trails & campsites up.
- 172. As long as the money stays in the park, I'm happy
- 173. Still cheap entertainment.
- 174. The proof will be in the results but as long as the fees are used for this purpose it is well worth the cost to enjoy this
- 175. In the scope of things, it is minimal. Just make sure the money is spent in the manner that it has been noted.
- 176. The fee is reasonable
- 177. It's a fair fee, but I am concerned that this fee to go up, which I would not support.
- 178. Seems reasonable to charge those who use the back country.
- 179. Seems reasonable to me.
- 180. It's 3 dollars and it's our park, there shouldn't have to be an explanation.
- 181. All businesses need to make revenue. The services were great. Love my time there. The only thing is that the area that is up wind of the bear pole had several widow makers where tents could be placed.
- 182. \$3 is reasonable for the ability to ask questions of the backcountry staff.
- 183. I support he fees for camp improvements and additional trails.
- 184. Fine to charge a little bit. Having good trails is not free. But it needs to be cheap so anybody can go.
- 185. Park needs the additional revenue hopefully it will be used for trail and campsite maintenance not something else. Really like that it is per person per night not a flat fee no matter how many people and # of nights
- 186. Yellowstone can use the money
- 187. A nominal cost, and well worth it if it keeps the park in good shape.
- 188. I overall support the fee as long as I can see where the money goes. I think more backcountry rangers would be a good use of the fees.
- 189. It was well worth the cost. I am against any fee increases, for the record. Thanks.

- 190. If it helps support maintenance of back country, Im fine with it. Its pretty cheap.
- 191. I understand that budgets are tight and additional revenue streams are needed so not a problem.
- 192. NPS is already underfunded. There is a fair amount of labor involved in maintaining and monitoring trails. This is not an unreasonable expense.
- 193. \$3 for trip into the backcountry is extremely reasonable and will ensure its availability into the future. This is a no-brainer.
- 194. it's a gift to spend time in the park. worth it!!!
- 195. I believe that the park needs all the money it can get.
- 196. It seems very reasonable. I can't believe how lucky we are to have these great amenities with so few people in the backcountry in the off season. Thank you .
- 197. Funding for the National Parks is far from adequate (an issue for Congress to address). The least those of us who use the backcountry can do is to help maintain the opportunities to access these uncrowded areas of natural beauty. If that means paying a minimal fee, I have no objection. I would much rather have a minimal fee imposed than to limit the backcountry park staff from being able to have the resources to do their jobs.
- 198. I don't mind paying some, but when we had already paid when we applied for our permit I think there should be some sort of discount when we pick up our permit.
- 199. The fee is peanuts for humans, horses need to be charged as well
- 200. I'd be willing to pay more because it's worth it
- 201. It's a reasonable fee
- 202. Support enforcement of liter control.
- 203. It costs to have a ranger in the area, to maintain and repair trails and signage etc. the fee is definitely too low
- 204. You need to maintain the park somehow.
- 205. if it helps to maintain the quality of the backpacking experience it is worth the fee
- 206. It is important to provide a back country experience for those who can access it.
- 207. The cash is for a good purpose.
- 208. it will prevent boat parties from obtaining permit @ dock sites on Yellowstone lake, and then not using, preventing others from obtaining a campsite.

- 209. Trails require maintenance, people require wages, National Parks cannot be maintained without income. Those who want to use the National Park should expect to pay something. Campsites require maintenance.
- 210. The national parks are a treasure that need support to maintain the quality of those parks for the future, especially in light of reduced support from the federal government. \$3/day/hiker is hardly an onerous charge for the privilege of using maintained trails/campsites. I am over 65 and the Golden Eagle Pass at \$10 for life is a ridiculously low amount to charge.
- 211. Fees are nominal and go for a good cause.
- 212. It takes time and money to keep up the trails. Those of use enjoying them, should help find that.
- 213. I support the NPS. It is uncomfortable having to pay another fee when we used to hike for free. Between an advanced reservation fee and this new fee it causes negative feelings.
- 214. Well worth the money
- 215. the fee seemed very reasonable.
- 216. The Park Service needs more money to maintain the park, and we're happy to contribute. I think larger fees are in order.
- 217. Its a small price to pay for the experience that is expected and received
- 218. I am happy to pay the fee, if helps to improve the trails and backcountry campsites. I know the park needs the money.
- 219. Y.P. needs the \$\$!
- 220. It isn't that much.
- 221. We love the parks and realize that they are underfunded. \$3.00 per person is a small price to pay to help the parks.
- 222. I support this as long as the benefits are visible and tangible.
- 223. 3 bucks is nothing for the experience
- 224. National parks are great and I love to support the nps
- 225. It's a cheap fee to help preserve Yellowstone backcountry
- 226. As long as the money really goes to support the backcountry.

Appendix K:

Unedited "Not Support" Responses to Question 24:

"This is the first year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per person, per night for stock parties). Prior to 2015, the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office. Do you support or not support this change? (Please explain your answer)"

Appendix K: Unedited "Not Support" Responses to "This is the first year that Yellowstone has charged a backcountry permit fee (\$3 per person, per night for hikers and boaters and \$5 per person, per night for stock parties). Prior to 2015, the backcountry permit was free. The additional revenue from the permit fee will be used to make improvements in the backcountry and backcountry office. Do you support or not support this change? (Please explain your answer)"

- 1. Let nature be free. It's where we all belong. Most of us are broke it's 2016.
- 2. Generally it is hard to believe that such a small fee from backcountry hikers would actually improve the trails or the experience, especially considering the high amount of revenue Yellowstone clearly receives from entrance fees.
- 3. It should be up to the campers to uphold the sites, and this money was not necessary to spend for what we did.
- 4. I am neutral on the change
- 5. In general it makes me sad that, while I'm able to enjoy Yellowstone, many of my friends are financially not in the same position. (Not the \$3, but the \$25 entrance fee and additional \$25 to camp) Understanding that it is costly to maintain the park, perhaps there could be a clearer option for subsidized passes based on financial need.
- 6. There is clearly no improvement in backcountry office staffing. Unless you plan to use that money to pay them to go out into the backcountry so they can answer questions, then I do not feel comfortable knowing that my money is supposedly making improvements.
- 7. They should either charge per person or for the permit, not both. We already pay to get into the park, the permit itself, and now the per night fee.
- 8. It should be a fee per party. It is difficult to get everyone that wants to go on the camping trip to register and pay at the permit office.
- 9. The people that use the backcountry are not the folks to stick an extra fee with. The folks that use the backcountry are not your usual user of yellowstone. Record numbers of people enter the park each year. Anyone that uses the backcountry in yellowstone will tell you there is not a significant user rate increase in the backcountry. To stick the normal backpacker with an extra fee to make improvements on a part of the park that should be as unimproved as possible to provide a more wild experience is not right. Some people don't like pooping in the woods they think they need a full on toilet. Just because some softy thinks they need

all these amenities of home in the woods doesn't mean that the experience will be better. How many places in this country can you go and get a full on raw experience in nature. The backcountry should be kept wild and inexpensive. If you are willing to put everything you need to be comfortable on your back and walk to what you want to experience it should be far more inexpensive than the guy that pulls his rolling home onto a paved pad with electricity, clean water, and toilets.

- 10. I used to work at Big Bend, TX NP in 1980s in Law Enforcement US Customs Investigations/Patrol working anti-smuggling drugs as a cross designated DEA Agent. Wife and daughter and I lived in USG trailer got to be friends with employees of USPS in the park for over a year. Got to be good friends with employees found good manager motived park service maintenance crews to do their work but bad managers were manipulated by employees. If you want the job do the work.
- Given the amount of money the park brings in and how little it takes to maintain the backcountry, the entrance fee should cover backcountry maintainence. Also backcountry users are the lowest impact users of any visitors.
- 12. With the pre registration fee of \$25 and the backcountry permit fee \$24 we spent \$49 a trip!
- 13. The federal government should allocate adequate funding from tax revenue that I pay. Each year I also purchase a NPS annual parks pass. Having to pay another fee for a backcountry permit just doesn't seem right.
- 14. Because the money will not be used this way. What will happen is the budget will be cut by the amount of the new fee.
- 15. I see no differences in any improvements either at the backcountry office(s), trails or at backcountry camp sites. Seems like simply a convenient hiker 'tax' which will keep rising as in Glacier National Park. Please don't use a 'lottery' permit system to artificially create a demand that didn't exist until a lottery was created...again as Glacier has done. Then fees were raised to pay for the computers and personnel to attend to the 'new' demand.
- 16. It's not fair that people are charged \$3 per night and a person with stock is only charged \$5 per night. If I paid \$5 per night, would I also be allowed to poop on the trail and not clean it up? In addition, what about stock parties that are running way more horses than there are people? It's not fair that one person is running so much stock through, taking up more space and resources, dirtying the trail, and not paying a percentage equal to their impact on the land. Charge more per head of stock and invest that money

toward someone who cleans the trails of manure. A single 1,000 pound horse produces 50 pounds of manure a day. Say someone is running 17 head of stock through, that's 850 pounds of crap strewn along the trail. Glad they paid \$5 toward the improvement of the area. Ridiculous.

- 17. DISCOURAGES POOR PEOPLE FROM ENJOYING OUR BACKCOUNTRY. SLEEPING IN TENTS DOES NOT MEAN YOU HAVE LOADS OF CASH. IF POOR PEOPLE CAN'T AFFORD TO ENJOY PUBLIC PARKS THEY WON'T VOTE TO SUPPORT THEM.
- 18. I've worked and back packed in Yellowstone for years and one of the perks was free backcountry camping. For me personally I believe that all backcountry camping should be free and I make it a point to go to areas that are.

Appendix L:

Unedited "Yes" Responses to Question 22:

"Did anything detract you from your enjoyment of Yellowstone's backcountry on this trip? If Yes, what detracted from your enjoyment and how did it detract from your enjoyment?"

## Appendix L: Did anything detract you from your enjoyment of Yellowstone's backcountry on this trip? If Yes, what detracted from your enjoyment and how did it detract from your enjoyment?

- 1. Getting a ticket for nor hanging the food up immediately upon arrival to the campsite because my friends forgot to tell all of us what the ranger said. That sucked but it's on them.
- 2. We needed to hike through a herd of bison. We were forced to hike off trail, and because the trails weren't adequately marked we got lost.
- 3. Availability was sparse
- 4. Some trails were poorly marked and added a large amount of time to our trip in which we were lost.
- 5. The trail down into the canyon (last mile or so) to our sight was poorly maintained and dangerous in many places.
- 6. The lack of signs on the trail and inadequate information on the signs. Due to the inadequate information on the signs on the trail, my group spent 2 hours searching for a campsite that ended up being a mile farther than indicated on our maps. Also, the maps provided gave no indication of the terrain we would be traveling. Therefore we unknowingly began a VERY difficult trail that we were not trained for. The poorly marked signs made us leave our backcountry experience a day earlier than planned therefore we missed landmarks we truly wanted to see.
- 7. The hike (7 mile hole) was much more difficult than anticipate and thus I felt so exhausted that I was not enjoying myself
- 8. There were no public back country trail maps. It was difficult to navigate & plan trails to hike unless you wanted to shell out \$20 at the gift shop.
- 9. Horses greatly degrade the quality of the trail, making it very muddy in many places.
- 10. All of my previous backcountry camping was done with other people, but this was my first one alone. It was a weird feeling but for the first time in my life I felt a little agoraphobic. I have never camped in a wide open field like that before and doing it alone gave me a profound sense of vulnerability. Everything else in my experience was great though. I was especially pleased by the friendliness and intelligence of the Park Ranger who issued me the permit.
- 11. the smoke from the forest fires was really bad at points
- 12. Old Faithful was way over-hyped.
- 13. Mosquitoes. We were not given adequate information about their presence.

- 14. No- nothing. Just quick note that the pole for hanging food was down at my site and it was hard to find an alternative (but I did after some searching)
- 15. Bear pole was in a swamp/flooded plain and was hard to access
- 16. there were two bars to put on our backpack, but both of them were too close to the assigned campground. not 100 yards, max. 30 yards. we couldn't put our tent somewhere else because we dindt want to get too close to the lake or to mud
- 17. Hearing other campers from my camp couple campsites were too close together
- 18. You need to plant some more fish in shoshone lake
- 19. Most other large national parks (including Glacier and Grand Teton which l've recently visited) have all hiking trails visible on google maps. This feature makes planning much easier. It overlays over topography, and you can use the directions feature of google maps to determine any distance you are curious about. Also we stayed at 9A4, and it was was very difficult to get up and down to the water source.
- 20. Crowds in Yellowstone before making it in to back country areas which were not cowded
- 21. Considering I had taken the proper precaution to watch the backcountry video, plan ahead, and take proper supplies- I felt like the backcountry office staff wasn't always on the Same page. Some of the staff new the procedure and others told me everyone in the group needed to come in before being issued a pass. This is nearly impossible since people work and the backcountry office is closed by 5. On a separate note, One incident really made our trip frustrating. I don't know what the communication is out in the park with the back country offices as far as all park rangers are concerned, but we were issued a pass for a backcountry campsite and told which pullout to park in/ trailhead to take. Arriving to llamar valley that day with our pass- the two trailheads near our designated Parking areas were closed due to the fact that a couple of Rangers were shooting a coyote. This coyote was a danger to people, so I'm sure the Rangers didn't want anyone near the area. Since we were told we could park here by the backcountry office ranger and walk in to our campsite, we had no idea what we should do since the trailheads were closed near these parking areas. One ranger told us it was ok to park there and use the trail to our campsite and now a ranger at the parking area said it wasn't ok to use the trail. Why werent the Rangers on the same page about a closure due to dangerous wildlife? When we asked

the Rangers at the pullout about how we could get to our campsite if the trailhead was closed and showed them our backcountry pass, they lashed out at us, we're very standoffish as if they hated their job, and didn't want to provide any helpful information on what to do. I get they probably don't enjoy killing wildlife and had to kill that coyote, but as an employee of the park myself- every customer/ tourist trying to enjoy the park is as important as the last and they acted totally unprofessional. I did not respect their tactics at all. They may have been agitated but it is

- 22. Too many people at the famous places, I was so grateful for the back country.
- 23. There seemed to be a lot of people on the trail. It is a popular area though so if we would have chosen another area it probably wouldn't have been an issue
- 24. Nearby substation. Detracted from nature but wasn't too bad
- 25. The topo map had a ton of creeks and streams crossing the path, but they were all dry. We went 11 hours without water the second day.
- 26. Mosquitos. I forgot bug spray and didn't think they would be bad that time of year. But in the shaded areas I had at least one mosquito on me while I was slapping the one, four more would find there way on me. It was my fault.
- 27. Somewhat strange people we shared our campsite with in the evening.
- 28. Being a cdt hiker the backcountry office in grand village was more than unfriendly even rude. Cheyenne in old faithful made so up for it. She was amazing!
- 29. Making noise for bears, seemed unnecessary on a well-trafficked trail during the day and we guessed we were scaring away other animals we would've liked to have seen.
- 30. There were points when we were not sure if we were on the trail or on the correct trail. This made us anxious about finding our campsite. Trails could be more clearly marked.
- 31. Footprints and hats in the hot springs. Give people more tickets for disturbing the landscape.
- 32. Large burned area to walk through wasn't quite spectacular
- 33. We were heavily disappointed by the lack of wildlife! We saw aves and rodents, and two deer. All large ungulates were MIA. And the strangest part of it all was..we didn't see any carcasses or even any sheds. That was really disappointing and weird.
- 34. private guided trips everyday we were there

- 35. The check-in process took a long time (I think maybe an hour). Would've been nice to watch the video ahead of time.
- 36. Too many people at the Geysers by Old Faithful. We will be coming back during a less busy time.
- 37. BEARS. Two different grizzly bear sightings, too close to where we were. I know that it's part of the experience of Yellowstone, it was just scary and uncomfortable.
- 38. Our second campsite, 3L3 is within the main territory of a small group (3) of bachelor buffalo. Unfortunately, we scared these three guys off the site when we first arrived, but they returned in the night and just as we were going into our tent after nightfall, our headlamps met their eyes not very far away. We were pretty terrified to see these eyes nearby our tent at night and didn't know how to react as this wasn't covered in any of the advice. So we hollered and clapped in the hopes that it would scare a bear. We were prepared with bear spray and didn't have food in/near the tent, but the animal didn't go away and the gleaming eyes were terrifying. In the end, we ended up throwing rocks at it and when it didn't move, we deduced that the only animal it could be was a buffalo. After getting into our tent and lying awake in fear for about an hour, we finally heard buffalo munching near the tent and agreed that it felt safe to go to sleep. I was also worried about what to do if the buffalo were surrounding the tent in the morning, but luckily they were slightly further from the tent by morning.
- 39. we couldn't dig our cat holes deep enough because the ground was all rock. It was fine, we just wanted to treat nature properly and had to do the best we could.
- 40. Too crowded! Even on the CDT portions of the trail.
- 41. So much haze and smoke!
- 42. We encountered a large group on horseback, roughy 30 or so people with two dogs. We got off the trail to let some of the riders pass and just when we thought we were clear to resume our hike, here would come another group. This cycle repeated itself for quite a long time, and the trail wasn't too nice to follow after that many horses. Besides the dog infraction, these riders also rode on a portion of trail that was closed due to a carcass. I guess park rules don't apply to everyone.
- 43. My only two comments are, one that we received a parking warning for unauthorized overnight parking in a parking lot at our trail head. We did not know it was unauthorized lot for overnight parking and even discussed parking at this specific location with the backcountry office. We had the car permit on our vehicle dash board and thought we read all the signs in

the lot and don't recall any "no overnight parking" signs. So needless to say this was a little frustrating, This was for the Lava Creek Trail, the trail entrance just north of Mammoth. Finally, the Blacktail Ponds Spur trail needs some serious work, I'd estimate that 80% of the trail is not visible due to over growth.

- 44. I didn't let It detract me from my enjoyment but a small group gave me a bogus story and was trying to stay under the bear poles at my camp sight when I got there which one of them also peed under. They just wanted to stay there because it was right next to a water fall. I didn't let them stay.
- 45. Trash left at campsite on slough creek trail. I packed it up and hiked it 8 miles out. Trash included full size glass bottles of alcohol.
- 46. Group of Xanterra employees taking a large amount of alcohol out the Freight Road took up the entire trail and were snarky when asked to let us pass.
- 47. Lack of preparedness for close encounters with bison
- 48. Campsite WC2 is on a spur about 1 mile from the trail and that's not clear on the map. Better signage or a note on the permit (there were other notes about each campsite) would have been helpful. Some unofficial campsites seem to have sprouted up along the spur from people thinking the campsite didn't exist and so seems to be a recurrent problem. Also, that same secction, we had hikers with dogs off leash on the fan creek trail and that part of the park (off of hwy 191) seems to be less well patrolled than the rest of the park.
- 49. It would be nice if the backcountry sites had a little better seating. Some logs cut to seat-height would be really nice, rather than sitting on the ground or on low fallen trees. This is not hard to do, and many other places I've backpacked have features like this.
- 50. Horse defecation on mandatory trails into camp site sucking air on some switchbacks rather breath fresh air not horses---t
- (1) pit toilets were in disrepair at many sites making them unpleasant to use and questionable in terms of environmental impact / safety; (2) at several sites in Bechler the best tent sites were targeted for revegetation without adequate replacement identified (ex. Dunanda Falls)
- 52. The permitting process took a long time. The ranger was pleasant, but we had a reserved backcountry permit and I believe most of what we did could have been done online prior to our visit. It took more than an hour to obtain our permits and licenses.
- 53. Fires, Heavy Smoke. Unfortunate but natural

- 54. Only minor things. Difficult parking at Glen Creek/Golden Gate because full with day hikers to Bunsen Peak and elsewhere - there's not enough parking for a trailhead that serves half a dozen hikes, especially as the overflow is designated for horse groups. Difficulty of getting permits for Heart Lake was a bummer. Would love to be able to see online which sites were available at that moment so I could plan a trip more carefully, even if it was just in the backcountry office. Would love to be able to book a quota of backcountry sites online. If you offer one-third of sites prereservation starting March 15, why not have one-third of sites available for online reservation any time, especially for lesser sites. Give a credit for cancellations to encourage people to release prebooked sites that they can't use - at present there's no incentive to ring up and cancel a site so I'm sure some go unused due to trip cancellations etc.
- 55. The shear voulume of people waiting at the BC office. Most of them never had been in BC before so they spent so much time discussing options with BC Ranger. I have been camping in YSNP BC for many years and I have never seen it so crowded. One afternoon we found a tent in our registered site. The couple who were in our site told us that after several hours of looking (during the heat of the day )that they were unable to find their own campsite and decided to just stay there. It seems that because of all the new reality tv shows about wild survival etc that so many more people want to try it themselves.
- 56. Impending weather caused us to shorten a 6 day trip into 3 days.
- 57. mosquitoes
- 58. The buffalo plateau trail isn't marked very well. The creeks on the map were either dry or not located. The amount of creeks for water supples was 1 reason this trail was picked.
- 59. i was worried about the bears. Thiugh we did have bear spray and hung our food.
- 60. the reservation system allow people to reserve a campsite then not use it. We were at the first campsite on shoshone lake and saw everybody who paddled by. Many of the campsites were empty, but reserved. Only a few of the campsites should be allowed to be reserved.
- 61. Personally, we had 4 water purifiers(different types, all go down and obtaining water was difficult and led to us having to call our trip short. These water purifiers were all proven in the past with extended stays in the back country.
- 62. Smoke from the fires was strong one particular day.

- 63. The hike from mist creek to the trail head was a bit much, but I understand why. We got on the wrong trail by the cabin you pass as you drop from mist creek. The only sign was at the cabin, we took a wrong turn before it.
- 64. Hikers outside our tent after midnight.
- 65. It rained a deluge the last night campfires were allowed, making having a campfire challenging. No campfires for the rest of the trip was a disappointment as we love campfires in camp.
- 66. There were 3 forest fires in the northwest corner of the Park at that time and the smoke detracted from our views and therefore our enjoyment
- 67. Got started down the wrong trail and had to backtrack.
- 68. One rude mule packer. The other stock packers though were polite and friendly.
- 69. Would not want to go to Park in summertime as it would be too crowded. This time of year was crowded enough, at least on the day hike trails.
- 70. Day hikers going to fish in slough creek hiking through our campsite very morning and afternoon. Made it less private and feel more crowded.
- 71. 1.concern about fires (turns out south entrance was closed due to fires shortly after we were out) 2. sadness that others were disrespectful with trash at designated sites; for example, at one site, there was toilet paper, at another, a sanitary napkin a bush...
- 72. Loud people on ATVs at a Bechler trailhead. Two men wanting to see my backcountry campsite; it felt very intrusive (bad etiquette).
- 73. This is very minor, really. But, with the increasing use of Yellowstone by everyone, it is very difficult to get a campsite at Lewis Lake Campground the night before launching for Shoshone Lake. We were lucky this year to get a site mid-morning, but not so in the past. Yes, Grant Village is an option (campsites there can be reserved, unlike Lewis Lake Campground), but it is so much nicer to be right at Lewis Lake for the early morning launch (to avoid paddling in the afternoon wind/waves). Would it be possible to designate a certain number of campsites at Lewis Lake Campground reserve-able for persons doing the Shoshone Lake trip?
- 74. Horse shit all over the campsite, near the kitchen area, near the tent site, near and in the river where water is drawn from. Can't horses be tethered in one area? Or must they be allowed to be hobbled and wander all over?
- 75. Some liter. Suggest ban and severe penalty on glass bottles. When found, too difficult to pack out. Injury hazard etc..
- 76. Smoke from fire in West Yellowstone.
- 77. The amount of horse poop all over the campsite area and on the trail.

- 78. The intensity of downed timber off the trails in Lodgepole and/or burned forests made it very hard to hike. Weather was really dry due to climate change? Very few fish in Yellowstone Lake due to lake trout? Thus very few preditory birds (Osprey and Eagles)
- 79. Bear came into cool area at night
- 80. smoke from fire
- 81. Larger groups are sometimes a distraction but on this trip I passed only 1 commercial hiking group and 1 commercial horse group. They were both under control
- 82. smoke from the fires distracted from the views
- 83. Bear in camp. Only chewed water bags on ground & Jetboil top.
- 84. The showers were closed when we got off the water. We tried two different locations. Why not close only the showers that are being cleaned?
- 85. Some camp sites were poorly marked
- 86. Horse poop. Seventeen head of stock were being moved through the trail toward us. They raised clouds of dust first of all, and secondly, we were dodging stinky piles of manure for the next six miles until we reached our campsite. We were forced to walk off the trail to avoid stepping in horse poop along narrow stretches of path. It was disgusting. I understand that stock use is permitted on the trail, but seventeen head strung along by four individuals seems excessive.
- 87. Traffic
- 88. Backcountry privies should be provided at all established campsites, including clear signage.
- 89. There was a fire ban. While I understand the need to enforce thelse regulations I feel like I can safely have a fire in the backcountry even during dry conditions. Maybe include a part in the video about the proper way to extinguish a fire..
- 90. Having to step off trail to allow a 35+ head of horsese to pass, on trail, in backcountry. Horses have no place in Wilderness areas

Appendix M:

Unedited "Commercial use is not acceptable" Responses to Question 26:

"What is your opinion about commercial use in the backcountry? Why do you believe commercial use is not acceptable?"

Appendix M: Unedited "Commercial use is not acceptable" Responses to "What is your opinion about commercial use in the backcountry? Why do you believe commercial use is not acceptable?"

- 1. Parks are for recreation and conservation/preservation. Not for making a profit...lookin at you, Xanterra
- 2. Why?????
- 3. Would rather it be used for people to enjoy the wonders of the National Park at their own pace, and it prevents overcrowding and irresponsible people from doing dumb things.
- 4. The entire appeal of the backcountry is that it is off the beaten path. My goal is to get away from the commercialism of the more popular areas of the park. Commercialism would definitely take away from that aspect. Keep the commercial use where it is already very prevalent in the park.
- 5. The back-country needs to stay free and owned to the wild. Commercial use could lead to quick erosion and overuse of these rare and beautiful sites.
- 6. I go to the backcountry to get away from commercial activities and fully experience nature. Most commercial use will detract from that, unless done in a highly sustainable manner.
- 7. I am unclear what this question fully means, and its implications. I support the national park staying pristine forever, and if commercial business hurt the park they should be banded. If commercial business help the park, then by all means bring them in.
- 8. The majority of these parks now are already packed full of commercial businesses and in some cases approach theme-park level of accommodation on places that were set aside for their natural beauty. At the very least the backcountry could remain untouched for those who want to get away and be in nature and these landscapes, no commercial enterprise.
- 9. What is commercial use?
- 10. I believe the backcountry is to be explored by those willing to go out and 'rough it' on their own. Allowing others to detract from this experience and profit off of it would take away the enjoyment of the backcountry.
- 11. I don't think commercial use in the backcountry belongs in Yellowstone.
- 12. I like having the backcountry as it is. You have to work to get there
- 13. Commercial use allows people to book permit required areas through external sources. This makes permitting for people not using an outfitter more difficult.

- 14. I find commercial things pretty annoying in the backcountry. I use backcountry trips to get away from things like that.
- 15. The point of the backcountry is to GET AWAY FROM THE COMMERCIAL SIDE OF THE PARK. The commercial areas are great for the park as a whole so they serve their purpose but I think it is so important to leave some places alone. Let there be some places where the traces of human presence are as minimal as possible, after all, such places are very hard to come by. That is supposed to be the purpose of the park system.
- 16. They book up campsites too far in advance making it harder for smaller parties to enjoy the trails. If commercial groups are allowed in the back country make rules and regulations that prevent them from blocking up campsites and making it difficult for people with limited means to enjoy the back country.
- 17. Not Yellowstone. There are plenty of other forests that could and should be designated as commercial use. Yellowstone is too special.
- 18. Visitors using the backcountry should be kept fairly low, and commercial use would increase that number. Commercial use is acceptable everywhere else in the park, let's keep the backcountry as natural and wild and secluded as possible.
- 19. Unbridled commercial use is not acceptible, but things like Guided tours would be OK in my opinion.
- 20. Keep it natural
- 21. I may need more information as to the definition of commercial use as it is intended here; however, I read this as corporate/private business use. The lands are public, as in they are owned by the citizens of this country) and should remain untarnished of private interests and potential destruction/pollution/disruption. For example, the Exxon pipeline spills into the Yellowstone River in recent years. That is unacceptable.
- 22. Commercial use detracts from the natural aesthetic only Yellowstone provides, please do not allow commercial use
- 23. do not need vendors in the woods we go there to find solitude and peace and quiet not the comforts of a general store
- 24. Preservation is key to maintaining a natural ambiance and true outdoor experience.
- 25. Park needs to derive revenue from any commercial use. Only tours and low impact use should occur
- 26. Too many groups of pack horses
- 27. Overcrowd the areas, it is nice to be remote and not have to be near any large party's

- 28. The kinds of people who go on commercial trips often do not take good care of places, litter, leave TP etc
- 29. The Outdoors/nature in general and commercial use are opposites.
- 30. Would love to see this land maintained for many more generations and it seems like the obvious circumstance of commercial use is the destruction of that environment.
- 31. The only form of commercializations I would support would be a wilderness guide to take a group camping. To show them the beauty and the proper way to handle ones self in our great parks
- 32. I don't know dactyl what circumstances this would occur under, but I feel that it would detract from the serenity.
- 33. I've seen what happens when this happens. You get stupid people who don't know what they're doing and then it just totally sucks the fun out of back packing. This happened in my home state of NC.
- 34. If we want to preserve the backcountry and keep it as wild and maintained as it is now, we cannot allow for commercial use. If the backcountry office workers are unknowledgeable about their own backcountry, just imagine the kind of people that would be going there for commercial use. It would be disastrous.
- 35. National parks are supposedly intended to serve the public. Commercial use takes permits that would go to the public and gives them to businesses who then sell for high premiums.
- 36. Helps keep overuse down. Less people in the backcountry. More peaceful
- 37. It would be helpful to define "commercial use" here. I don't understand enough about the question to have an informed opinion about 'commercial use' specifically but anything that brings large numbers of unprepared people into the backcountry is undesirable.
- 38. Not exactly sure what you mean by this question?
- 39. If limited to a very small group of people, then i'm ok with it. However, i'm not in favor of large guided tours on trails. This causes congestion and a lot of noise on trails. Large groups also take away from the natural beauty and remoteness of that we all crave in the backcountry.
- 40. The land is to be preserved in a national park.
- 41. I don't really know what this is, but it sounds undesirable
- 42. Let's keep preserving places for solitary experiences. I am strongly against commercial use in the backcountry.
- 43. threatens the sanctity of the wilderness
- 44. I don't know how to qualify what commercial use of the backcountry would look like, but generally, I don't trust privatization of public resources.

- 45. Preserve the park
- 46. I'd like to see this space embraced as a place to act outside the realms of our created worlds, a place to be an animal in part of a giant ecosystem.
- 47. Keep it wild.
- 48. It takes away from the outdoor experience.
- 49. It's always nice when nature isn't commercialized, ya know
- 50. Commercial use will take away from the wilderness experience from individuals who are in the backcountry.
- 51. I'm not clear enough about what you mean by commercial use to answer this question.
- 52. I don't see the need for commercial use. The trails are well marked and campsites are well designated. Large commercial or guided groups would take away from others backcountry experience.
- 53. That's not what the parks is for. That is definitely not what the backcountry is for.
- 54. Keeps guides and consessioners out of the back county
- 55. This is not the reason why national parks exist
- 56. Not in a national park.
- 57. I think that Yellowstone should stay away from commercial use. I loved my time in the back country because it was away from all of the "Tourist". For example people who wear jelly sandals on trails and have no clue what trail etiquette or Leave No Trace. I order to keep the back country wild we have to keep commercialism out of it.
- 58. Parks are for the people. Not corporations that are FOR PROFIT making money off the land. Bottom lines do not bold well for the preservation of our land.
- 59. It's the public's park. There are many places for companies to make money leading trips. Send them to other places.
- 60. Fee based use in the backcountry goes against my desire to have as natural an experience as possible. As soon as money is to be made on something abuse of the resource is more likely
- 61. Backcountry is for people that have the need to connect with their natural environment and appreciate the beauty and wilderness without the comfort that's usually detract from this. If someone is unwilling to prepare themselves for this sort of experience, it clearly isn't important to them. Commercial use will also make the sites overused. It'll overcrowd the trails.
- 62. I'm not sure what is meant by commercial use.

- 63. National parks are a public good, private citizens should not profit from their resources.
- 64. Backpacking can be dangerous. Making it commercially available provides an "unfit" person to expose themselves to a harmful situation. If something "tragic" happened to one of these unprepared clients, the possibility of public outcry as well as a bad reputation for leaving the wild places wild could occur. I don't want precautions in place in the backcountry. I want it to stay as wild, dangerous, and unpredictable as it ever was/can be.
- 65. Group sizes are always too large. I don't like stock parties, rafting parties, or just hiking parties in general. The backcountry is one of the few areas to escape crowds in yellowstone.
- 66. This should be protected space. Is that not the point of national parks?
- 67. For the most part I do not support commercial use of the backcountry. There is already too much recreational, non-commercial pressure.
- 68. No mining or deforestation please, but okay to make a limited number of e.g. canoe or back county hiking trips.
- 69. It's a national park after all
- 70. These lands are for the enjoyment of the public and should not be a money making opportunity for private businesses
- 71. this is a public resource and uses should be limited to preserve natural beauty and delicate ecosystems
- 72. It would ruin the ability for regular people to take advantage of campsites, cause an increase in people on trails.
- 73. I don't like the sway that they might be able to have over how the land is managed and who gets to do what in the area. If they had ABSOLUTELY no say and just gave money, than that is fine, but I would not want to go to "wrigley national park" or "Uscellular national park" It doesn't feel authentic or warm or welcoming. I would love it if more money was given to the national parks, even if it meant paying higher taxes. Ideally there would be a provision in your federal taxes that would allow you to personally allocate 1% of your taxes to an area of your specification. i would always give to the national parks. I can't express how much they mean to me.
- 74. The rest of the world is for commercial use. Please leave the backcountry alone!
- 75. Better define commercial use. Are you referring to guided groups like NOLS/ OB etc, or private venders operating food services etc? If the latter, I would prefer to see less privitization of our national parks. The money should be going to the parks, not some vender.
- 76. This is a national park, don't need to say anything else

- 77. I'm not sure I know what you're referring to exactly by commercial use, but if it is about allowing lots of people to go backcountry, it would be a shame if it lost its magic of peace and quiet.
- 78. I'm not sure what "Commercial use" is defined as. This needs to have further explanation as this could have many possible meanings
- 79. I believe you get the most out of it as an individual or group of friends. Commercial interests are not a good mix for these areas because of high demand. They may take up reservations and never use them if the more desirable campsite within the park.
- 80. It's hard to imagine how a commercial operation could have enough business to be profitable and not also create crowding or damage to trails and scenery. Too many commercial organizations will prioritize their business over respect for the wilderness. There may be exceptions, but how can you screen for them?
- I really don't have a frame of reference to answer this question.
   Inherently, I've been taught that commercial use destroys peace, land, and tranquility. But this might not be the case here.
- 82. I consistently observe commercial operators who believe it is acceptable to violate park regulations because the requirement to please customers "leaves them no choice". This behavior should be confined to the already impacted front country.
- 83. Commercial use opens up the door to overuse and overcrowding, which is the exact opposite of why most people want to be in the backcountry in an already over crowded national park like Yellowstone.
- 84. The backcountry should stay natural
- 85. It would make it harder for non-commercial uses to compete for available space.
- 86. A company should not make profit in a national park.
- 87. Please explain commercial outfitters? or mining or Forrest tree harvest. Unclear what you are getting at. Commerical guides in NM are aggressive and feel they pay big money to do so so with out tight management they exhibit behavior not of Park Service polices and attitude of tax paying hard working people who want wilderness solitude and happy atmosphere.
- 88. I would prefer access and commercial would probably drive up the price and make access/availability difficult.
- 89. Keep the parks secluded, please.
- 90. Define commercial use in the backcountry? Are you talking about logging or similar activities? Unacceptable. Are you talking about guiding in the backcountry? Totally acceptable.

- 91. It will create more human traffic and make it harder for regular people to get permits. Overuse of the trails and campsites is not desirable either. Going into the backcountry should feel like you have the whole park to yourself and that maybe you are the first person to explore that spot.
- 92. it belongs to the public for public use not commercial profits,,,,,let them buy their own land
- 93. Commercial is for there profit only. Park could not recover expense of damage.
- 94. Other than the Roosevelt cookout there should not be commercial use because it destroys the integrity of our park. Keep it natural and as simple without crowds as possible. Go to Disneyland if you want commercial.
- 95. There is little escape nowdays from the bombardment of commercialization. Let Yellowstone not only be a space for animals to roam free but also an escape for human beings to free themselves form the attachments of this industrial world.
- 96. I'd prefer that personal profit not be a part of in-park experiences
- 97. It takes away from the natural feeling.
- 98. It detracts from the natural beauty and undisturbed areas.
- 99. Because they would limit and control back country sites from private users.
- 100. It should be left completely natural
- 101. In other areas i have seen commercial outfitters suck up all the permits and the general public then gets forced to pay the outfitters when they don't want or need to use their services.
- 102. Let the wild be wild and let people enjoy the environment naturally. That is the reason most of us go back there in the first place(to get away from it all)
- 103. I don't mind a small number of guides that can be hired to lead hikers, but beyond that I do not think commercial use is a good idea. The back country should be preserved for the use of the people.
- 104. Yellowstone is for everyone not only the rich.
- 105. Guides are assholes. Horses tear the crap out of the trails. Everyone knows the guides are getting (via \$) to get best spots. There are picnic spots on the lake reserved for guides. Finally, I have PERSONALLY witnessed guide teams over the limit on horses and people
- 106. It will squeeze out the little guy.
- 107. I don't understand your definition of "commercial use." Do you mean the guided horseback trips we saw at the Slough? Those were fine. If you mean something else, you need to clarify your question.

- 108. Really, commercial companies have access to many other areas in our country. It is nice to have the national parks where we can go and not have them around!
- 109. "Commercial use" is a very vague term. Without more details to understand what you mean, keep it out...
- 110. That is not acceptable as it adds to the crowded. Backcountry should be reserved for those willing to put in the effort to get there. Exceptions maybe got those with disabilities
- 111. not sure what you mean!
- 112. I especially take umbrage with horse use on trails. can't they clean-up after themselves--I do!
- 113. The only negative in the trip was the horse shit and the degradation of the trail where many horses from a commercial outfit use it. Commercial outfits should be required to clean up after their animals.
- 114. The National Parks should not exist for the benefit of private enterprise/businesses. The National Parks belong to the American public. This especially pertains to the backcountry, where people go to experience solitude and to "get away from" commercialization and the trappings of "civilization".
- 115. I'm not sure what that would be, but I do believe the backcountry should stay for private use. It is wonderful being able to get away from the crowds on the roads, and be able to see places in the park that still look the way they did centuries ago.
- 116. If you are in the backcountry, you go there to get away from the commercial enterprises.
- 117. National Parks need to be kept as wild as possible. There is more than enough other public land- NF, BLM, etc..- for commercial activity.
- 118. It increases the number of people at campsites, and in the area
- 119. This is a scarce resource in a NP, area would become overcrowded.
- 120. This is usually detrimental for the non commercial user.
- 121. Commercial groups will/have occupied more than their fair share of prime camps. As well as much larger groups and frequency of trips. Bechler is a clear example.
- 122. We have the multi-use National Forests where commercial use is allowed. Let's leave the National Park's resources unimpaired for future generations.
- 123. Would hate to spoil what is perfect as it is
- 124. should never supersede private use
- 125. Only in limited situations should commercial use be allowed.

- 126. There need to be some places that are not commercial.
- 127. These groups are often far too large and disruptive. Large groups of horses trash the trails and make a great deal of noise and have unfriendly attitudes.
- 128. Can make it too busy
- 129. USUALLY MEANS PUBLIC CAN'T GET PERMITS UNLESS THEY GO THROUGH OUTFITTER.
- 130. They can fill permits too fast
- 131. They can find somewhere else to turn a profit

Appendix N:

Unedited "Commercial use is acceptable" Responses to Question 26:

"What is your opinion about commercial use in the backcountry? Why do you believe commercial use is acceptable?"

## Appendix N: Unedited "Commercial use is acceptable" Responses to "What is your opinion about commercial use in the backcountry? Why do you believe commercial use is acceptable?"

- 1. It is sometimes the only way that some people will be able to get into the backcountry.
- 2. If it doesn't damage the trail and is kept to a minimum, and the fee is higher, then I think it's ok.
- 3. In some cases, people are unable to get a wilderness experience without the aid of a guide. However, commercial use should be limited, and remain passive guiding only, with no intrusion of commercial enterprises, such as cabins, into the backcountry.
- I worked as a guide for Trial guides Yellowstone and I had some amazing experiences bringing people into the back country for the first time.
   Sometimes a guided trip with an experienced outdoors person is what it takes to get people out.
- 5. It provides people who wouldn't normally go into the backcountry the opportunity to explore it.
- 6. I don't know exactly what this means
- 7. If they are educating citizens on the importance of keeping backcountry pristine, then they are benefiting the earth.
- 8. It is acceptable, but only on a small scale. I enjoy the backcountry a lot, and want other people to enjoy it too, which in some cases requires commercial guides. Part of what makes it the backcountry though is the solitude and closeness with nature, which would be diminished with a full commercialization.
- 9. I'm not really sure what this means
- 10. As long as they have been evaluated by the park to be competent and capable of upholding park regulations and values, permitted commercial outfitters provide a valuable service to people who arent prepared to plan their own backcountry trip
- 11. It is a way for people to see the park that is guided so they will not harm the wildlife
- 12. I don't know what it is.
- 13. They provide an additional source of income for the Backcountry work and allow many people, who otherwise wouldn't be able to, enter the backcountry and experience the same joys that I do.

- 14. If it helps bring in revenue that can be used to improve the trails/park/environment then I would be willing to stay at "Campsite 1e sponsored by Sony, Inc."
- 15. The national parks are meant to be preserved and respected. Bringing people into the park especially the backcountry brings upon a new desire to see the passed down to the next generation of people.
- 16. This may be the only way many people will be willing to "get in touch" with nature.
- 17. I don't totally understand this question but if properly used the more people outside the better?
- 18. to draw more attention, perhaps for more support.
- 19. I want people to experience the backcountry in a safe and sustainable way.
- 20. Public lands are for the public. If someone wants to pay to have a guide show them the way, that is okay with me and okay with me if someone makes their money doing so.
- 21. As long as commercial users follow the same regulations as all users I don't think it should matter.
- 22. I am not sure what commercial use entails.
- 23. Some commercial use is acceptable for essential services but their impact should be minimal in order to preserve the natural aspects of the area and experience.
- 24. I would prefer to limit to the public however commercial use as long as limited in size is okay.
- 25. In a very limited amount that is low impact, commercial use could help to fund some of the maintenance (through selling trees that have been cleared out, for example).
- 26. Commercial use should be limited to the same size parties as general public. Also public should have the choices of sites as commercial.
- 27. It gives people a place to start if they have never been in the backcountry before. Limiting the size of these parties and types of travel (horses, lamas, mules) is the issue. If I spend days of my time walking somewhere to set up camp and I have to walk through horse shit the whole way and then share a special place with a rude tourist that thinks they are entitled to everything because they paid way to much money to experience the great outdoors just like me I'm not going to be happy
- 28. No bother if abiding by same rules.
- 29. I don't understand this question

- 30. Trip leaders are usually well versed in the rules of LNT. They can introduce the back country to new people and educate them on the importance of wild spaces.
- 31. I understand the beurocratic and financial need to allow some commercial use of the park, but feel that preservation of this ecosystem and the cultural historical and prehistoric resources within is of the utmost importance and destructive commercial activity should be kept to an absolute minimum.
- 32. As long as a guide is not (!) required, and if guides respect and follow the same guidelines and regulations as any other park visitor, I imagine it *could* be a rewarding experience to travel with one. However, too many guides would mean a large number of people in the backcountry who weren't really park visitors. Organized guiding would also, I suspect, tend to overtax specific areas (wherever the guides preferred to go). The sense of exploration is part of the backcountry charm. So I say "acceptable" with reservations.
- 33. Only in very small amounts, because it supports the local economy.
- 34. As long as it does not effect non commercial use.
- 35. I don't really have any strong feelings on this topic.
- 36. If there are limited backcountry outfitter licenses allowed and said outfitters do not get any special treatment, or excluded from fees I am alright with them. I just do not want the park to become a commercialized exclusive place. This is a park that I grew up in and around, I want to always be able to access it the way I have always been able to.
- 37. in designated areas...in 42 miles thru old faithful to bachelor, we only saw commercial usage... no wonder the permits are so hard to get privately!
- 38. I am torn on this issue because I can see the pros and cons for both.
- 39. If you mean the ability to have commercial outfitters take people on hikes or use trails for horsepacking, then yes, I feel that this is acceptable and should be encouraged with a percentage going back to the Park. We hired a Yellowstone Association guide during our trip to the park and we received a decent wildlife spotting day. I felt that the commercial fee was far too high, but I hope that some of the fee went back into conservation efforts in the park or to pay park staff. I completely support the US National Park Service and all of the amazing staff supporting the ecosystems.
- 40. I believe its okay if historically based and properly managed.

- 41. It's acceptable because not everyone is comfortable going into the backcountry on their own. However it needs to be limited to that independent travelers still have a good chance of obtaining a permit.
- 42. One of the good things that you have in USA NP, and this in particular, is that you have a good balance between comercial and nature. NP is for everyone.
- 43. I don't understand the question, what does commercial use mean?
- 44. If used mindfully and unobstructingly
- 45. Very limited commercial use is acceptable. A balance needs to be maintained to keep private and commercial parties from interfering. I also like to see commercial parties and private parties not competing for the same campsites.
- 46. It allows certain people who might only feel comfortable with a guide to see parts of the park they might not otherwise see. I believe it should be capped in terms of use though.
- 47. respectful commercial use for video, etc. allows people to enjoy the park if they are unable to go. e.g. through documentaries.
- 48. To promote backcountry activity for people with less experience
- 49. I am ok with limited size commercial groups in the backcountry, but commercial guides should not be given preferential treatment for backcountry permits, etc. Guides and outfitters can help people explore the backcountry safely and can actually help protect the resource from mistakes made by inexperienced backcountry users.
- 50. Regulated to prevent over-crowding
- 51. Not a problem if held to a high standard, and gives learning experience for those inexperienced
- 52. In the case of the Yellowstone Assoc Institute and other education groups I think it is fine. If outfitters (fishing or otherwise) start to use the backcountry I think that begins to clog up the backcountry and lead to overuse.
- 53. As long as it doesn't detract from backpacker experience.
- 54. Commercial use is acceptable because I'd like more people to experience the backcountry and some people need professional help to make that happen. However, I would like to see commercial party size limited. (we saw a ridiculous lama party)
- 55. In a limited format. I really believe the commercial use we see in the backcountry/on public lands anymore is for the wealthy, not regular folks that might not have the experience/gear to get to a place like Shoshone Lake.

- 56. Experienced guides can be a big benefit to inexperienced travelers. However, I would not want them to crowd out private individuals from getting permits.
- 57. Commercial guided tours and trips enable wider range of people to having various competency to more fully enjoy the park.
- 58. If you mean things like commercial hiking companies and guided backcountry trips I think this is a good thing as it encourages backcountry use among hikers who might not otherwise have the confidence to head into the backcountry alone. I would limit maximum group size and I would limit the amount of reservations that commercial companies could make so they don't push out independent backpackers. If you mean commercial use like companies paying to use thermophiles or drilling for oil then I would say no.
- 59. I'm on the fence about this. When we backpacked in Tuolomne Meadows (Yosemite), there was a lot more hiking traffic from High Sierra camp to camp good for the folks who want to slack-pack, not so good for folks who want more solitude.
- 60. It allows those who are uncomfortable going out on their own a way to enjoy the backcountry and provides paid work for guides to do so.
- 61. If limited so need not use an outfitter to use the backcountry.
- 62. I hate horse traffic on the trails. They cause trail erosion, poop all over the trails which I have to walk through, and generally come in larger groups.
- 63. This allows folks without the skills and equipment to enjoy the backcountry. Some folks are nervous about bears, the remoteness, ect.
- 64. As long as it is regulated, I believe it is acceptable as it provides an opportunity for some individuals to visit the Park who might not otherwise be able to.
- 65. on a limited basis and this is disclosed to permittees
- 66. Only with a minimal crew
- 67. I think it's acceptable as long as it's limited in number of permits and size of parties, and that it doesn't crowd out non-commercial use. Providing use to commercial outfitters will help garner support for the park from local businesses.
- 68. Only Stock parties.
- 69. ONLY if they pay a lot more for the right to help pay for their increased wear and tear on the trails and campsites
- 70. Assuming you mean tours, I think that is fine if allows more people to enjoy their parks, especially the spectacular back country.

- 71. Some people don't have the skills to do these trips in there own. They should have the opportunity to hire an outfitter.
- 72. Depends on the type of commercial use; if it's guided trips I think that's fine.
- 73. As long as outfitters are respectful of the back country, I don't have a problem with it. Pack it in, pack it out. This way people who can not walk can enjoy the wilderness too.
- 74. If referring to guided groups, etc, as long as they are limited and approved by the park.
- 75. The realities of funding will necessitate the commercial use, but it should be limited and not encroach on the individual backpackers use of the backcountry.
- 76. For handicapped people who need assistance The rest should have to walk
- 77. It's the only way some people could get into the backcountry
- 78. If they are held to same standards as the public.
- 79. it is acceptable if the number of outfitters is limited to allow individual groups access
- 80. Allows people who may not be able to experience the back country to access it, but should be limits on number of commercial trips.
- 81. I am ok with modest commercial use, But needs to be limited and very well managed, otherwise the backcountry will become more like the front country.
- 82. Reduces costs to backcountry users, and supports local businesses dependent on well-managed parkland.
- 83. it provides aservice to visitors that don"t have their own equipment
- 84. I believe U may be referring to groups led by guides. I really do not care. I do care about the horse poop.
- 85. If by commercial use you are talking about horse parties and the like led by outfitters, I believe they have as much right to access the park as individuals. Having said that, they do tear up the trails more than backpackers and should have to pay significant fees to provide maintenance dollars.
- 86. Limiting group size, no priority lists for campsites, minimize horse traffic.
- 87. Depends on the type and amount, but generally I have no objection to such things as guided hikes or backcountry trips. Not that we would use them.

- 88. It may be the only way for some to see the back country. It must be controlled and seems to be worse with the best campsites going fast to commercial operators
- 89. I am not opposed to a commercial led group as long as they do not monopolize permits and campsites. They should be very limited in number.
- 90. If this means guided trips, they should follow the same standards as everyone else, and not monopolize the camps or trails.
- 91. Commercial group size should be limited

## Appendix O:

Unedited Responses to Question 49:

"Please write any comments, complaint, or suggestions pertaining to Yellowstone's backcountry that may help us improve the backcountry experience." Appendix O: Unedited Responses to "Please write any comments, complaint, or suggestions pertaining to Yellowstone's backcountry that may help us improve the backcountry experience."

- 1. Nah.
- 2. Go Yellowstone!!!
- 3. Mark the trails just a little more often. Do not further commercialize the wilderness, it destroys the experience.
- 4. trail maps
- 5. I had a great time and the ranger I spoke with at the office was very knowledgable!
- 6. We had to hike through a herd of bison for our trip. This forced us to travel off trail. It was difficult to find the trail again because we weren't sure what was the trail and what was a bison or other game trail. Improving signage for the proper trail would have been very helpful.
- 7. It all was really great. It was a little difficult to get our permit. A place to get permits in Bozeman or big sky would be great
- 8. I'd love to acquire a job working for NPS!
- 9. Please keep trail markings updated! This was the only part that detracted from our experience. Otherwise, the trip was fantastic.
- 10. Please fix the trail down to the first backcountry site from inspiration point. Very dangerous and not maintained as well as should be considering the number of people who hike it.
- 11. Keep it the way it was this summer.
- 12. I highly suggest giving out topographical maps to the backcountry hikers. We could not find a decent map of the area we would be traveling. Everything in the stores/online were too broad therefore we couldn't prepare adequately for our hike. Also, the lack of signage on the trail made us worried. The NPS harps on safety in the backcountry, but the lack of maps and signage does not correspond to this. We had a great time in backcountry despite a few setbacks. We will do backcountry again but not for many many years.
- 13. I would appreciate less horse traffic on the trail. Though we dit not pass any horses on our trip. walking through horse "leavings" got old after day 2. I really enjoyed the campsites, and their distance from one another was very well done so as to minimize contact, but we still got to chat a bit to exchange trail information. I really enjoyed the trip and am looking forward to the next time I get to backpack in Yellowstone.
- 14. Website could have been easier to use to find trails and plan the trip

- 15. I loved it. I really hope that the parks system doesn't try to over commercialize. I love that it is still possible in some places to be exposed to the elements. It really puts things into perspective. Perspective that more and more people miss out on as our culture becomes more urban. I am so glad that you are doing this study. I hope that the data you collect will help to protect what is left of our wilderness areas. The ranger I spoke with when getting the permit was very helpful, informed, and cheerful.
- 16. Keep up the good work! Thanks for making our national parks safe and accessible!
- 17. Cell Phone towers! I know some would hate this idea and I can definitely see the other sides to the argument. But for me personally, I think that if I could text other people from my campsite I would not have felt so alone out there
- 18. An icecream truck would be nice. Providing fire extinguishers at main back country campsites or requiring a group to have one while in the back country may prevent fires from spreading.
- 19. The person in the backcountry office should have the ability to process the payment fees, via register or square. The parking for the attractions got out of hand and the traffic backed up while we were visiting. A shuttle system should be put in place so visitors don't have to drive and park at every attraction.
- 20. The Old Faithful backcountry staff was incredibly knowledgeable, helpful, and kind. Not to mention, they sure are good lookin!
- 21. More backcountry staff
- 22. I loved my experience in the backcountry of Yellowstone. I would like to see more education programs from NPS in schools and colleges. Growing up I did not know anything about our national parks besides that they are preserved lands by our government. The rangers and staff of NPS have taught me so much from visiting parks around the country. That knowledge is crucial for the public to start understanding the beauty that is hidden in these parks and could possibly lead to healthier lives and well being.
- 23. Thanks for a fabulous backcountry experience in Yellowstone! The Geyser Basin is INCREDIBLE!
- 24. Our ranger at the Tower station was very helpful and even loaned ha bear spray. Thank you everyone we had a great time and salute you etc etc
- 25. Move bear pole at the fairy falls site
- 26. I applaud the permit system and being able to reserve permits in advance. I also like that not all sites are given away by reservations, as people

should have the opportunity to walk up and go do back-county trips. But it rewards those willing to do the research on trails/sites etc. The permits are necessary to avoid overuse and degradation of the trails and the backcounty. My party did not see a single person once leaving the Thoroughfare trail to cross the divide over to Heart Lake via the Trail Creek trail until we reached Heart Lake.

- 27. Yellow Stone was a wonderful experience. The Rangers who helped plan our trip were skilled and helpful. Their information was accurate and their knowledge of the back country was much appreciated as it was our first trip to the park and to the state itself.
- 28. Keep campsites far enough apart so you don't see or hear other campers. Keep stock sites extra far away from normal sites - or ban using bells on livestock when turning them loose at night
- 29. Get your trails on google maps
- 30. Maybe have Rangers go over the potential for having to cross waterways and whether or not there will be options for filtering water on specifics trip they might be taking. Lots of people do not pack enough water. Let Rangers know they are there to serve and protect and not intimidate visitors or make tourists feel like they can't approach them.
- 31. Keep up the good work!
- 32. Yellowstone was a magnificent place that I wish I would have spent much more time exploring.
- 33. The one major complaint I have is the Ranger who helped us plan our trip very much overestimated our ability to hitch a ride back from the south end of the Bechler canyon trailhead at the end of our trip.
- 34. It was wonderful, please keep in rustic, and with a "roughing it" attitude it makes it less likely that people will attempt it unless they know what they're doing.
- 35. Hire experienced backpackers and require trips into Yellowstone's backcountry as part of training before beginning the backcountry office position as well as during the position, about twice a month, to continue broadening knowledge of the region.
- 36. Trail signs that indicate miles to specific camp sites. Online access what sites are available for first come first serve. If livestock only sites are not reserved a week prior to date they should be allowed to be reserved by hikers too.
- 37. Proofread your survey, it has typos. The Yellowstone backcountry is amazing, I will definitely be back.

- 38. Had a great time. Thanks for all who make the park great! Again park employees from all agencies should be able to get a discount into the park.
- 39. Please make changes to the advanced reservation system. Without confirming a groups arrival or penalizing "no shows", many backcountry campsites appear full to walk-in backpackers when in reality they are not. All 4 of the sites I attempted to reserve before getting a less desirable location were supposedly full but did not have campers.
- 40. Great trip!!!
- 41. Great experience and definatly the best part of the park being able to hike in the backcountry.
- 42. I think that the substation near Indian Creek should be shielded from view with trees.
- 43. I was very pleased with the experience, other than feeling underprepared for the lack of water available in the SW region of the park (along phantom geyser).
- 44. We loved our trip and the process to obtain the permit once our trip was approved was painless.
- 45. We had a really lovely experience. We did share our campsite with another group - it was unclear if this was intentional or not (I don't know how the system works, or if you are meant to share campsites or not). The trails were well maintained and the campsite was clearly laid out. The food pole was appreciated! The only thing that may have been useful would have been the availability of detailed ordinance survey maps of the backcountry areas available in the shops.
- 46. -Better trail markers for the designated campsites...including on trail signs and at the "designated" sites -No bear bagging poles AT THE CAMPSITE as it seems contradictory to backcountry safe camping protocol! I've seen many sites where the food pole is literally above the flattest areas at the designated site! Not cool. -Encourage more human only foot travel through the backcountry; there are plenty of other nearby mountain ecosystems in which humans and their pack animals can visit.
- 47. How many bear incidents were there between humans and bears? I don't really get the typical American fear of bears, especially in the np. Protection is good but i think there is too much fear mongering. I hiled roughly 7000 miles in the us and had bear encounters but never ever any problems.
- 48. It was a fantastic experience and trip.

- 49. Keep it wild. If I want to walk off the trail and explore the "unexplored" technically federal land is my land and yours if you are an American citizen. If I am not harming the environment in a malicious manor I don't see the problem in me using my land the way I want. I understand some people have no clue what they are doing and they could harm themselves and other as well as our precious wilderness but if you can prove you aren't going to be a total jackass and ruin it for everyone why can't I just go for a walk in a truly wild place?
- 50. As a CDT thru Hiker it was easy to obtain a permit the day before and it was nice for them to group CDT hikers in campsites to provide more options for campsites. Pit toilets would be nice
- 51. I'm in research. Your survey is too long. However, you have a good flow. I hope you research puts an end to any notion of commercializing the back country as being acceptable. There are already too many shops and over crowding in the developed areas of the park. Good luck on your endeavors and encourage the park to promote your findings within the park.
- 52. Backcountry camping in Yellowstone is an awesome experience that more people should try.
- 53. It was perfect
- 54. Some trail intersections or river crossings lacked signage, or lacked information on the trail we were trying to follow. One sign had faulty information.
- 55. It was difficult finding the trailhead to Mallard Lake. Otherwise the backcountry experience was great. Not pertaining to backcountry: the parking lot situation in the rest of the park was a little ridiculous. We eventually found spots at all places we wanted but the way the lots were laid out necessitated a single file line with people waiting for up to a half hour to get a space while there were empty spots further along in the lot. Redesign would help.
- 56. I appreciate the opportunity to travel into the backcountry. Thank you for all of the information and for keeping our parks and visitors safe!
- 57. No complaints.
- 58. A large board instantly showing what campsites are available that evening. It took the staff a while to use the current system to check options for us. Using a Spatial system to display this information would be ideal.
- 59. My experience was great. One thing could have improved my experience. Iur trip went into the Shoshone geyser basin, maps indicating the

allowable place to swim were very difficult to understand. The maps were satellite images with the swimming hole circled. A true map of the area with the trail identified and swimming hole marked would likely have been more helpful.

- 60. Your questions about bears depends on the species. You may want to be more specific. As for backcountry, the experience was amazing! Keep the trails from overcrowding and the sites from overuse and I think the untouristy part of Yellowstone will survive for generations to come.
- 61. We had an absolutely incredible visit. We only saw people at the very start of our hike but after the first hour we were completely alone. There were no other campers at our campsite which was such an unexpected bonus. It felt like we owned Yellowstone for about 24 hours. It was just myself and my husband enjoying every second of this majestic park. I cannot say enough good things about our backcountry hike. It was a spur of the moment decision to come down from Saskatchewan (about 1000km away) and I can't wait to do it again on a long weekend. Such an amazing experience. Thank you.
- 62. great trip, and a great group of rangers where in my area, very happy overall, and have been in the past in the Bechler area
- 63. Overall myself and my group had a very positive experience, similar to experiences we've had in the past. Personally I think backcountry opportunities in our National Parks are an unbelievable resource for outdoor enthusiasts.
- 64. I really enjoyed my experiences with the backcountry staff. Bob and the woman I've interacted with are such informed and enjoyable people! I love yellowstone. I only wonder "where did all the wildlife go?". We didn't see anything in August! I am dreading the day Yellowstone turns into Zion National Park. Please do not support a bus system in Yellowstone. AND NO RIVER RUNNING PERMITS....EVER!!! Thanks :)
- 65. shuttles, cheaper fishing permits, better choice of campsites
- 66. Speed up permit process if you already have reserved a permit. Lower reservation fee/make changing it more flexible. Would be great to be able to process it over e-mail instead of faxing. Allow viewing safety video ahead of time. Change reservation system so permit offices don't have to call a main office to check if there are openings. Would love to see outhouses in the back country (especially discretely placed in the woods) as well as bear boxes (also discretely located). Would have enjoyed more of a spider web of trails. In Lamar valley it's basically one long trail so the options for exploring after arriving to campsite was limited.

- 67. Rangers were great and very helpful! We had a great time.
- 68. Yellowstone National Park was an amazing trip! We were fortunate to be part of the experience. We did find it difficult to be flexible with the weather/conditions (including fire, road closures, etc.) and yet find backcountry sites available in the part of the park we were aiming for. Our backcountry experience would have been even better if some of the larger campsites had staved open throughout September. As it was, we got out of the back country at 12pm and all campsites were completely full throughout the park. We were left with no other option than to go all the way out to the Grand Tetons National Park (which was incredible, and I'm thankful we went). However, it would be helpful to have more information about surrounding campsites openings or where to go in other areas -National Forest, National Park, private, or to have a number to call to ask a ranger where to continue primitive camping, rather than going all the way out to a ranger station. Another improvement would be to encourage better communication throughout the park with staff and visitors. For example, we noticed that rangers, campsite hosts, visitors, concessionaires, and entrance staff all had different information (or lack of information). This made the visit confusing and frustrating at times. It would be wonderful for all staff to have a central communication system where they can pick up relevant comments about things going on across the park to provide a better service. This could include information about road/entrance closures, wildlife sitings, campsite availability, surrounding park information, incidents, traffic, etc. If you want any help setting up such a database, I'd love to help the park work on this.
- 69. Great park! Did Lone Star to Shoshone to Delacey as a 2 nighter: Liked the pit toilets there. Shoshone lake is gorgeous! Did one night at Pebble creek and Cascade lake respectively: Pretty sites. Would have liked more blazes on the trails, and possibly mile markers counting out from junctions.
- 70. everything was great.
- 71. The Park is doing a good job I think. The biggest issues are closer to the roads and major attractions where so many people are, and the traffic on the roads.
- 72. Great experience! Nice job balancing the accessibility with the wilderness experience.
- 73. We had a great time!! Being able to reserve campsites in advance would be appreciated!
- 74. We had a wonderful time. We were sad we didn't see a bear, but are also glad, if that makes sense. Everyone we came across was respectful and

polite. While not our first time to Yellowstone, this was the first time doing the back country and we learned a lot about how much food and what kind works best. Our ranger at Tower Junction was spectacular! So helpful and informative, I think we talked to him for 30 minutes. What a great resource.

- 75. Great experience. Backcountry office and rangers were incredibly helpful. Our original permit was cancelled by park due to bear activity. The rangers were very helpful in recommendations and getting us a comparable permit. They also answered tons of questions related to our planned trip. Awesome experience.
- 76. Thank you!! Best backpacking trip ever!
- 77. Thank you for being so kind as before arrived the NP as after. Thank you to Jim and all de Rangers of west Entrance. You're lucky to belong Yellowstone, please make your best to preserve it and continue doing well.
- 78. Consider charging \$3 a person for 1-3 days instead of every day.
- 79. I recommend posting bear sighting information so that it is readily available and updated in the backcountry offices.
- 80. This trip was definitely a bucket list trip for us. We had an excellent time, both in Yellowstone and in Grand Teton.
- 81. As already mentioned, it would be great to create more loop trails with sites about 4 miles apart. Most of the people at the backcountry office were very helpful. One of them was a real stickler for rules and was not very helpful or accommodating. It's great when the rangers have recommendations for trails and sites that are nice.
- 82. recommend more campsites that are shorter distance hikes (like Ice Lake).
- 83. Good program. Thank you for hard work by rangers.
- 84. Please consider creating a process where users can take an online test and print out a certificate in order to avoid having to watch the backcountry video. The video takes up a lot of time, and time is really valuable if you have a long hike or need to run a shuttle etc. Helping customers get in and out of the backcountry officer quicker really would be appreciated. Please consider limiting the size of backcountry parties, particularly day use horse groups - they monopolize parking at certain trail heads and make the on trail experience less desires less for other users.
- 85. I'd like to see rangers be a bit more open with questions during a mid trail conversation. We were asked if we had "seen sign/s." Not understanding she meant a physical paper sign at trailhead, I assumed she meant signs

of animal activity along the trail. I didn't even consider her meaning of a sign at the trailhead. I'd also add that a small paper sign at a trail head, marking it closed is not sufficient, when trails marked closed for fire restrictions were marked with large tripod barriers and red caution/closed tape across the trail. We did hike a short trail that had been closed for wildlife management. We even read the big board at the trailhead. But it was a small, 8.5"X11" sign that was on a small post and small backing board that said the trail was closed. In no way was the trail blocked or a barrier crossed by us to hike the trail. GRANTED; we were WRONG by not paying closer attention to posted signage. But it honestly looked like so many signs I've seen before indicating "bear country, be aware" "wildlife is dangerous, don't approach" or like so many others i can't recall currently. It just dealt like we were being grilled and not provided the info until after we answered, "had we seen sign/s". I feel bad that as a self proclaimed avid, experienced and knowledgeable hiker, I missed such an obvious sign. (They were on the trail pulling the signs as we were hiking it. This was because the wildlife management had ended and the signs could be removed but we saw the sign when we looped back to the trailhead. Thanks for listening to my rantings!

- 86. I had an amazing experience and hope I am able to return.
- 87. We only did a very short in-and-out trip because it was the first overnight hike for my kids. But it was a lot of fun and everything seemed well-organized. We liked the shed elk antlers left in the campground. Would've been nice if you could have arranged a moose to show up for us, but you can't have everything.
- 88. I liked all of it. It was great. Can't wait to do it again.
- 89. I thought the entire experience was very easy and appreciated the information I was able to obtain on the website prior to applying for a permit. I was dismayed that I didn't find out about the additional 1-mile hike required due to construction near Inspiration Point until we arrived at the backcountry office. An email would have given us an opportunity to change plans if we'd needed. The distance ended up being fine, but the trip was specifically planned as an "intro to backcountry camping" for our children, so their backpacking abilities had been factored into the (original) distance to our campsite.
- 90. I have a unpredictable vacation travel schedule, so it's hard to plan trips last minute. That's partly why we chose this part of the park. Maybe a product of a lot of interest. It was a great experience overall. Maybe bear boxes at the campsites would be nice.

- 91. More information on encounters with bison. In our case, bison came to our campsite at dawn and were sniffing and snorting all around the tent. The tent was in the designated site and all food was hung from the pole. We were very quiet and eventually the bison went away. It would have been good to have more information on what to do in this situation including whether it was appropriate to set up the tent in the reserved site knowing that a herd of bison was in the general area.
- 92. Overall, great experience. The fire info on the yellowstone nps website and posted at trailheads/pullouts was very helpful. We camped in sites near the Maple and Buffalo fires and it was good to have a way to check on the current conditions.
- 93. Reported to USPS Ranger upon return from backcountry the following two points. ! sighting of Grizzly. 2. This I may file an EEO on: hiking into and two days later on trail to BC site 4H8 a pair of Mohamed sandals next to the trail facing East shot azimuth was East. After having served 1 year in Iraq and 6 months in Afghanistan this a sign by Muslims to pray to Allah thus I request a Christian cross for Christians to be fair and equal.
- 94. I grew up in Montana and can't believe it took me this long to backcountry camp in Yellowstone! I will be back. Rangers were great :)
- 95. Allow more visitors to experience the magic of the backcountry! I appreciate the solitude in Yellowstone's backcountry, but the 1 party per site policy artificially limits the number of permits. It is silly to tell people that no permits are available when only 2 people are staying at a sites that are designated 12 or 20 camper capacity. None of the other national parks do this. (Glacier, Bryce, Olympic, North Cascades, etc)
- 96. Everything is great, keep it old school.
- 97. I sent my reservation in April. The application said to be patient. After not hearing anything, I had to call. Luckily for me the reservation was still there. It just seems like there should be a better way to communicate that the reservation request was received, pending or accepted.
- 98. more camp sites for small groups
- 99. Loved back country camping. It is always interesting seeing wildlife even if its not big mammals. Saw some cool grey owls and sandbill cranes. Only unenjoyable part was encountering toilet paper on trail that had obviously just been left by hiker we passed on trail on way out. But that's unavoidable. Wish we were able to reserve a campsite well in advance not via lottery.
- 100. Thank you for all your services.

- 101. I would like to have more detailed access to where there have been backcountry bear sightings. As a guidebook writer (Bradley Mayhew, Lonely Planet Yellowstone & Grand Teton National Parks and currently updating Top Trails Yellowstone & Grand Teton National Parks) providing hiking information for visitors to the park I would like to have closer cooperation with park rangers and park media staff to ensure the information I am providing is both accurate and in accordance with park policy - this would benefit both parties. See earlier comment also about online reservations. Thanks
- 102. We camped in a backcountry site that officially accommodated one tent, with a second bootleg tent location and we had two tents. The guilt!
- 103. My comment isn't about the backcountry its about the frontcountry. Yellowstone is receiving record visitation. They should consider extending the time campgrounds and visitor services are offered into the fall. I heard many complaints on my September trip from others that there were too few areas to camp in because of seasonal closures. Surely these areas could stay open well into October. However, I realize funding is an issue.
- 104. My main complaint was that the construction crews had some trailhead parking closed and I don't think they should be allowed to do that . Grizzly Lake and Mount Holmes.
- 105. Photos of backcountry sites, or the area near each site, would help in choosing locations to use.
- 106. The Ranger was amazing! He was so helpful and took the time to answer questions. He also helped us pick out a campsite that was perfect!
- 107. More frequent trail markers on long trail, like every mile or every other mile. Just so you know you are on the trail and haven't wonder off it.
- 108. While I understand, the witing 48 hrs. To make a reservation to be fair to people there in the park. What is to stop people from booking sites thay are nit using to insure a spot earlier on. We had to make a plan to get to the back country office right when it opened in order to get a site.
- 109. I am very impressed with the job the trail crews do to keep up the trails and campsites in good condition. The backcountry offices need to be staffed with people that know more about the trails in their area, and the volunteers in the backcountry offices need to be provided with access to the computer system to provide quick turn around on permits. I would also like to see less horse traffic in the backcountry, and catch bags on the horses so hikers don't have to walk through their copious droppings.
- 110. Could use more campsites, especially closer to the road for families and those with special needs. Especially in popular areas (8G1 area). No

more campsites on top of each other (Wapiti Lake, Pitchstone, Ribbon. More family sites 1-3 miles in. As the park's visitation increases, the park needs to bring back some backcountry trails or add some. There needs to be a campsite on the west side of Fawn and the East side of Bighorn to make these trails more doable for those on foot, not everyone can do over 10 miles per day. LE's could use to be more friendly some folks complain about encounters (I don't mind them) Get a new computer system that works for the staff issuing permits. Try to have a permanent, educated staff at the backcountry offices, and try not to rely so heavily on volunteers. Loosing Jim at Mammoth and Beth at Old Faithful was a huge loss for visitors looking for good solid information. You really do need 2 or 3 campsites just for CDT through hikers. We talked to many of them this year, and only one couple (out of over 20) was able to obtain a permit. Some thought there was a campground at Old Faithful, and most of them said they were forced to break the law and camp out of bounds, or put in 25+ mile days. They could use 2 or 3 community sites, which they can call to make a reservation over the phone in Dubois or Island Park. They could also use a bear spray trade system in those towns as well. Not one of them was carrying bear spray. Replace the bridge over the Gardner River in Gardner's Hole. Build an official trail to Dunanda Falls below the campsite. Add a trail between the trailhead of ice & wolf lakes along the road Over all, our backcountry experiences have been awesome, and all of these comments are fairly minor gripes. The backcountry office and those in the field do an excellent job on a short staff. keep up the great work! I can not stress enough how easy it is to work with the backcountry staff.

- 111. The questionnaire did not ask my prior experience in hiking the backcountry, my answers would be more beneficial to you as an experienced backcountry traveler (primarily solo) than to answer questions targeted at the majority of your participants who get out once or twice in a lifetime....no disrespect meant. I have traveled hundreds of miles now in Yellowstone's backcountry this year alone, I'm from remote Idaho with countless miles there, I've hiked portions of Alaska, Washington, Colorado etc. and this is the most incredible summer of my life. If I can be of any help, please feel free contact me. My experience in Yellowstone this year means I will be back. Sincerely, Lance Leeper
- 112. Have more tent sites available in close proximity to trailhead. We had to hike 3 miles in just to pitch the tent.

- 113. we had 9 people in our group, requiring us to have 2 campsites, limit is 8. The ranger who paddled up to our 1st campsite as we were preparing to send half of our group to the other campsite allowed us to all stay at one campsite. This kind of common sense should be had not just by the ranger in the backcountry but also at the permit office. I have been canoeing into Shoshone Lake for 20 years, I am not sure how needed a ranger is to be stationed at the lake nearly full time. Those resources could be better spent maintaining the backcountry trails/campsites.
- 114. One thing is there is no check out once you are out from the backcountry trip. That would help by: 1. Letting rangers know that people are free from the sites(sometimes early)leaving openings for others that were previously reserved 2. Letting rangers know that people are out of the backcountry safely
- 115. I value the experience of back country office staff. Sometimes there are staff that haven't been in the back country much (volunteers?) and can't give first hand knowledge/advice. To the extent that there can be staff that have traveled around most of the park that would be an improvement. That said, I've been very pleased with my experience with the back country offices so far.
- 116. My family of 4 really enjoyed the trip. It was a bit expensive to camp in the back country with the reservation fee and the backcountry fee! I would like one or the other but not both. I was pleased to get all of our desired camp sites in early April for our trip in August. The only bad experience we had was hikers outside of our tent after midnight. The were retracing there path looking for a dropped GPS device.
- 117. We had a wonderful backpacking trip, but I do want to clarify, again, that we only spent 1 of our 6 nights in the park. We started our hike at the Box Canyon TH, south of Big Timber, MT, and hiked south 40 miles over the Slough Creek Divide and down to the Slough Creek TH in the park. During the first 30 miles we saw almost no one, and it was only during the last 6 miles of the hike, as we got closer to the Slough Creek TH that we saw several groups of people. Our last night was spent at campsite 2S3. While the food box at that camp was very much appreciated, I was surprised to find that there was no pit toilet at that site. I think the pit toilets at YNP backcountry campsites are crucial to keeping the backcountry clean from its many visitors, and I am perplexed as to why there was no toilet at 2S3. I would also like to make a suggestion that YNP develop policies that make it easier for locals to pick up their permits. I live in Bozeman, and our hike started 50 miles south of Big Timber, MT, but I, along with another

member of our party, had to drive 90 minutes to Mammoth on the morning of the start of our trip to pick up the permit. Then we had to drive 3 hours back out of the park to the Box Canyon TH. We even had to get special dispensation (the ranger in the office at Mammoth had to call his supervisor to even get access to my permit) because the route of our hike put us outside the two-day advance limit to picking up a permit. Living in Bozeman, we also have access to backcountry trailheads (along Hwy 191) that are nowhere near a backcountry office. There must be an easier way to pick up permits without having to drive to Mammoth or West Yellowstone. Many thanks for your efforts in providing this wonderful place for us.

118. I have hiked the back country perhaps a twenty times. The following observations are based upon the changes I have seen in the past 10 or so years: 1. The pit toilets should be expanded. Hellroaring creek in particular and the spots in Belcher River without pits should have them added. 2. There are too many guides with too many horses in Yellowstone. I know this will never be reduced but it is a real shame. They guides treat the park like they own it. Especially offensive to me are the sale boat things on Heart Lake and the (illegal) back country horses on the south boundary trail. I know your are going to say, these are largely illegally in the park from the south boundary dude ranches but these guys pay no attention to the back country bans. 3. I do not mind fees and am happy to pay high entry/use fees. But the money most be HONESTLY allocated to pay for maintenance. Every new source of revenue seems to be used to build another building. 4. The Yellowstone research units and various groups are too numerous with relatively worthless research agendas. Two examples of my point. This past summer I ran into a team of 5 workers and interns to track wolves. 5? Seriously? This is my tax/user fee? For the record they would going to find wolf poop to document what the wolves were eating. Ok, a real research objective, but where the heck is this on the priority list that it needs 5 people? Second example. Ran into a team at station on Southeast corner of Yellowstone lake. I showed the Animal and range team from MSU a plant I had pulled from south edge of Thoroughfare trail which was Leafy Spurge. Guys could not ID it. Seioulsy, you let these idiots in to do research? 5, Long term the contin. divide Trail hikers are going to become more numerous. Great group, but if you hike Appalachian Trail, it is drug and party zone. Please do not let that happen to Yellowstone

- 119. You might want to review rattlesnake safety. We encountered two on the trail, coiled, ready to strike. We should have brought a snake bite kit. Just a sign at the trailhead would be good.
- 120. It's pretty great. Keep it going.
- 121. Please offer a mixed race and declined to state button for your question "What is your race?" For me, the backcountry experience would be enhanced if all backcountry sites had pit toilets (Bechler) and bear boxes (Slough).
- 122. Thank you for such well-maintained and well-marked trails. I've hiked in other wilderness areas where the trails are not as well cleared or marked, and just having the path clear and obvious helps put our mind at ease that we are in the right place. I love that we can reserve backcountry camp sites, which helps with planning a positive experience.
- 123. Give out maps of the trails and campsites with each permit.
- 124. It seems that people need to continually be reminded not to burn packaging, etc. in fire rings. We've periodically find remnants like bits of foil, sometimes worse. Otherwise, we like how the backcountry is now where we can have our own campsite (unlike glacier Park).
- 125. I raked the food preparation area of fallen sticks. There was much powder dust there from many years of use and no one ever sweeping. I don't know why there was garbage left in the bear box where I was by I packed it out. That was another great use for "gorilla" tape. The plastic bag that the garbage was in was starting to disintegrate, The gorilla, or duct, tape, taped and compressed the garbage into a neat, packable wad. My trip to the Yellowstone backcountry was fantastic. Can a coyote be fed ? Certainly a coyote can be fed. Not legally, of course.
- 126. Seeing as to how there was no one but us at all the back country sites, I have no complaints. We saw a few day hikers on our trek in and out, and had to move off the trail for horses twice, but that is no problem. Would not have enjoyed it so much if it was packed like in the summer. Prefer to be alone in th wilderness.
- 127. Having more bear spray rental locations Advise day hikers to avoid walking through occupied campsites.
- 128. One designated camp site was not marked on trail and we had to backtrack to find it. One trail not marked and very hard to follow (connecting Thorofare to South Boundary Trail). Otherwise, had no problems.
- 129. Many backpackers like to travel the backcountry in loops so they can start and finish at a single trailhead. Additional trails should be considered to

establish some interesting loops to hike. Because Yellowstone is so big, and does not have many loops, the selection of trips to the backcountry is limited without having to backtrack on areas already seen.

- 130. great to be back!!
- 131. Keep Yellowstone wild!
- 132. What a wonderful opportunity. Thanks.
- 133. I want to thank all the people who have made my many Yellowstone backcountry experiences possible over the years. Your dedication is truly appreciated. The national parks, especially the backcountry, are a unique treasure. I would like there to be some mechanism to designate a National Park donation on federal income tax returns. The park rangers and other employees need to have the funding necessary to maintain both the backcountry experience and the non-backcountry experiences in our National Parks.
- 134. We know there are several places in the park that have no trails through them. We also know there are animal management reasons for this, but it also seems that some of the areas could handle a trail or 2. Maybe for day hikes to start with.
- 135. Doesn't seem like backcountry. Trails are well marked, in super condition. I am used to backpacking where you have to be able to use a compass and a map, where bush whacking is required occasionally to reach the destination. When you reach your desired destination, camp is set up with regards to wildlife, water availability and good backcountry safety habits. Yellowstone it seems as if backcountry is set up to make sure visitors, even if they are stupid can't hurt themselves. Yellowstone is pretty big, going off trail might not be that bad.
- 136. make it possible to pick up permit online instead of have to go to backcountry office the day before or day of To help set up some kind of shuttle service for hikes
- 137. Do away with Bear Management Areas. They are no longer needed.
- 138. Some kind of bear spray exchange whereby canisters could be purchased and returned if not used for a minimal fee. Bear spray is major expense. I spent \$180+ on four canisters for our 7 day trip to YP and had to abandon them at our lodging because they can't be taken on plane. Probably won't do it again.
- 139. We had a fabulous trip and there isn't too much to complain about. My major suggestion is to keep things the way they are. I am especially concerned that special interest groups like packrafters and mountain bikers will continue to press for more back country or river access. This

would not be a good thing. The carrying capacity of the front country is already being exceeded. Why add visitor stress to the last remaining refuges for wildlife left in the park. Again, keep the back country as undeveloped as possible. It is certainly not "underused" by wildlife.

- 140. Too few dock sites on Yellowstone lake. I have never been turned away, but have come close many times. Would be very upsetting. The backcountry rangers @ Grant are Great!! The bouys that mark the nets on the lake need to be easier to see & understand. Why are we being checked for entry pass when leaving the south entrance? The rules for fishing on the lake for Macks should be changed to allow leadheaded jigs & scents to increase harvest. It seems there are too many rules. The !/4 mile restrictions in the arms are ridicules (for motorized boats). This also limits Mack harvest. How does this ruin the "wilderness experience " any more than all the net boats in there? You may contact me @ 208 240 0505 This is the first time I have ever felt that my opinion could make a difference, I hope I am not wasting my time!! Thank you.
- 141. My big concern was the amount of horse poop all over. I am glad we made this trip but will probably not do it again.
- 142. We were very pleased with our trip. I would say we only had two issues that we encountered: 1) the sign for our campsite at Sportsman Lake had been turned so that we ended up hiking a little ways out of the way (not a big deal) - perhaps secure the campsite signs so they can not be turned; and 2) trail markers on the east side of Electric Pass were few and far between, which was a little disconcerting since you could see another trail off to the south from the pass, although the direction of the other trail did not really seem reasonable for our hike.
- 143. In Yellowstone Lake regulations further emphasize how vulnerable boaters are to the weather. Include some statistics like how often the wind blows above some minimum which is dangerous (say 10 mph) and from what directions. Tell how many people have capsized and drowned in the lake, punctuating how important it is to stay within ____ (100 meters?) of the shore when in non-mototrized craft. I found the wind/waves very intimidating.
- 144. The NPS volunteer that issued our permit at Canyon was most helpful and efficient. We found the trail signs in the backcountry to have text that is too small. Twice we were in situations at trail junctions where bison were present. We couldn't get anywhere close to the trail sign. I got as close as was reasonably safe and used binoculars to read the sign. At that we still couldn't read the writing on the sign. If it were larger we might have

been able to do so at a safe distance. I can imagine whoever reads this might get a laugh out of it, but you asked and it was an issue during our trek in Lamar Valley. It was a wonderful experience all in all.

- 145. It was great. Already looking forward to my next trip. Free backcountry maps for hikers would be nice.
- 146. You, and the backcountry are doing fine- a very nice experience. The loop road and big campgrounds, well that's another matter altogether! Oh, my pet peeve- Harleys!!!! I planned the dates for my trip to miss the Sturgis motorcycle run- something I learned the hard way after several trips in the National Parks during mid-August. I can't believe more people don't complain about it. It would be very easy to have a decibel meter at the entry gate, and MODIFIED motorcycles could rev the engines prior to entry. You need a loud roaring exhaust system?, well go somewhere else. Years ago while visiting Rocky Mt. Natl. Park with the same problem I saw an article in the Allenspark Wind newspaper asking the same questions. Guess they didn't get an answer either. Horses may have historical rights, but Harleys should not.
- 147. We had an excellent experience. I think the Park Service does an excellent job. Camps are spaced well apart, are located well, and the privilege of spending time in the Yellowstone backcountry is unsurpassed.
- 148. more pit toilets in heavy use campsites would be desirable.
- 149. A+ help in securing permit from LG at West Entrance backcountry office. Excellent trail maintenance. A+ campsites with water nearby, bear pole, and safe fire ring. Pit toilets would make them even better. Only problem we had was needing to alter our route because critical campsites on long stretches without campsites were taken. Also we went cross country to find little visited thermal areas. Would it be possible to issue some backcountry camping permits outside regular campsites? The trails, especially considering the challenges in clearing and maintaining since the '88 fires, are excellent - cheers to the trail crews! Being old fogeys with less than youthful knees and ankles, we appreciate it that you have not put in unnecessary rock and log "steps" into the steeper sections of trails, as seems to be the current fad in many national parks these days. Thank you for leading the way great backcountry management. We are looking forward to another Yellowstone trip.
- 150. We didn't know that a bear would get into water containers that had never contained food. The bear information should include that.
- 151. We had a great time and can't think of anything right now.

- 152. Please remove hazard trees at campsites, especially at the boat sites along the lake.
- 153. Please. Please stop horses from using the trails.

## VITA

Mr. Ryan Grisham began his advancement in higher education obtaining an Associate of Arts at Collin College in Plano, TX in 2007 with an emphasis on philosophy. His next academic undertaking resulted in a Bachelor of Science in Forestry with a major in Outdoor Recreation/Human Dimensions at Stephen F. Austin State University in Nacogdoches, TX in 2014. Furthering his passion for science, human dimensions, and the outdoors, Ryan began pursuing a Master of Science in Forestry in 2015 under the guidance of Dr. Pat-Stephens Williams researching visitor use dynamics in the backcountry of Yellowstone National Park. While studying at SFA, Ryan was a teaching assistant and an associate for The Arthur Temple College of Forestry and Agriculture's GIS Laboratory. He has aided in human dimensions research for Grand Teton National Park and Alabama State Parks.

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