GRAND TETON NATIONAL PARK PUBLIC TRANSIT BUSINESS PLAN

Prepared by

David Kack

Program Manager
Mobility & Public Transportation

and

Jaydeep Chaudhari

Research Associate

Western Transportation Institute
College of Engineering
Montana State University
Bozeman, MT 59717-4250

Prepared for

The National Park Service
Grand Teton National Park
Moose, Wyoming

October 20, 2009

Disclaimer

The contents of this report reflect the views of the authors, who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official policies of Grand Teton National Park, the National Park Service, or Montana State University.

Grand Teton National Park, the National Park Service, and the United States Government do not endorse products of manufacturers. Trademarks or manufacturers' names appear herein only because they are considered essential to the object of this document.

This report does not constitute a standard, specification, or regulation.

Acknowledgements

The authors thank Jennifer Carpenter, Suzy Schulman, and Margaret Wilson from Grand Teton National Park for their assistance in this project and for acting as project managers during different phases of this plan.

The authors additionally thank all members of the Grand Teton National Park staff who have been involved in the plan, whether attending project meetings, helping with the visitor survey, or providing their insight into the Park.

Finally, thank you to Mary Gibson Scott, the Superintendent of Grand Teton National Park for her interest and participation in this plan.

Table of Contents

List of Tables

List of Figures

This Page Intentionally Left Blank

EXECUTIVE SUMMARY

The Transportation Plan Final - Environmental Impact Statement for Grand Teton National Park (September 2006) noted that, "Development of a public transit business plan (TBP) is included under all alternatives. The goal of the TBP is to provide a sufficient analysis of options to determine whether it is feasible to begin a transit system in and around the Grand Teton National Park and, if so, how to operate it efficiently and effectively such that it is a financially sustainable system that could be provided by either the private sector or another entity" [1].

Grand Teton National Park contracted with the Western Transportation Institute (WTI) at Montana State University to create the Transit Business Plan (TBP). Three main tasks associated with creating the plan were:

1. Literature/data review and analysis;
2. Visitor and employee survey, stakeholder interviews, and collected data analysis;
3. Design service alternatives and alternate funding strategies for a proposed transit system.

Task 1 focused on reviewing information from a peer group of transit systems in six other National Parks and federal lands to obtain lessons learned and other factors that would be critical to a potential transit system in Grand Teton National Park (the "Park"). This task also analyzed how the reviewed transit systems were funded. Information on the peer group review is summarized in Chapter 2, while detailed information is provided in Appendix A.

Task 2 focused on gathering data unique to Grand Teton National Park and its surrounding area by surveying both visitors and employees of the Park, as well as interviewing local stakeholders, including officials from the Town of Jackson, Teton County and Park concessioners. Information obtained in this task is highlighted in Chapter 2, while detailed information is provided in Appendix B (visitor survey), Appendix C (employee survey) and Appendix D (stakeholder interviews).

Task 3 was completed, providing initial information on how a potential transit system could be implemented in a phased approach. While it was not within the scope of the plan to detail specific routes for a potential transit system, enough analysis was conducted to provide a list of alternative service options for a public transportation system, along with estimated costs.

In working on this plan, "feasibility" (for a transit system) is defined as, "being desirable by visitors, employees and others who may ride such as system; having a stable source of funding for operations and capital; and identifying a means for the on-going administration, operations and maintenance of a transit system." As noted within this document, there is not adequate money within Grand Teton National Park at this time to fund a potential transit system. In addition to looking at the "feasibility" of implementing a potential transit system in the Park, it became apparent to determine the "necessity" of implementing a transit system in Grand Teton National Park, "necessity" being defined as, "something that is essential, especially a basic requirement, or circumstances that create a need or an obligation" [2].

Grand Teton National Park

Since 1999, visitation to Grand Teton National Park has ranged from a high of 2.7 million in 1999 to a low of 2.35 million in 2003 (Figure 1). Since 2003, there has been a slight upward trend, with just below 2.6 million visitors in 2007. This public visitation causes significant wear

and tear of park facilities, which require constant repair and rehabilitation. However, the Park currently has a $125 million deferred maintenance backlog for these facilities. In addition, by 2017, this deficit is expected to rise to $213 million, based on a gap of $11.3 million per year in Operations & Maintenance (O&M) funds, and a gap of $10 million per year for project funding [3]. Given these forecasted deficits for maintenance of existing facilities, the Park is unable to provide funds to implement a transit system at this time.

Figure 1: Grand Teton National Park Visitation

The Park, therefore, was interested in determining the necessity and feasibility of a potential transit system, requiring no direct investment from Park or National Park Service funds to implement such a system. Some information on how this may be accomplished was identified from the review of a "peer group" of parks.

Peer Group Review

Six transit systems were reviewed: Acadia National Park, Denali National Park and Preserve, Glacier National Park, Rocky Mountain National Park, Santa Monica Mountains National Recreation Area (SMMNRA), and Zion National Park. These transit systems were implemented in large part to respond to specific issues such as the desire to reduce traffic congestion, or reduce visitors' impacts on natural resources. As noted within this document, these conditions do not exist to a significant extent within Grand Teton National Park. Further, these systems vary in the length of time they have been in operation, whether they are a mandatory or voluntary system, whether they charge a fare, and how they are managed. The review shows that, except for the SMMNRA, the systems have been relatively successful, through increased ridership and sustainable funding, in fulfilling their goals of reducing private vehicle use, providing alternative

transportation options, and reducing adverse impacts on the environment, etc. The following three key observations were made from the peer group review:

1. Planning and implementation activities to launch a full-scale transit system took five to six years after initiation;
2. Three of the five systems reviewed relied at least partially on park revenue by charging a $5 user fee that was embedded in the entrance fee (people paid more to get into the park, while transit services were free);
3. Park transit systems are seasonal and coordinate with local area transit systems.

General information about the peer group is highlighted in Chapter 2 of this report, with detailed information in Appendix A.

Visitor and Employee Surveys and Stakeholder Interviews

Visitor and employee surveys and local stakeholder interviews were used to collect data that would help provide insight into the necessity and desirability of a potential transit system that could operate in and around the Park. The surveys showed that 46 percent of visitors and 50 percent of employees were "likely" to "very likely" to use a bus. Further, the interviews revealed that the majority of stakeholders felt the time was right for determining the feasibility of a potential transit system in Grand Teton National Park. While the information from the surveys and interviews indicated the general desirability of a transit system, it did not indicate the necessity of a transit system within the Park at this time.

In general, the majority of visitors to the Park are very satisfied with their experience, and the stakeholder interviews indicated that most do not believe there are traffic congestion issues within Grand Teton National Park.

Further, many of the stakeholders interviewed were tentative with their comments, as they desired to see more information before providing strong support for a potential transit system. General information about the surveys and interviews can be found in Chapter 2, with specific information available in Appendix B, C and D.

Potential System

As highlighted in Chapter 3, a phased approach to implementing a potential transit system may be the most logical way to proceed, if the system is determined to be feasible (i.e, funding and administrative, operational and maintenance issues are resolved). Based on current discussions within the Town of Jackson/Teton County area, there is a desire to expand the Southern Teton Area Rapid Transit (START) service from the Town of Jackson to the Jackson Hole Airport (which is within the boundaries of Grand Teton National Park). Therefore, Chapter 3 highlights four phases to the potential system: Phase 1 connecting the Town of Jackson to the airport and Moose (Park Headquarters and the Craig Thomas Discovery and Visitor Center); Phase 2 including service from Moose to South Jenny Lake; Phase 3 providing service from Moose to the LSR Preserve; with Phase 4 of the potential transit system providing service from Moose to Colter Bay.

Phase 1 of the potential system should be thought of as a "pilot" or "demonstration" phase, the data from that phase being used to determine the on-going feasibility of the current phase as well as subsequent phases. Based on the information analyzed for this plan, the potential system (and

each phase) is calculated on operating June though August. It is possible, however, that the service to the airport and Moose could operate on a year-round basis. The potential system is also based on operating the services for approximately 12 hours per day, roughly from 8:00 a.m. to 8:00 p.m., although the frequency on each route would likely vary. Based on these parameters, the estimated costs for the various phases are provided in Table 1.

Table 1: Potential Transit Service

Phase/Route	Frequency	Annual Hours*	Annual Cost*	No. of vehicles
Phase 1: Jackson to Moose	30 min	2208	$154,560	2
Phase 2: Moose to South Jenny Lake	15 min	3312	$231,840	3
Phase 3: Moose to LSR	30 min	1104	$77,280	1
Phase 4: Moose to Colter Bay	2 hours	1104	$77,280	1
Total		*7728*	*$540,960*	*7*

*Annual totals (hours and cost) are based on 92 days of service (June-August).

The information in Table 1 is based on estimated costs of $70 per hour. Actual costs are likely to be different, based on final operating details. In addition, it may be desirable to provide service from mid-May to mid-September, adding an additional thirty days of service, which would cost approximately $176,400 for the routes/phases noted in Table 1.

Conclusions

The authors realize the decision of whether or not to implement a transit system within the Park will not necessarily follow an easy or clear path. There are many priorities within the Park and surrounding region. Stakeholders such as the Town of Jackson and Teton County may provide strong support, or support may be limited, based on other priorities that may emerge in the near future. In addition, the funding necessary to begin and sustain the potential transit system may or may not be easy to identify and secure.

While the data herein highlights that a transit system within the Park is clearly not necessary; it is viewed as desirable. With the Park's current and forecasted financial resources, a non-National Park Service funding source would need to be secured to make the potential system feasible. Further, administration, operation, and maintenance items would need to be resolved, if a pilot/demonstration phase of a potential transit system were to be implemented. While the information herein provides a basis for moving forward, a wider discussion with stakeholders will be critical, if the Park decides to continue to explore the possibility of implementing a transit system in and around Grand Teton National Park.

In summary, this plan should not be viewed as the end of the process, but rather the beginning of a process that may lead to the implementation of public transportation in Grand Teton National Park.

1. INTRODUCTION

The Transportation Plan/Environmental Impact Statement (EIS) for Grand Teton National Park ("the Park") discussed a 2001 transportation study that was conducted to identify actions that would:

- Improve visitor experience by providing a richer set of choices for movement within and between key activity areas and destinations;
- Improve mobility within the Park with a better balance between motorized and non-motorized travel modes;
- Reduce the potential for congestion in key areas;
- Provide information to visitors to help avoid adverse impacts to Park resources and to promote a variety of transportation options [1].

Further, the Transportation Plan Final - Environmental Impact Statement for Grand Teton National Park (September 2006) noted that, "Development of a public transit business plan (TBP) is included under all alternatives. The goal of the TBP is to provide a sufficient analysis of options to determine whether it is feasible to begin a transit system in and around the Grand Teton National Park and, if so, how to operate it efficiently and effectively such that it is a financially sustainable system that could be provided by either the private sector or another entity" [1].. Grand Teton National Park contracted with the Western Transportation Institute-Montana State University (WTI) to create the plan. This report presents the findings and recommendations of the plan.

In working on this plan, "feasibility" (for a transit system) is defined as, "being desirable by visitors, employees and others who may ride such as system; having a stable source of funding for operations and capital; and identifying a means for the on-going administration, operations and maintenance of a transit system." As noted within this document, there is not adequate money within Grand Teton National Park at this time to fund a potential transit system. In addition to looking at the "feasibility" of implementing a potential transit system in the Park, it became apparent to determine the "necessity" of implementing a transit system in Grand Teton National Park, "necessity" being defined as, "something that is essential, especially a basic requirement, or circumstances that create a need or an obligation" [2].

1.1 Project Scope

The purpose of this plan was to determine the overall necessity, feasibility, and desirability of a public transportation (transit) system in the Park, as well as providing general parameters of such a system, including proposed routes and general cost information. To determine necessity, desirability, and feasibility, several tasks were necessary. The main factors that focused on necessity and desirability included: Literature/Data Review and Analysis; Visitor and Employee Survey, Stakeholder Interview; and Collected Data Analysis. For determining feasibility the major factors included the Peer Group Review and the Potential System Analysis, which included service factors such as the service area, origins and destinations, schedule (intervals), and operating issues such as equipment needs and funding opportunities, including identification of outside resources (including funding) that could support the proposed system. The following subsections provide additional detail on these factors:

1.1.1 Literature/Data Review and Analysis

The literature/data review and analysis was based on a peer review of other transit systems in National Parks and National Recreation Areas. A total of five parks and one recreation area and their respective transit systems were reviewed. These included: Acadia, Denali, Glacier, Rocky Mountain and Zion National Parks, and Santa Monica Mountains National Recreation Area.

Information on the above areas and their transit systems was obtained through an extensive review of resources, including park planning and management reports, newspaper articles, data collection, personal communication and the Internet. The results of this task are highlighted in Chapter 2, while detailed information is provided in Appendix A.

1.1.2 Visitor and Employee Surveys, and Stakeholder Interviews

This task included three subtasks: a visitor survey, employee survey, and interviews with local stakeholders. Visitor surveys were conducted by WTI personnel at three major Grand Teton National Park locations from August 16-18, 2007. A total of 418 visitor surveys were collected, and analyzed. The employee survey was conducted primarily through an on-line process from August 29 through September 13, 2007. A total of 93 surveys were collected and analyzed. Face to face interviews with fifteen local stakeholders; including staff and elected officials from the Town of Jackson, Teton County, and Grand Teton National Park Concessioners; took place July 19 and 20, and September 5, 2007. Chapter 2 provides an overview of the results of the surveys and interviews, and information on Grand Teton National Park. Detailed information can be found in Appendix B (Visitor Survey), Appendix C (Employee Survey), and Appendix D (Stakeholder Interviews).

1.2 Document Outline

The remaining chapters and appendices provide the detailed information upon which the conclusions and recommendations are based. Chapter 2 provides the context about Grand Teton National Park, information about the five National Parks and one National Recreation Area that were analyzed, and summarizes the visitor and employee surveys, as well as the stakeholder interviews. Chapter 3 provides information about the potential transit system, including how it could be implemented in three phases. Chapter 4 presents the conclusions and recommendations of the plan, including action items. Chapter 5 provides a list of the references used in this plan.

The appendices include detailed information on the Peer Review (Appendix A), Visitor Survey (Appendix B), Employee Survey (Appendix C), and the Stakeholders Interviews (Appendix D). Appendix E provides information on potential sources of funding for the transit services noted herein, and Appendix F provides detailed information on the potential transit system.

2. CONTEXT

In order to determine the necessity, desirability and feasibility of a transit system in and around the Park, WTI researchers conducted a peer-group review, as well as visitor and employee surveys, and interviews with stakeholders. This section provides a highlight of the results of those efforts. Detailed information can be found in Appendix A, B, C and D.

2.1 Grand Teton National Park

Grand Teton National Park has consistently had over 2 million visitors each year since 1999, with just below 2.6 million visitors in 2007 (Figure 2). This high level of visitation to the Park requires significant efforts in maintenance and rehabilitation of Park facilities. It is forecasted that from 2008-2017, the Park will need to spend just under $147 million to address existing deferred maintenance and future rehabilitation requirements of facilities. The Park currently does not have enough funds to meet these maintenance needs and requirements. Over the next 10 years, it is anticipated that only $4.7 million will be available annually to address the project funding requirements of $14.7 million, leading to a deficit of $10 million each year. Further, the Park is anticipated to receive $10.6 million in Operations & Maintenance (O&M) funds each year to address forecasted O&M requirements of $21.9 million per year, with the potential to create an additional deficit of $11.3 million on an annual basis. This means that the Park could face an overall $213 million deficit for maintenance and future rehabilitation requirements for existing facilities [3].

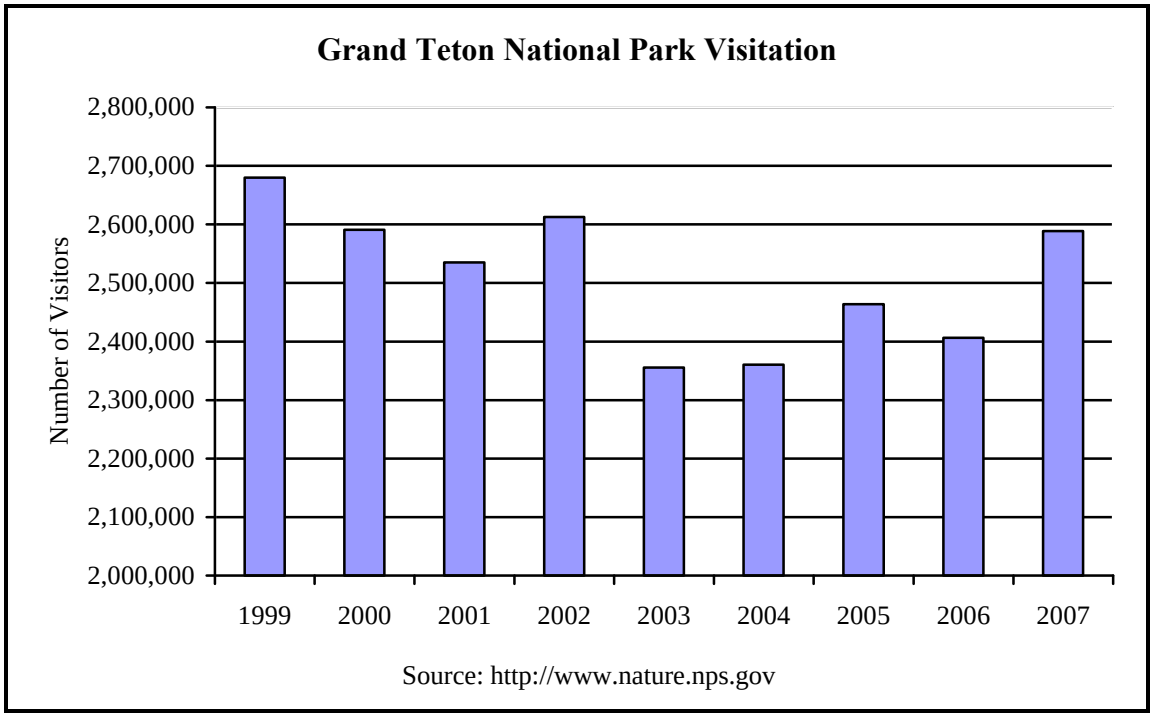


Figure 2: Grand Teton National Park Visitation

In addition to the operations and maintenance issues within the Park, Grand Teton National Park is affected by growth in Teton Village (Jackson Hole Mountain Resort), the Town of Jackson, and Teton County (Wyoming). The transportation issues from the surrounding area not only

deal with surface transportation, but air transportation as well, as the Jackson Hole Airport lies within the Park's boundaries.

In order to provide alternative transportation in the area, the Town of Jackson and Teton County created the Southern Teton Area Rapid Transit (START). Operating since 1987, START is a public transportation system that provides service within the Town of Jackson, to the Jackson Hole Mountain Resort (Teton Village), with services to the Star Valley area, and to Teton County Idaho (Victor and Driggs, Idaho). In addition to START, several other transportation providers exist in the area.

The Grand Teton Lodge Company, one of the concessioners in the Park, operates a limited scheduled shuttle system so guests and employees can get from the various lodges and campgrounds to the Town of Jackson. The shuttles operate from approximately 7:00 am to 9:35 pm, and allow for three trips into Jackson. The shuttle operates from Colter Bay Village through the Jackson Lake and Jenny Lake lodges to the Town of Jackson.

In addition to the scheduled service provided by the Grand Teton Lodge Company, Alltrans, Inc., operates tours under the "Grey Line" brand, and provides charter (or "on-demand) services as well. Alltrans also provides scheduled service from the Town of Jackson to Idaho Falls and Pocatello, Idaho, continuing on to Salt Lake City, Utah. Finally, there are smaller shuttle services that provide transportation to hikers, climbers, and visitors who are taking floating trips, or other outdoor recreation activities.

However, if a potential transit system were to be implemented in the Park, it is anticipated that the Town of Jackson and Teton County would be significant stakeholders in the process, and START would be a key stakeholder, as well. This is based on the fact that, as is shown in the following section, many transit systems within National Parks and other Federal lands are an effort involving gateway communities, and are operated by an entity other than the Federal land management agency. In addition, the Grand Teton Lodge Company would be a significant stakeholder, as it may be able to greatly reduce, or eliminate its transportation services, depending upon the level of service of the potential transit system.

2.2 Peer Group

A total of five National Parks, and one National Recreation area were reviewed to determine information that would be helpful in determining how a potential transit system in Grand Teton National Park may be implemented. The peer group included:

- Acadia National Park, Bar Harbor, Maine.
- Denali National Park and Preserve, Denali Park, Alaska.
- Glacier National Park, West Glacier, Montana.
- Rocky Mountain National Park, Estes Park, Colorado.
- Santa Monica Mountains National Recreation Area, Thousand Oaks, California.
- Zion National Park, Springdale, Utah.

While detailed information can be found in Appendix A, this section highlights information from these Federal lands.

One-half of the peer group (Acadia, Denali and Zion National Parks) are a "one-way in, one-way out" parks, so visitors enter and exit through the same area. The other three areas reviewed (Glacier and Rocky Mountain National Parks and Santa Monica Mountains National Recreation Area) have a mix of "roundtrip" and "drive through" traffic. One major difference is that none of the peer group members are adjacent to another National Park (Grand Teton National Park is adjacent to Yellowstone National Park).

Four of the six systems of the peer group have been operating their transit services for at least eight years (Acadia, Denali, Rocky Mountain and Zion National Parks), while Glacier National Park and Santa Monica Mountains National Recreation Area are relatively new systems. Of those reviewed, only the Santa Monica Mountains National Recreation Area system is no longer operating (it was set up as a pilot project).

Of the systems reviewed, only two, Denali and Zion, have mandatory systems, while the others are all voluntary (mandatory systems require visitors to ride the bus to see certain areas of the park, at least during certain seasons). Mandatory systems allow for a "captive audience," as visitors must use the transit system to access the entire park, or certain areas of a park. While voluntary systems can address issues such as traffic and parking congestion, mandatory systems are often implemented when resource issues (traffic and parking congestion, air quality issues, etc.), are so acute that parks are required to take action. This is not currently the case in Grand Teton National Park.

While valuable information was obtained through the peer group review, specific information about Grand Teton National Park needed to be collected to determine the feasibility and necessity of implementing a transit system within the Park. The following section provides an overview of the information obtained through visitor surveys.

2.3 Visitor Surveys

Visitor surveys were distributed Thursday through Saturday, August 16-18, 2007, in the Park by WTI staff. Park staff commented that some primary schools and colleges in surrounding states may have already started their school year, which may have led to reduced visitation over that period and affected the results of the survey. The questionnaire was distributed at three primary locations in the Park: the Craig Thomas Discovery and Visitor Center, South Jenny Lake, and at the Colter Bay Visitor Center. Surveys were also distributed at the Willow Flats Overlook and at the Colter Bay Village Laundromat. A total of 418 surveys, either partially or totally completed, were returned.

The number of surveys completed and analyzed provides for a 95 percent confidence level at a 5 percent interval. The confidence interval is the interval (or range) of plausible values for a characteristic of a population. It is constructed so that when associated with a degree of confidence, the value of the characteristic will be captured within the interval. For example, from the visitor survey, if 45 percent of the respondents indicated that they were very likely to ride a bus within the Park, we are 95 percent confident that the true answer is within the 40-50 percent range. The results of the visitor survey noted herein are based on the total number of responses to a particular question, and not the total number of surveys, unless noted. For example, if only 380 answers are provided to a question, the percentage of responses is based on 380 (N=380), not the 418 total surveys.

A select number of questions from the visitor survey are highlighted in this section. These questions (and responses) are highlighted as they provide a foundation for general support of a transit system, and provide information as to characteristics of a transit system visitors believe are most important. The responses to all the questions can be found in Appendix B.

The first question of the survey asked respondents, "What is the purpose of your visit to Grand Teton National Park today?" Respondents were to check all the purposes that applied. The information about why visitors are in the Park provides data about how a transit system may be used by visitors, and the service area of a potential system. Figure 3 shows the responses to the question.

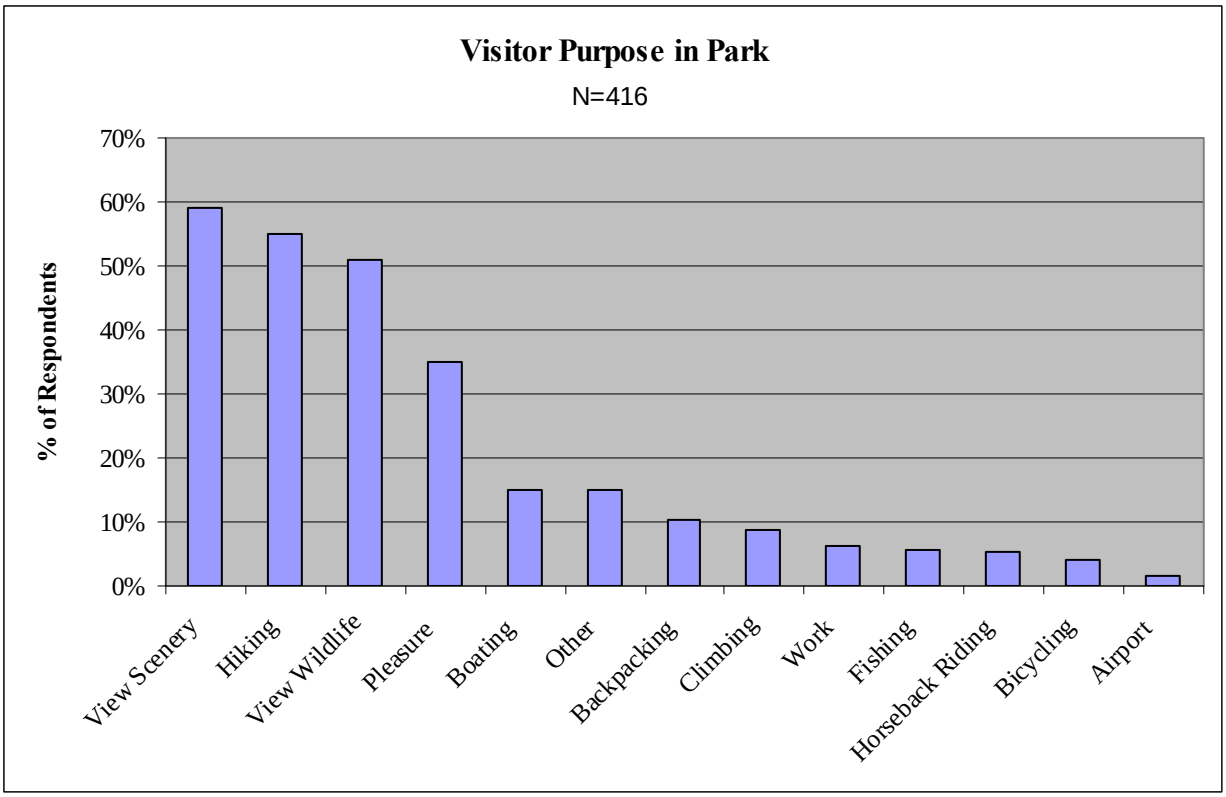


Figure 3: Purpose of Visiting GRTE

The second question asked, "What type of vehicle are you traveling in today?" The responses are shown in Figure 4. This information pinpoints how the visitors are traveling, and if they are using a mode that would be favorable to public transportation.

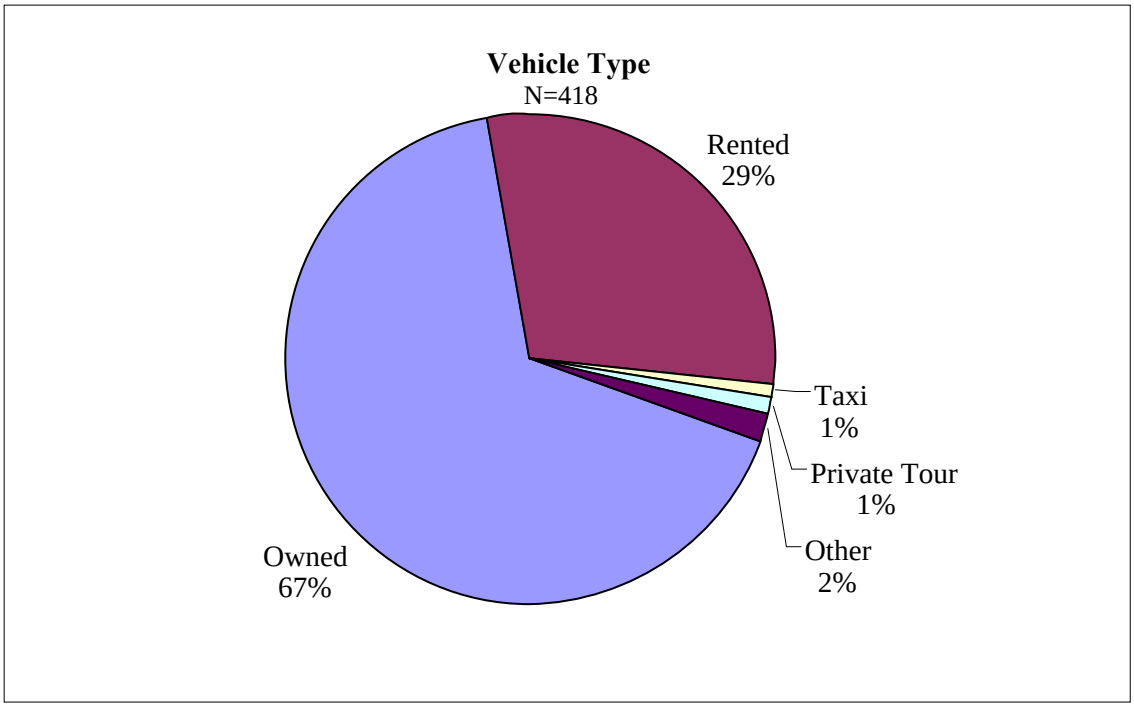


Figure 4: Vehicle Type of Visitor

In addition to the type of the vehicle the visitor is driving, it was also important to know where the visitor is coming from, specifically their primary residence, as this could influence the use of a potential transit system. Question 12 of the survey asked, "What is the USA zip code or international postal code of your primary residence?" Figure 5 shows the responses to the question.

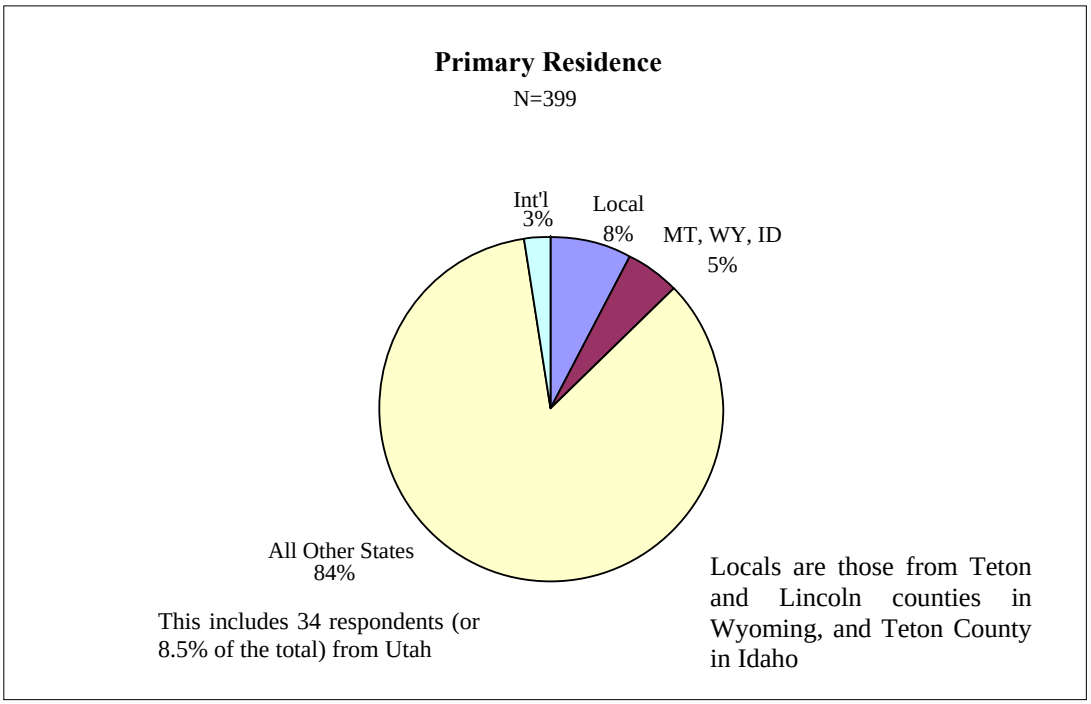


Figure 5: GRTE Visitor Primary Residence Location

By combining the information from Questions 2 and 12, we can state that the majority of visitors to Grand Teton National Park are from states other than those which are adjacent to Grand Teton National Park (Idaho, Montana and Wyoming), and that the visitors are in a vehicle that they own. This fact will impact how many visitors may use a potential transit system.

To better understand the likeliness to use a potential system, Question 5 of the survey asked, "If a transit (bus) service existed within Grand Teton National Park, with service to the Park's major destinations, how likely would it be that you would use such a service?" Figure 6 shows the responses to this question.

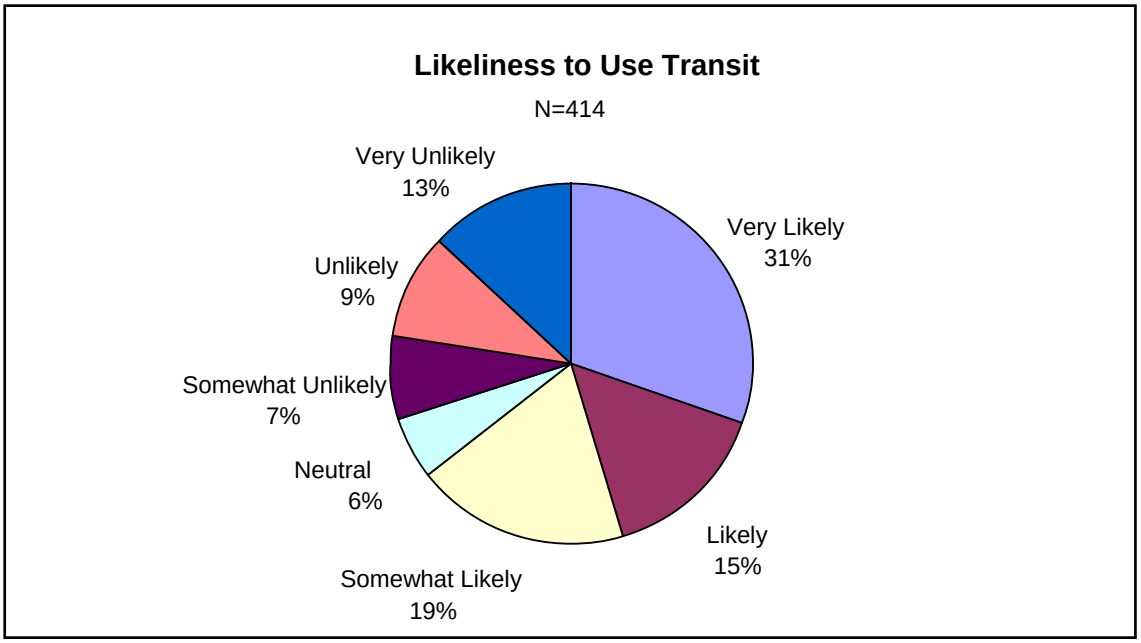


Figure 6: Visitor Likeliness to Use Transit

The responses from Question 5 show that 46 percent of respondents are likely to very likely to use transit within the Park. This shows a positive level of support for a potential system. A related question, Question 10 asked, "Have you used transit in a National Park?" Of the 410 responses to this question, 203 (49.5%) indicated they had used transit in a National Park, while 207 (50.5%) answered that they had not used transit in a National Park. Zion, Yosemite and the Grand Canyon were sited most often as the National Parks where respondents had used transit. If a visitor has used public transportation in a National Park, or on other Federal lands, and has had a positive experience, they may be more likely to try a transit system in Grand Teton National Park. Further, if a visitor uses transit on a frequent basis in their daily life, they also may be more likely to try a transit service in a National Park.

Question 9 of the survey asked, "How frequently do you ride public transit for work or commuting?" The responses to this question are shown in Figure 7.

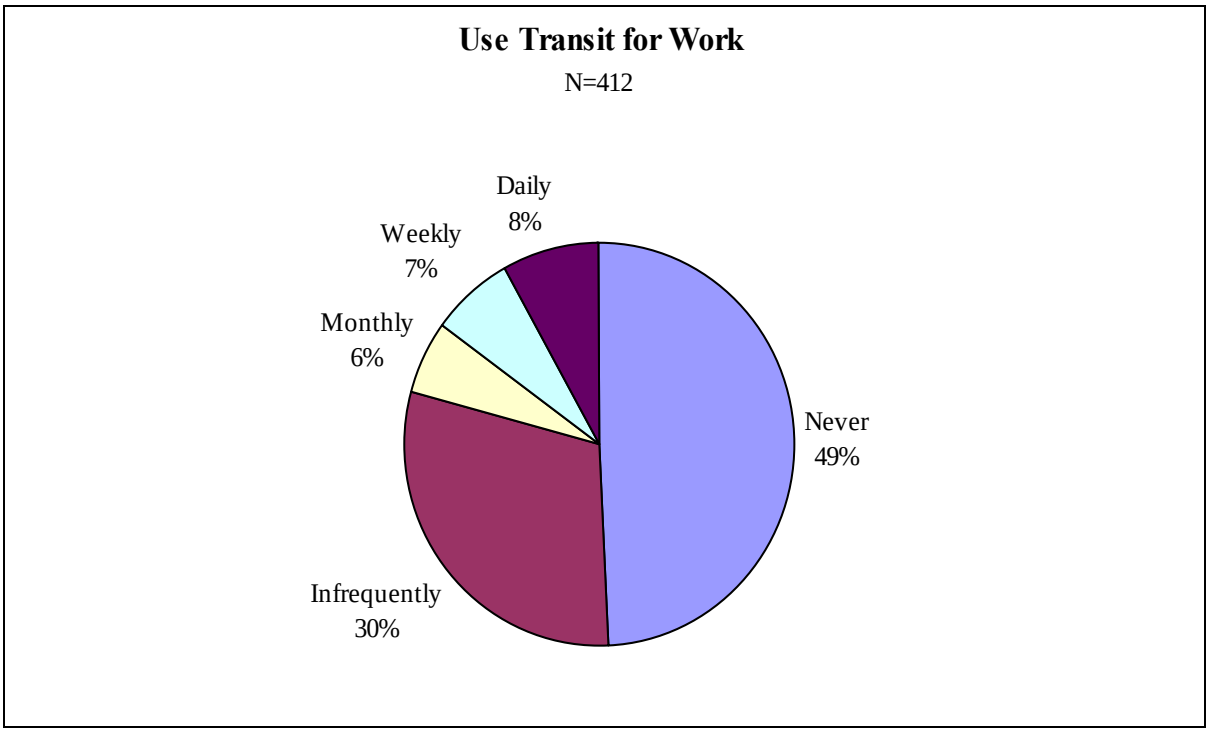


Figure 7: Visitors Use of Transit for Work

By combining the information from Questions 5, 9 and 10, we conclude that the majority of respondents (79%) do not use transit for work purposes, yet use transit when visiting National Parks (49.5%) and indicate they would be likely to use transit in Grand Teton National Park (46%). One possible explanation to this may be that people are willing to try a new experience while on vacation, and may be more likely to try an "environmentally friendly" experience, as transit is often marketed, in a national park. Combined, these responses note the desirability of a potential system, but do not address the necessity or feasibility of a transit system in Grand Teton National Park.

In order to better determine the operational feasibility of a potential transit system, a question was asked to determine the where the visitor had stayed for the previous night, and where they were going to stay for the subsequent night. Forty percent of respondents indicated they were not going to stay the previous and subsequent night in the same location. This would likely decrease the ability of these people to use a transit system for their trip, as they would need to bring all of their belongings with them.

In summary, visitors were in the Park to view scenery, hike, view wildlife, or for pleasure. Respondents were using owned or rented vehicles, and were from states other than Idaho, Montana or Wyoming. The majority of the respondents don't use public transit for work, but almost half have used transit in national parks, and nearly half (46%) indicated they were likely to very likely to use a transit system in Grand Teton National Park, if one existed. However, some responses indicated that visitor travel patterns may not lead to use of a potential transit service. While this section (2.3) focused on the responses to the visitor survey, the following section highlights the employee survey.

2.4 Employee Survey

An employee survey was conducted to determine if employees of the Park were likely to utilize a transit system. The survey was also used to determine if the potential transit service would need linkages outside of the Park, so that employees could travel from home to work on the transit system.

The survey was administered through an on-line service (Survey Monkey), although employees who did not have access to a computer were provided a paper copy of the survey. The survey process took place from August 29 through September 13, 2007. A total of 79 surveys were completed on-line, and 14 paper surveys were completed. A copy of the employee survey is provided in Appendix C, along with a compilation of all the responses. This section highlights the questions and responses of the employee survey, that were believed to be most relevant for determining support for, and service factors relating to, a proposed transit system.

Question 2 of the employee survey asked, "Where do you live?" This information would help determine potential bus stops for the potential system. The responses are shown in Figure 8.

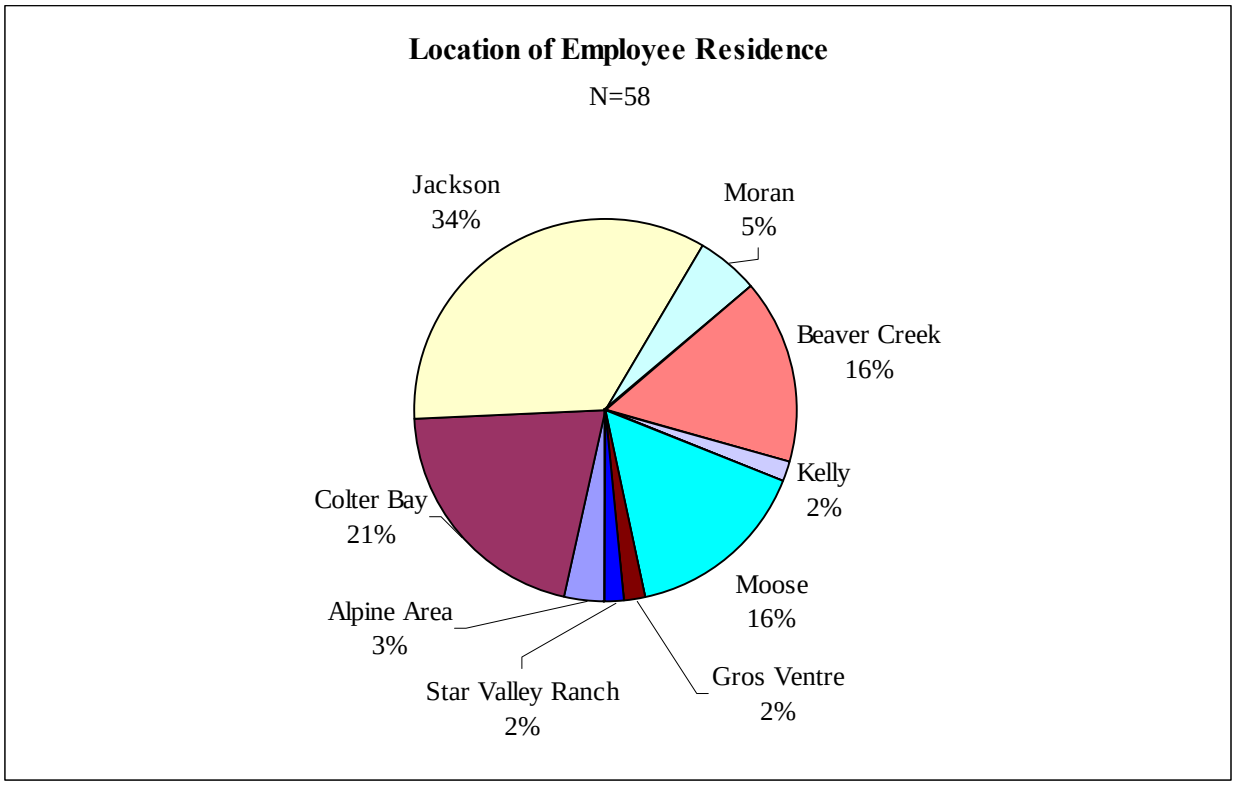


Figure 8: Employee Residence Location

Note: 39% of respondents live outside of the Park's boundaries in Jackson, Alpine or the Star Valley Ranch area. All other respondents (61%) indicated that they reside within the Park's boundaries in Beaver Creek, Colter Bay, Gros Ventre, Kelly, Moose or Moran.

Question 3 asked, "How many miles is it (one-way) from where you live to your work?" The information from Question 3 would help determine the likeliness of an employee riding a transit system. The responses are shown in Figure 9.

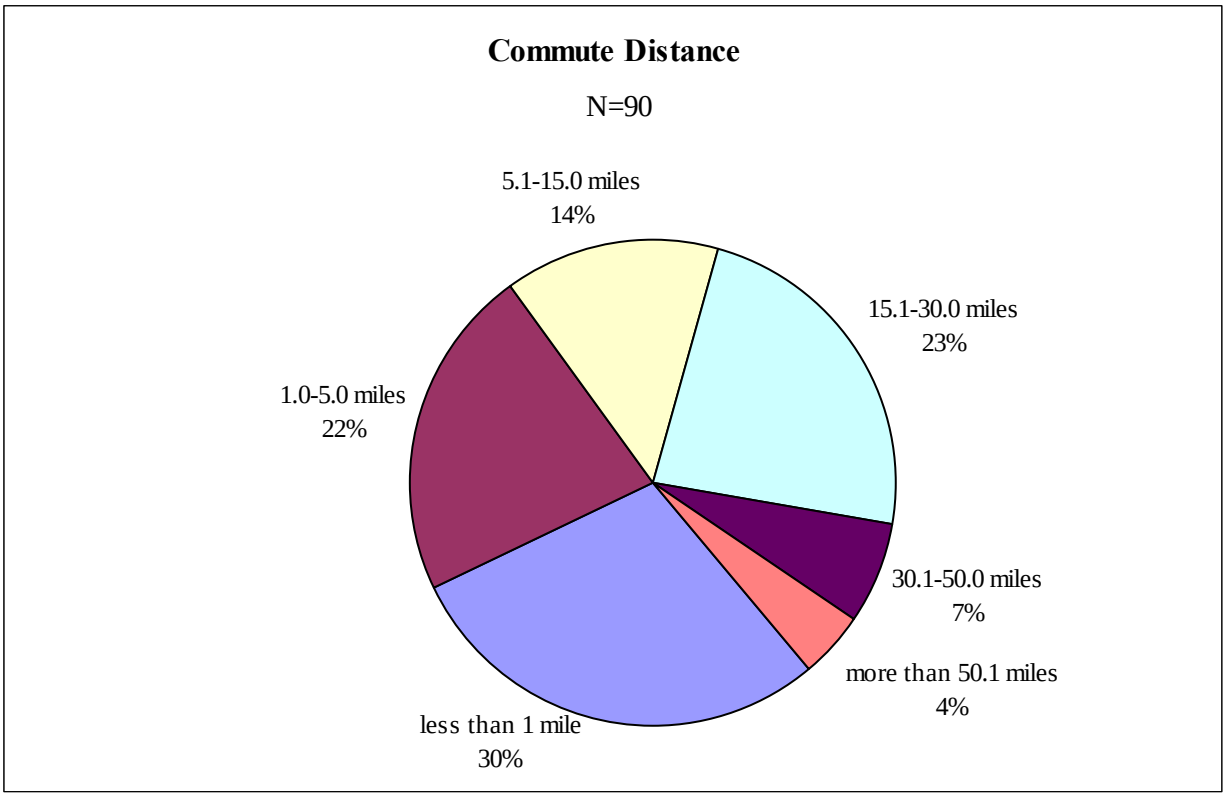


Figure 9: Employee Commute Distance

Those traveling greater distances between home and work may tend to perceive a higher benefit from public transportation. In addition to commuting distance, the current mode used for the work commute could also indicate how many employees may use a potential transit system to get to work.

Question 4 asked the employees how they normally travel to work. Figure 10 shows the responses to Question 4.

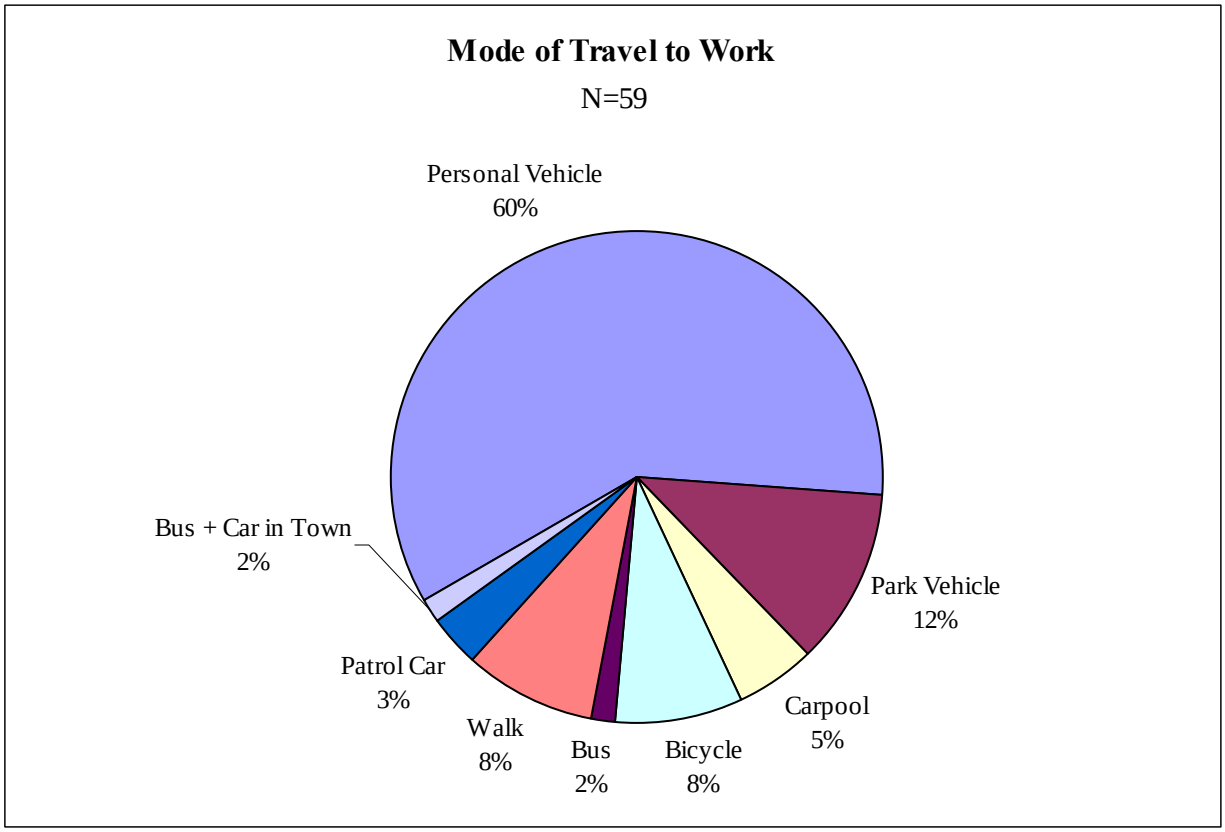


Figure 10: Mode of Employee Commute

Since the majority of employees use a personal vehicle to get between home and work, they may be more likely to use a transit system or a mode such as a van pool, to commute between work and home. To better determine the likeliness of the employees to use a transit system, Question 15 asked, "If a bus system existed that provided timely service between your home and work, how likely would you be to use such a service?" The responses to the question are shown in Figure 11.

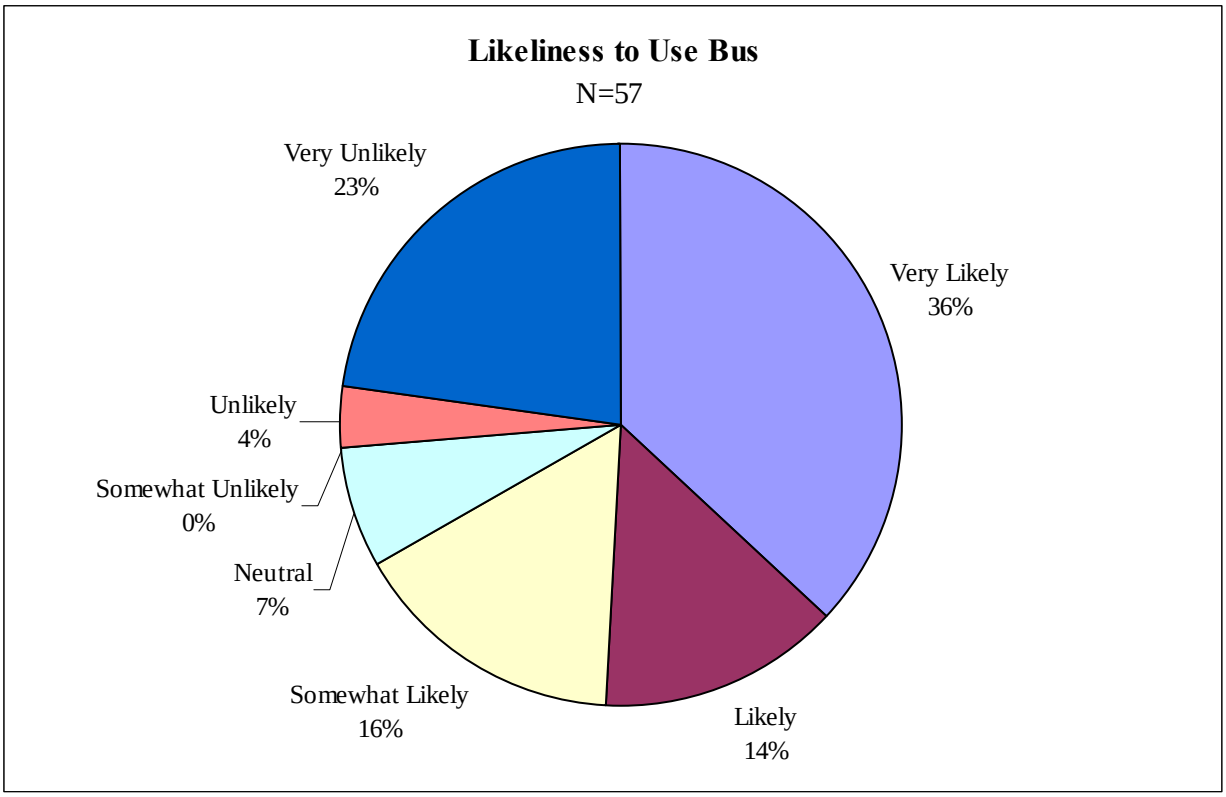


Figure 11: Employee Likeliness to Use a Bus

While only 93 employee surveys were filled out, the results provide enough information to help determine the likeliness of employees using a transit system within the Park, as well as what service parameters may be necessary to make the system useful to the employees.

While the residence location of employees was somewhat scattered, the information is useful for route planning. While some employees enjoy a very short commute, 34 percent commute at least 15 miles between their home and workplace. Fifty percent of the employees were likely to very likely to use a transit system for their commute.

The employee survey data indicates that a potential system that could provide service to between Jackson and Moose may receive the most use. This potential route could also be used to service the Jackson Hole Airport, which lies within Grand Teton National Park's boundary.

In addition to the employee surveys, and previously noted visitor surveys, certain key stakeholders in the Jackson area were interviewed to obtain their opinions on the feasibility/necessity of implementing a transit system within the Park. The following section provides information from the interviews.

2.5 Stakeholder Interviews

Researchers from WTI worked with Park staff to create a list of key stakeholders to be interviewed. The final listed included the following individuals:

- START (Southern Teton Area Rapid Transit) – Michael Wackerly, Director; Reed Armijo, Board Chair.
- Town of Jackson – Mark Barron, Mayor; Bob McLaurin, Administrator, Mark Obringer, Councilmember.
- Teton County – Andy Schwartz, Commission Chairman; Paula Stevens, Transportation Specialist; Brian Schilling, Pathways Planner.
- Wyoming DOT – John Black.
- Jackson Hole Airport – Ray Bishop, Airport Director.
- Jackson Hole Mountain Resort/Teton Village – Jerry Blann.
- Jackson Hole Chamber of Commerce – Tim O'Donaghue, Executive Director.
- Grand Teton Lodge Company – John Rutter, Chief Operating Officer.
- Signal Mountain Lodge Company – Jason Ryan, General Manager.
- Jenny Lake Boating Company – Doug Colonel, Owner.

The majority of interviews took place on July 19 and 20, and September 5, 2007. Two interviews were conducted over the phone, and the remainder done face to face. Interviewees were not provided the questions ahead of time, and most interviews lasted between 45 minutes and one hour. The questions for the interview are listed in Appendix D. The remainder of this section provides a synopsis of the responses provided to selected questions from the interview.

1) Please provide any comments you may have about the concept of potential partnerships to provide a transit system within Grand Teton National Park.

All of the respondents believed that the time was right to further investigate the possibility of transit within the Park. While most asked about specific details, the overall response was positive. Some commented on connecting other modes such as biking and walking, while others commented on partnerships and collaboration efforts. Connections to Jackson, Teton Village and the airport were mentioned as important origins/destinations.

3) If a transit system were to be established in partnership with Grand Teton National Park, what service factors, such as routes, schedules, etc., do you think would be important?

Many commented on specific destinations, although the majority discussed a high level of frequency, and that to increase ridership the service should probably be free. Most said that the drivers should provide some level of "interpretation" or comment on the Park. Most remarked that the experience on the bus needed to be "better" than the experience someone would get in their car.

4) Are there any other factors you believe would be vital to the success of a transit system that provided service within or to Grand Teton National Park?

Many said that a significant marketing effort would probably be needed, and the Town of Jackson would need to embrace the effort. Some also noted that the buses should be "green" or environmentally friendly. A couple discussed the need for both a "carrot" and a "stick," or incentives and disincentives that would make people more likely to ride the bus. Bike racks, and the ability to carry climbing or other gear was also mentioned by some of the respondents.

8) Do you have any comments related to travel (or traffic/traffic congestion) within Grand Teton National Park?

The majority of the respondents indicated that the Park does not necessarily have any traffic problems, but that there are some locations that are of concern, including Teton Village to Moose Junction; parking at South Jenny Lake, and many noted the traffic issues within the Town of Jackson. The general feeling about traffic issues in the Park was that except for the occasional wildlife jam, the traffic on the roads isn't too bad.

Some commented that with the new Craig Thomas Discovery and Visitor Center, and the number of float trips at Moose, parking at Moose may become an issue in the future.

10) Are there any other comments you have about transit service within or to Grand Teton National Park?

While most were pleased that an effort to investigate the potential for transit in the Park was occurring, they said there should be more "community input" before anything were to move forward. Most felt that a connection to the airport made sense. One respondent said they hoped this plan would provide the technical/practical information that is needed to move forward into the political arena so that input from the community can be gathered and a decision made.

2.6 Context Summary

In general, the responses obtained from the visitor and employee surveys and the stakeholder interviews showed a general interest (or desirability) for a public transportation system in the Park. However, the majority of those interviewed noted that there was not a traffic congestion issue within Grand Teton National Park. A few respondents did note, however, that a few of the trailheads can have parking congestion issues, although these are generally limited to a few days. Further, only one location, the South Jenny Lake parking area was noted by most respondents as having more consistent parking congestion issues. These results indicate an overall lack of necessity for a transit system in the Park at this time.

While the visitor and employee survey yielded information on the willingness to pay, or not, the stakeholder interview pointed to some possible partners that may invest in a transit system. Many wanted to see detailed information on the proposed system before they would provide specific information on their possible financial support. As previously noted, Grand Teton National Park currently faces significant needs related to maintenance and rehabilitation of Park facilities. The current $125 million backlog of deferred maintenance, future rehabilitation requirements of existing facilities, and the forecasted funding shortfalls in both annual O&M funding and project funding ($11.3 million and $10 million, respectively), preclude the Park's ability to provide funding available for a pilot transit system within Grand Teton National Park.

If an external funding source other than the National Park Service can be identified in the future, the Park may evaluate the potential of implementing a phased transit system (Chapter 3).

Based on the fact that there is currently little if any traffic congestion within the Park, and parking congestion occurs in only a few areas, there is little if any necessity for a transit system within the Park at this time. However, the visitor and employee surveys, and local stakeholder interviews indicated general support, or the desirability for a transit system. Therefore, a key issue is whether the resources to implement a sustainable transit service within the Park could be identified. These resources must be acknowledged before a transit system would be feasible.

The next chapter, Chapter 3, provides information on potential transit services, and phases for those services. Further, the information identifies what resources are necessary, and available, which will help to determine the feasibility of the potential transit system in the Park.

3. POTENTIAL SYSTEM

Although previous sections have shown that a transit system is not necessary at this time, there is a general desirability for a transit system in the Park. This section highlights what a potential system may look like, and what resources would need to be acquired to make a system feasible.

Question 11 of the visitor survey provided information that is important in determining locations that would be important for a potential transit system to service. Figure 12 highlights the sites/locations that were going to be visited by the respondents.

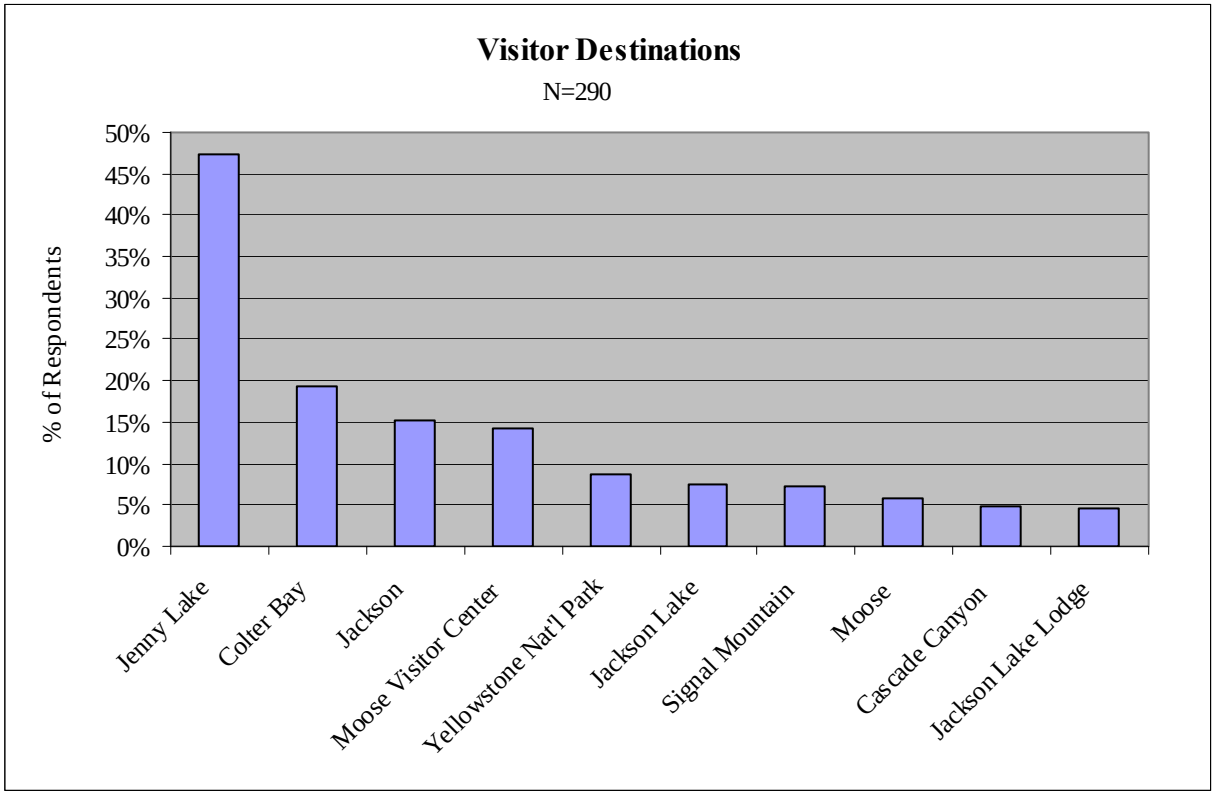


Figure 12: Visitor Destinations

This data, combined with the information about employee's residence locations (Figure 8), provides a foundation to guide and define potential phases/services. It is likely that a potential transit system would include four phases. If the initial service (Phase 1) is implemented, it would act as a "pilot project" or a "demonstration project" that would help to determine if transit in and around the Park can be feasible or sustainable. The remainder of the Chapter provides information on the likely phases of transit service for the potential system.

3.1 Potential Transit System: Phase 1

Phase 1 of the potential system would link the Town of Jackson to the Jackson Hole Airport, which is within Grand Teton National Park, and to Moose (Park Headquarters, and the location of the Craig Thomas Discovery and Visitor Center). This "pilot/demonstration" phase is a logical first step, as there has already been some discussion of extending the START system from Jackson to the Jackson Hole Airport. It is approximately 9.5 miles from the center of the

Town of Jackson to the Jackson Hole Airport, and 5 miles from the Jackson Hole Airport to Moose.

This potential route would connect Jackson to the Craig Thomas Discovery and Visitor Center at Moose, with a stop at the Jackson Airport. This would provide access to the Park through its south entrance for visitors who arrive by air, and Park and concessioner employees coming from Star Valley, Jackson, and other areas farther south. This option would likely necessitate the need for a park and ride lot within the Town of Jackson. This service would likely use a bus with a capacity of around 35 passengers. The route would be 14.5 miles and take about 25 minutes, including a five-minute stop at the airport. Detailed information about Route 1 is shown in Table 2.

Table 2: Route 1 (Jackson to Moose) Detail

Route 1: Jackson to Moose (7:30 a.m. to 7:30 p.m.)			
Frequency	Annual Hours*	Annual Cost*	No. of vehicles
1 hour	1104	$77,280	1
30 min	2208	$154,560	2
20 min	3312	$231,840	3
15 min	4416	$309,120	4
Stop Detail	*Distance*	*Travel Time*	*Total Time*
1. Town of Jackson	0.0 miles	0.0 minutes	0 minutes
2. Airport	9.5 miles	12 min + 6 min	18 minutes
3. Moose	5.0 miles	7 min + 5 min	30 minutes
4. Airport	5.0 miles	7 min + 5 min	42 minutes
5. Town of Jackson	9.5 miles	12 min + 6 min	60 minutes

* Annual totals (hours and costs) are based on 92 days of service (June-August)

As indicated in Table 2, this route would start at 7:30 a.m., so that Park and concessioner employees could to get to work in the Moose area by 8:00 am. Times could be adjusted based on shift start times of employees at the airport, and when flights are schedule to arrive and depart the airport. The annual costs included herein are based on an operational cost of $70 per hour, and 92 days of service per year (June-August). It is possible that the service could be adjusted for the various season (winter, summer, etc.) so that the correct level of service is provided at the correct time.

The Town of Jackson and Teton County may desire to have service to the airport on a year-round basis. If that is the case, the Park may want a one or two runs from the Town of Jackson to Moose, so that Park employees could use the transit system to get to work year-round, and not just on a seasonal basis.

If Phase 1 were to be implemented, the service should be monitored and evaluated to determine the number of visitors and employees using the transit system. The Park would work with the service provider (likely START), to determine if the service is successful and cost effective, so that a decision would be made to continue Phase 1, and if implementation of Phase 2 is desired.

3.2 Potential Transit System: Phase 2

If the Phase 1 service is deemed successful, the decision may be made to expand transit service farther into the Park. Phase 2 would likely consist of connecting Moose to South Jenny Lake Table 3.

Table 3: Route 2 (Moose to South Jenny Lake) Detail

Route 2: Moose to South Jenny Lake			
Frequency	Annual Hours	Annual Cost	No. of vehicles
30 min	2208	$154,560	2
20 min	2208	$154,560	2
15 min	3312	$231,840	3
10 min	4416	$309,120	4
Stop Detail	*Distance*	*Travel Time*	*Total Time*
1. Moose	0.0 mi	0.0 min	0 min
2. Taggart Lake	3.0 mi	5 min + 5 min	10 min
3. South Jenny Lake	4.7 mi	7 min + 5 min	22 min
3. Taggart Lake	4.7 mi	7 min+ 5 min	34 min
4. Moose	3.0 mi	5 min	39 min

Based on the visitor survey, South Jenny Lake is the most visited site in the Park. Further, South Jenny Lake was identified as one of the areas that has parking congestion issues. Therefore, it is recommended that this service have at least half-hour frequency, which would increase the cost. However, given this route is approximately 40 minutes long, 20-minute frequency is possible for the same cost as 30-minute service.

By connecting Jackson to Moose (Phase 1) to South Jenny Lake (Phase 2) it is likely that some parking pressure would be reduced based on this service. Parking demand at South Jenny Lake would be one of the factors monitored to evaluate this route. Route 2b would be an "internal route" as it would start from the Moose area, with its first stop at the Taggart Lake Trailhead, a stop South Jenny Lake, then back to the Taggart Lake Trailhead. Based on the popularity of South Jenny Lake as a destination, it is anticipated that this route would use a larger vehicle (35-passenger bus).

3.3 Potential Transit System: Phase 3

With the opening of the LSR Preserve and pressure on Moose-Wilson Road, Phase 3 of the potential system would link Moose and the LSR Preserve Center. The route/service between Moose and the LSR Preserve assumes a speed limit of 20 miles per hour, and only 2 minutes to load/unload at Moose and LSR. The load/unload time is possible with a smaller vehicle (passenger load). However, if someone needs a wheelchair or other mobility device loaded, it would take at least 6 minutes to load, given the time it takes to deploy a vehicle lift. A smaller vehicle, even one with a lift or other accessibility device, would be a requirement on this route, based on the width and capacity of the Moose-Wilson Road. Table 4 provides detailed information on this phase/route.

Table 4: Route 3 (Moose to LSR Preserve) Detail

Route 3: Moose to LSR Preserve			
Frequency	Annual Hours	Annual Cost	No. of vehicles
1 hour	552	$38,640	1
30 min	1104	$77,280	1
15 min	2208	$154,560	2
Stop Detail	*Distance*	*Travel Time*	*Total Time*
1. Moose	0.0 miles	0.0 minutes	0 minutes
2. LSR	4.25 miles	13 min + 2 min	15 minutes
2. Moose	4.25 miles	13 minutes	28 minutes
Assumptions: Dodge Sprinter vehicle with 12-15 passenger capacity.			

3.4 Potential Transit System: Phase 4

If Phases 1 through 3 are implemented, and evaluated to be successful, a fourth phase of service could be implemented to link all major destinations within the Park. Phase 4 would link Moose to Colter Bay, providing service to Signal Mountain Lodge, Jackson Lake Dam and Jackson Lake Lodge, as well. This route would supplant transit service currently being offered by the Grand Teton Lodge Company.

This phase/route would not serve the destinations on route 2 in order to maintain travel time and frequency. This is the longest route of the potential system at 27.5 miles (one way). Estimated travel time would be 60 minutes. The details of the route are shown in Table 5.

Table 5: Route 4 (Moose to Colter Bay) Detail

Route 4: Moose to Colter Bay			
Frequency	Annual Hours	Annual Cost	No. of vehicles
2 hours	1104	$77,280	1
1 hour	2208	$154,560	2
30 min	4416	$309,120	4
20 min	6624	$463,680	6
Stop Detail	*Distance*	*Travel Time*	*Total Time*
1. Moose	0.0 mi	0.0 minutes	0 minutes
2. Signal Mountain Lodge	18.5mi	25 min + 5 min	30 minutes
3. Dam	1.5 mi	2 min + 2 min	34 minutes
4. Jackson Lake Lodge	2.5 mi	3 min + 6 min	43 minutes
5. Colter Bay	5.8 mi	8 min + 9 min	60 minutes

Given the length of this route, and the stops, a larger 35-passenger vehicle should be used for this service. As noted with the previous services, this route/phase uses an operational cost of $70 per hour; and is based on 92 days of service (June – August).

If all four phases/services are ultimately implemented, the proposed service would be as shown in Figure 13. The potential system map shows service to Jenny Lake Lodge, which could be

added to the Phase 2 service, if deemed necessary. However, since this is a relatively small lodge, it may not be necessary to service that location. Evaluation of all the routes/phases may lead to modifications, such as adding some stops, and eliminating others.

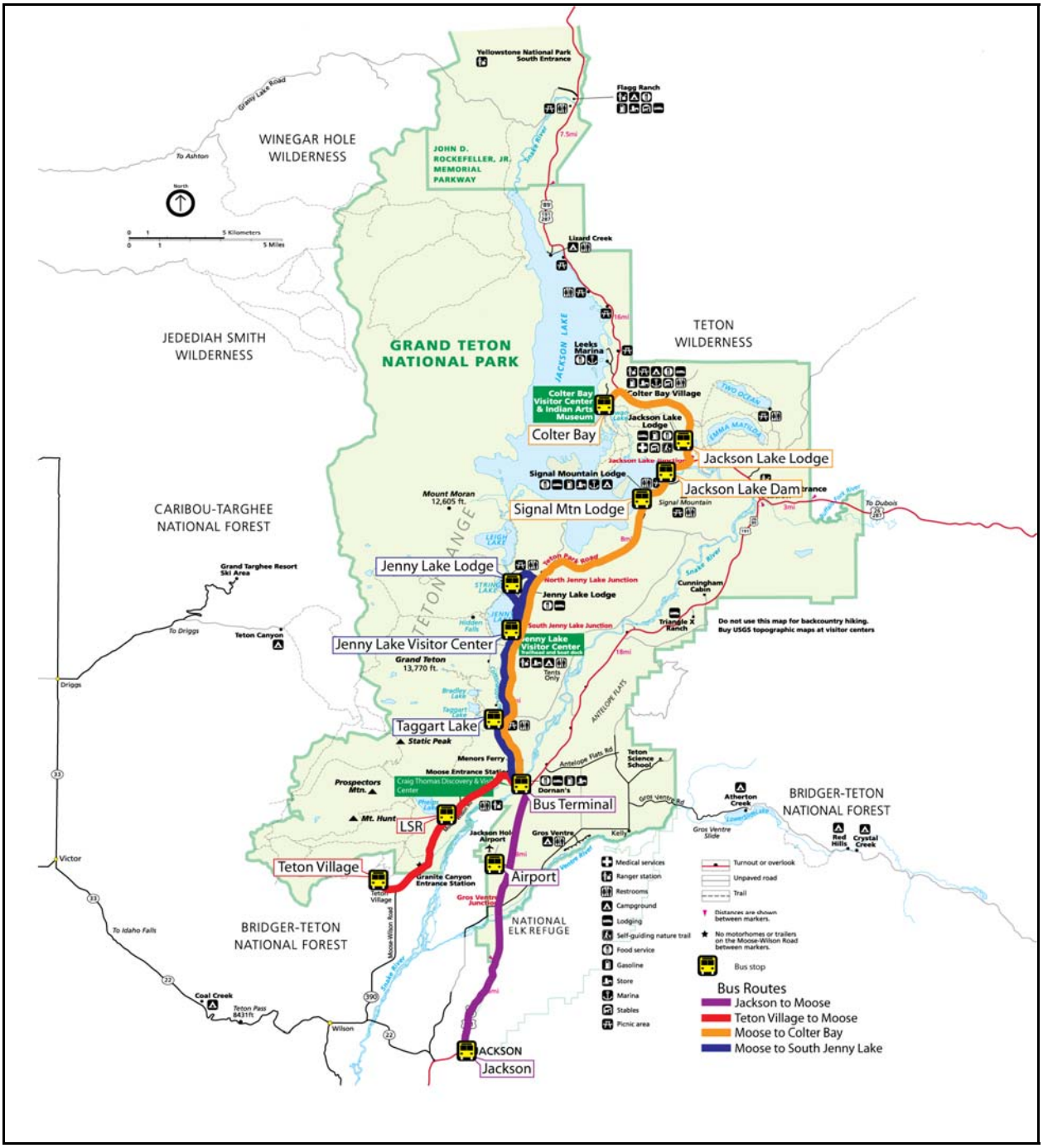


Figure 13: Potential GRTE Transit System

3.5 Potential System Summary

Implementing a transit system in Grand Teton National Park is not necessary at this time, based on traffic congestion and other issues, however, it may be desirable, as a "value added" service to tourists and other individuals who work in or visit the Park. Dependent on funding being made available from non-National Park Service sources, it is logical to use a phased approach to determine how successful transit may ultimately be in the Park. This Chapter provided four phases for implementing a potential system in the Park.

With current discussions in the area focusing on connecting the Town of Jackson to the airport (which is in the Park boundaries), Phase 1 would be based on a route that would connect the Town of Jackson with the airport, and Moose (Park Headquarters and the Craig Thomas Discovery and Visitor Center). If Phase 1 is evaluated to be successful, then Phase 2 could be implemented.

Phase 2 would connect Moose to South Jenny Lake, while Phase 3 would connect Moose to the LSR Preserve. Phases/routes 2 and 3 could be implemented concurrently, or separately, depending upon changes in conditions, such as parking issues at LSR, or increased traffic on the Moose-Wilson Road. Implementation of Phase 2 and 3 would also be dependent upon securing sufficient funding for the transit service. As noted in this Chapter, it is anticipated that the services/routes would operate for 92 days, June-August during the busiest times for the Park. Based on evaluation of the services/routes, the number of days could be increased or reduced.

Phase 4 of the potential transit system would provide a route between Moose and destinations such as Signal Mountain Lodge, Jackson Lake Dam, Jackson Lake Lodge and Colter Bay. With Phase 4 implemented, most all major destinations in the Park would be served. With all four phases implemented, it is possible that the Grand Teton Lodge Company would no longer need to provide its existing service, although their system typically operates from June through mid-September.

By utilizing a phased approach, the Park can ensure that existing services are effective and efficient, and have adequate funding. Based on the fact that the Park has a backlog of maintenance issues, it will not be using any existing funding for transit purposes. A phased approach will allow the Park and relevant stakeholders to obtain the funding necessary to ensure current transit services are adequately funded, and that funding is secured for each new phase to be implemented.

The following (final) chapter, Chapter 4, provides the conclusions and recommendations of this plan.

4. CONCLUSIONS AND RECOMMENDATIONS

This chapter provides the conclusions and recommendations based on the information highlighted in the previous chapters. In addition to the information highlighted in the previous chapters, more detailed data can be found in the Appendices: Peer Review (Appendix A), Visitor and Employee Surveys and Stakeholder Interviews (Appendix B, C, and D), Financial Resources (Appendix E) and Service Alternatives and Analysis (Appendix F).

The conclusions and recommendations herein are based on the necessity and feasibility of a potential transit system in the Park. Necessity was defined as the basis that something is essential, a basic requirement, or a circumstance that creates a need or an obligation. The data indicated that transit is not a necessity at this time for the Park. However, the potential transit system could be feasible, without being necessary.

In working on this plan, "feasibility" (for a transit system) was defined as, being desirable by visitors, employees and others who may ride such as system; having a stable source of funding for operations and capital; and identifying a means for the on-going administration, operations and maintenance of a transit system.

The data herein indicated a general desirability for transit, but other issues such as the mechanisms for administering, operating and maintaining a potential transit system still need to be finalize before a system would be feasible. Further, as noted within this document, there is not adequate money within Grand Teton National Park at this time to fund a potential transit system. This document has, however, noted several potential funding sources. Funding is one key issue that would need to be finalized before a transit system could begin.

There are several options available to the Park for making a decision on how to proceed, given the information herein. These options include ending the process with this plan, or to continue to gather data and make informed decisions that may lead to implementation of a transit system in and around the Park. If funding can be identified and other administration and operating issues resolved, the information herein does provide a foundation for how a system could be implemented in a phased approach to determine the sustainability of a transit system.

The authors realize the decision of whether or not to implement a transit system within the Park will not necessarily follow an easy or clear path. There are many priorities within the Park and surrounding region. Stakeholders such as the Town of Jackson and Teton County may provide strong support, or support may be limited, based on other priorities that may emerge in the near future. In addition, the funding necessary to begin and sustain the potential transit system may or may not be easy to identify and secure.

While the data herein highlights that a transit system within the Park is clearly not necessary; it is viewed as desirable. With the Park's current and forecasted financial resources, a non-National Park Service funding source would need to be secured to make the potential system feasible. Further, administration, operation, and maintenance items would need to be resolved, if a pilot/demonstration phase of a potential transit system were to be implemented. While the information herein provides a basis for moving forward, a wider discussion with stakeholders will be critical, if the Park decides to continue to explore the possibility of implementing a transit system in and around Grand Teton National Park.

In summary, this plan should not be viewed as the end of the process, but rather the beginning of a process that may lead to the implementation of public transportation in Grand Teton National Park.

5. REFERENCES

1. U. S. Department of the Interior. National Park Service. 2006. *Grand Teton National Park Transportation Plan/Environmental Impact Statement,* September.

2. MSN Encarta® Dictionary. http://encarta.msn.com/dictionary_/feasibility.html (web site accessed June 2, 2008).

3. Grand Teton National Park, Park Facility Management Division, 2008-2017 Facility Management Program Summary. Provided June 2008 by Grand Teton National Park.

4. U. S. Department of the Interior. National Park Service Public Use Statistics Office. *NPS Stats*. http://www.nature.nps.gov/stats/ (web site accessed June 27, 2008).

5. Wilson, B. 2000. Transit and the Park Experience: Preservation, Access, Economics and Opportunity. *Community Transportation* Vol. 18, No. 7, p.31.

6. Tom Crikelair Associates, 2007. Island Explorer Short Range Transit Plan. http://www.exploreacadia.com/IEX_SRTP.pdf (May 21).

7. HDR Alaska, Inc. 2006. Needs Assessment & Feasibility Study for a Community Transportation System.

8. U. S. Department of the Interior. National Park Service. Denali National Park and Preserve. http://www.nps.gov/dena (web site accessed Dec. 26, 2007).

9. Doyon, Limited/Aramark. Denali National Park Concession Joint Venture. http://www.reservedenali.com/ (web site accessed Dec. 8, 2007).

10. Phyllis Motsko, Concession Management Specialist, Denali National Park and Preserve, e-mail communication, Dec. 13, 2007.

11. U. S. Department of the Interior. National Park Service. Glacier National Park. http://www.nps.gov/glac/index.htm (web site accessed Nov. 5, 2007).

12. Gary Danczyk, Project Manager, Glacier National Park, e-mail communication, Feb. 25, 2008.

13. U. S. Department of the Interior. National Park Service. Rocky Mountain National Park, http://www.nps.gov/romo/ (web site accessed May 1, 2008).

14. John Hannon, Rocky Mountain National Park, e-mail communication, May 4, 2008.

15. Suzy Blackhurst, Estes Park Convention & Visitors Bureau, e-mail communication, May 9, 2008.

16. U. S. Department of the Interior. National Park Service. Santa Monica Mountains National Recreation Area. http://www.nps.gov/samo/ (accessed Dec. 20, 2007).

17. Christopher MacKechnie. *The ParkLINK Shuttle: Intrapark Transit in a Large Rural Park Adjacent to a Large Urbanized Area* (Report received through e-mail on Feb. 8, 2008).

18. Margie Steigerwald, Outdoor Recreational Planner, Santa Monica Mountains National Recreation Area, e-mail communication, Dec. 10, 2007.

19. U. S. Department of the Interior. National Park Service. Zion National Park. http://www.nps.gov/zion/ (web site accessed Oct. 25, 2007).

20. U. S. Department of the Interior. National Park Service. Nature & Science. http://www.nature.nps.gov/ (web site accessed Oct. 25, 2007).

21. Kirk Scott, Zion National Park, e-mail communication Feb. 25, 2008.

22. Jack Burns and Dave Webster, Zion National Park, e-mail communication on Dec. 17, 2007.

23. Federal Transit Administration. *Alternative Transportation in Parks and Public Lands.* http://www.fta.dot.gov/documents/Appendix_C_NS_2008.doc (document accessed Dec. 31, 2007).

24. Federal Highway Administration. Congestion Mitigation and Air Quality (CMAQ) Improvement Program. http://www.fhwa.dot.gov/environment/cmaqpgs/ (web site accessed Dec. 31, 2007).

25. Federal Highway Administration. 1999. *The Congestion Mitigation and Air Quality Improvement (CMAQ) Program Under the Transportation Equity Act for the 21st Century (TEA-21): Program Guidance*. http://www.fhwa.dot.gov/environment/cmaq99gd.pdf (document accessed Dec. 31, 2007).

26. Federal Highway Administration. Transportation, Community, and System Preservation Program–FY2006 Grants. http://www.fhwa.dot.gov/tcsp/06award.html (web site accessed Dec. 31, 2007).

27. Federal Highway Administration. Public Lands Highway Discretionary Program Information. http://www.fhwa.dot.gov/discretionary/plhcurrsola3.cfm (web site accessed Dec. 31, 2007).

28. U. S. Department of the Interior. Fish & Wildlife Service. 2006. *A Guide for Seeking Transportation Enhancement Program Funds in Partnership with State and Local Government* (June).

29. Cambridge Systematics, Inc. 2001. *Federal Lands Alternative Transportation System Study: Financing Opportunities* (August).

30. U. S. Department of the Interior. National Business Center, Transportation Subsidy Program. Transportation Subsidy Program Policy and Procedures via FAQs. http://www.nbc.gov/facilities/transportation_subsidy_program_faqs.html (web site accessed February 2008).

31. U. S. Department of Transportation, John A. Volpe National Transportation Systems Center. 2003. *Partnering for Transportation Success at Acadia National Park. A Case Study of the Island Explorer Shuttle Bus System at Mount Desert Island and Acadia National Park*.

6. APPENDIX A: PEER GROUP INFORMATION

In this chapter, the transit systems of five National Parks and one National Recreation Area are analyzed based on their service characteristics, years in service, their capital, operation and management systems, ownership and partnerships. The majority of these systems were started in response to specific issues, such as visitors' impact on natural resources, traffic or parking congestion, or related issues, no of which are currently significant issues in Grand Teton National Park. The six systems analyzed are:

- Acadia National Park; Bar Harbor, Maine.
- Denali National Park and Preserve; Denali Park, Alaska.
- Glacier National Park; West Glacier, Montana.
- Rocky Mountain National Park; Estes Park, Colorado.
- Santa Monica Mountains National Recreation Area; Thousand Oaks, California.
- Zion National Park; Springdale, Utah.

The Acadia and Zion National Park systems were started about the same time and set the standard for successful transit systems. The Acadia transit system provides an alternative transportation option to park visitors and locals, and is a non-mandatory transit system (visitors do not need to ride the system to view certain areas of the Park). The Zion transit system is a mandatory transit system operated on the park's most scenic road from its gateway community. The Glacier National Park system started in 2007, and ended its first season on a successful note. The transit system at Santa Monica Mountains National Recreation Area (SMMNRA) started in 2005 as a three-year pilot project. As of the date of this report, SMMNRA did not intend to continue the system due to low ridership. Denali National Park and Preserve has a mandatory, fare-based transit system. The Park operated the system until 1995, at which time the service was transferred to a park concessioner. The Rocky Mountain National Park service began as a voluntary effort in the 1970s, and has expanded, with the most recent expansion effort in 2006.

The remainder of this section provides a more detailed description of each of the noted transit systems.

6.1 Acadia National Park, Bar Harbor, Maine

Acadia National Park, a rugged island off the coast of Maine, is home to a diverse selection of plants and animals and the tallest mountain along the U.S. Atlantic coast. The land on which the park is located was donated by 20th Century nature lovers who wanted the land to be preserved. In 2007, a total of 2,202,228 people visited the park [4].

Park Transit

A non-profit organization, Downeast Transportation, Inc., runs the transit system in Acadia National Park and in Ellsworth, a gateway community. In the early 1990s, this organization recognized a need for public transit in the park, especially for campground visitors. In 1993, Downeast launched a shuttle service between park campground destinations and the island town of Bar Harbor with $2.00 fare, after securing interest from campground operators. In the mid-1990s, traffic congestion became worse, and it forced the park officials, gateway communities (The Mount Desert League of Towns), private businesses outside the park, and park

concessioners to explore an alternative transportation system in the park connected to the gateway communities.

After three years of discussion and planning, Downeast, Acadia National Park and the Mount Desert League of Towns were able to secure Congestion Mitigation and Air Quality (CMAQ) funds from the Maine Department of Transportation to help pay for an expansion of the system. The four island towns, the Park, Friends of Acadia (a non-profit organization that supports the Park), and the Bar Harbor Chamber of Commerce contributed local match funds. The park allotted a portion of its entrance fees to the new transit system. Finally in June 1999, a fare-free comprehensive park shuttle service was launched on eight routes within park connected to gateway community transit systems and a regional airport. A detailed development timeline of Acadia National Park's transit system is shown in Table 7. Downeast spent the CMAQ funds to purchase eight propane-fueled buses. The local match was used for operation, planning and marketing expenses [5].

The Island Explorer, as the system is named, has other links to various public transportation facilities around the park to enhance the comprehensive multimodal transportation network. A strong network of alternative transportation systems that existed around Acadia provided a foundation for expanding transit into Acadia National Park. Currently there are 29 propane-powered buses on nine routes that travel from 6:45 a.m. to 10:45 p.m. between June 23 and October 16. The Island Explorer is now a unique partnership between:

- Acadia National Park,
- U.S. Department of Transportation,
- Maine Department of Transportation,
- Friends of Acadia,
- Six area municipalities, and
- Private businesses and corporations, including L.L.Bean.

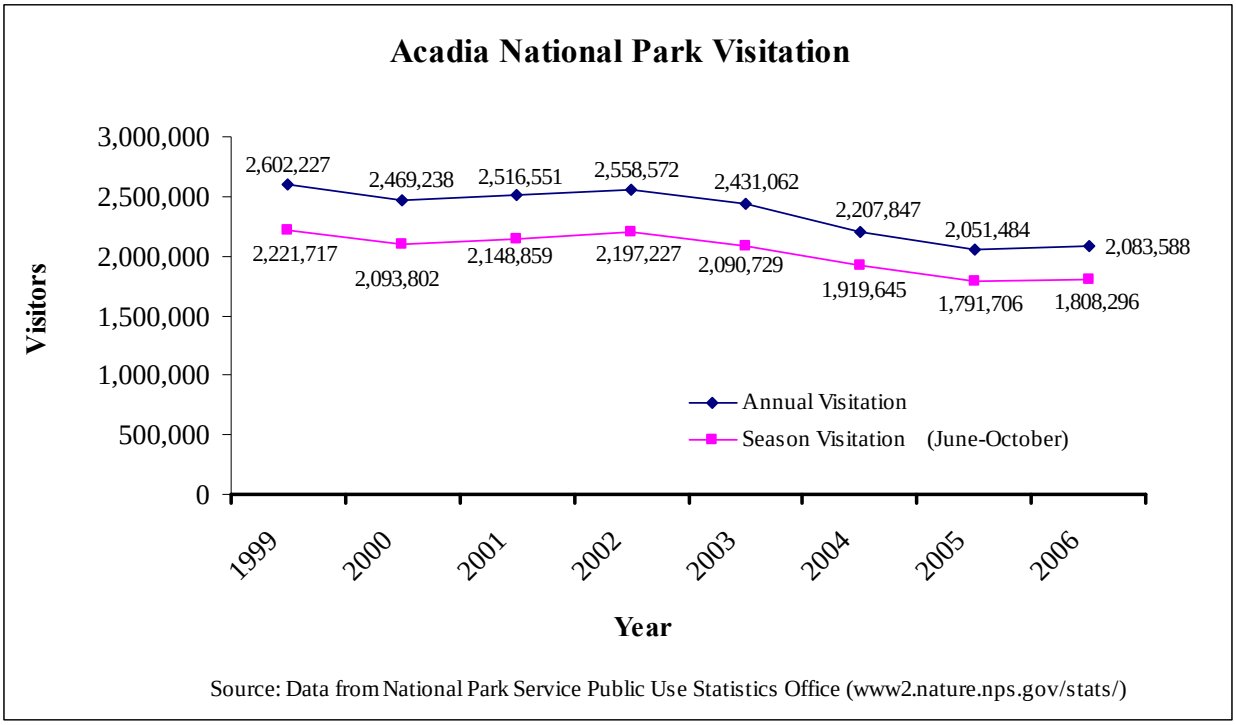


Figure 14: Acadia National Park Visitation Information

Since 1999, park visitation has been gradually decreasing (Figure 14). In 1999, 2.6 million visitors visited the park and in 2006, there were only 2.08 million visitors. Despite decreasing visitation, an improved transit system has attracted more riders, and ridership has been increasing since 1999 (Figure 15).

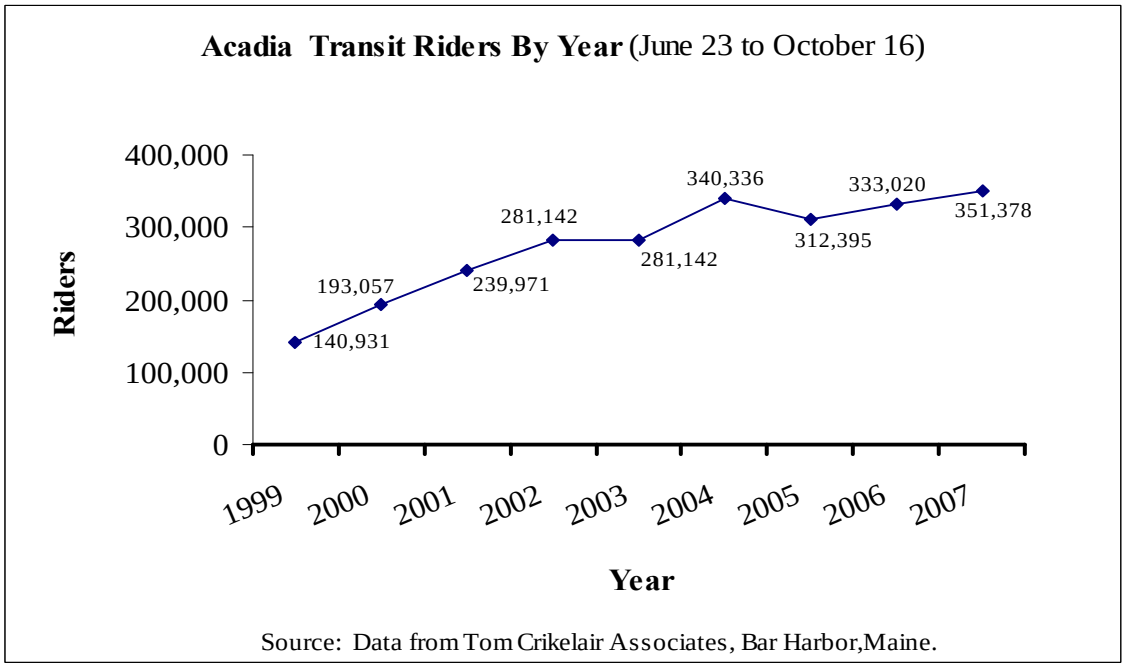


Figure 15: Island Explorer Ridership

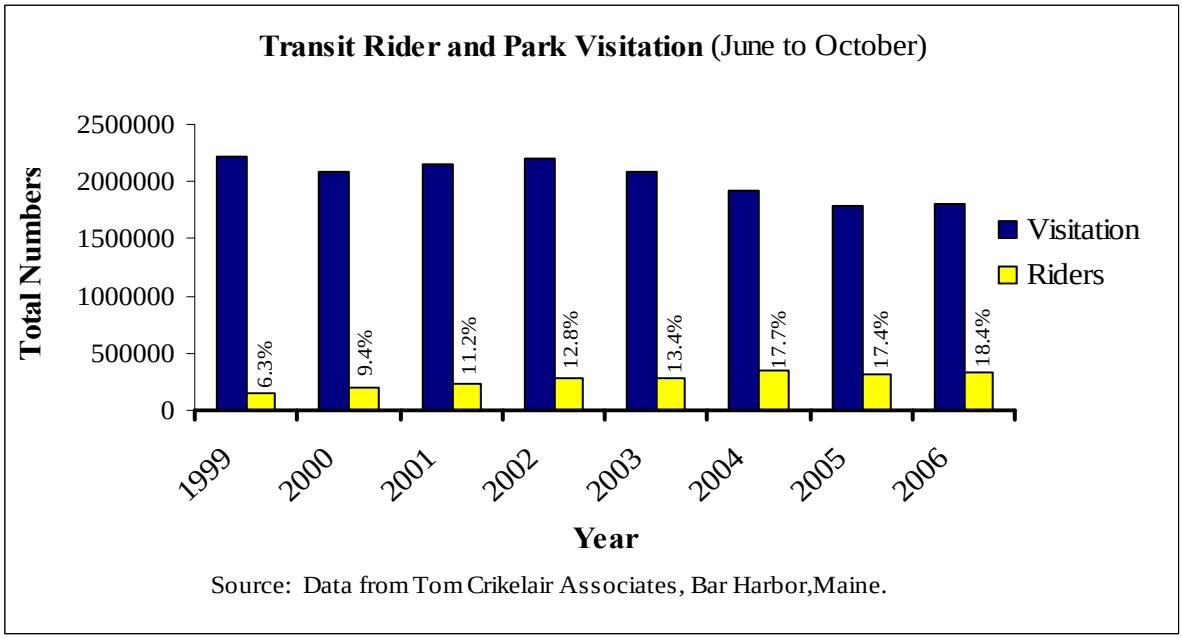
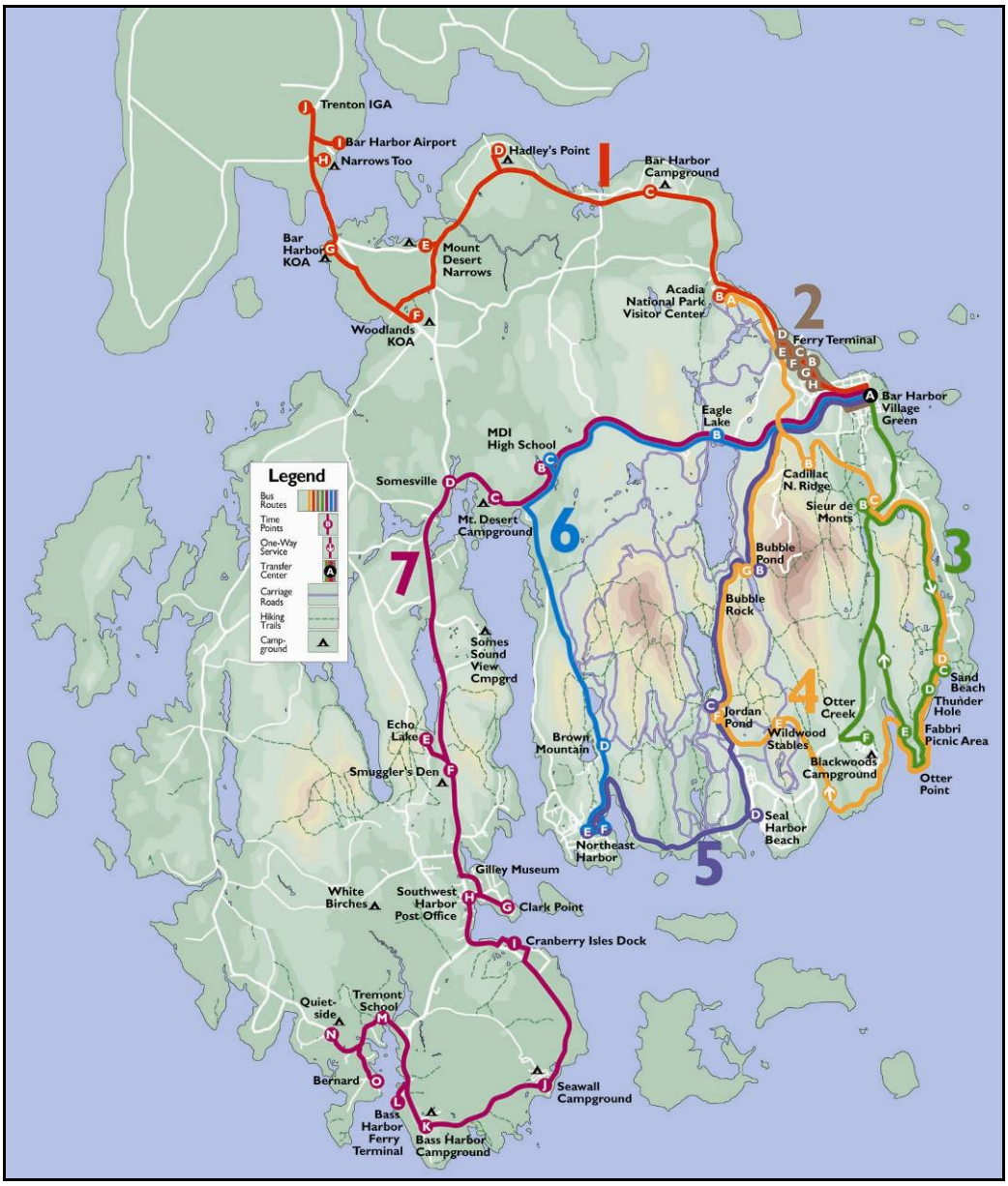


Figure 16: Acadia Visitation versus Ridership

Figure 16 combines the information from Figure 2 and Figure 3, and highlights the fact that while overall visitation has decreased, ridership has increased from 6.3 percent of total visitors in 1999 to 18.4 percent in 2006.

This increase in the percentage of visitors using the bus may be due to the fact that the number of transit routes has expanded from seven in 2002 to eight routes for 2003 and 2004, to nine routes which have been in service from 2005 to the present. Figure 17 highlights seven of the nine routes. The two routes not shown are the Schoodic route which serves Acadia National Park's Schoodic Point, with stops in Winter Harbor, Prospect Harbor, and Birch Harbor, and there is also the Bicycle Express, which operates every half hour between the Bar Harbor Village Green and Acadia National Park's carriage road system at Eagle Lake.



Source: Island Explorer

Figure 17: Bus Routes in Acadia National Park

In fiscal year 2007, the Island Explorer provided 245 hours of service per day during the summer season and 108 hours per day during the fall season. The annualized operating cost was $48.49 per hour. Average ridership for the summer season averaged 4,120 rides per day, while the average ridership was 1,144 rides per day during the fall season. A total of 351,378 rides were given for the June-October 2007 season [6].

A transit system user fee is embedded in the park entrance fees. When the transportation system is in operation, the park takes $10 from every park pass to support the fare-free Island Explorer bus system. A breakdown of revenue, expenses and net revenue for the Island Explorer are shown in Table 6.

Table 6: Island Explorer FY07 Financial Data

Types of Funds	Amount	Percentage
Revenue		
Acadia National Park Fund	$450,000	37.6%
Federal Transit Fund	$367,500	30.7%
Municipalities Appropriation	$60,200	5.0%
Corporate support	$247,500	20.7%
Business Direct Service	$34,880	2.9%
Business Donations	$6,500	0.5%
Individual Donations	$25,000	2.1%
Friend Groups	$1,000	0.1%
Interest	$4,000	0.3%
Total	$1,196,580	100%
Expenses		
Actual expenses	$1,143,743	95%
Net Revenue	$52,837	5%

Source: Island Explorer Short Range Transit Plan

During FY07, Acadia National Park spent $ 450,000 on the system's operating expenses. The Downeast Corporation received $367,500 (30.7%) from the Federal Transit Administration's section 5311 fund. Maine DOT administers FTA 5311 funds, and its guidelines stipulate that this fund cannot be more than 50 percent of the total operating cost. For FY08 or FY09, the Island Explorer is also expecting $ 51,000 under FTA's Job Access and Reverse Commute (JARC) fund. In addition to the corporate support from L.L.Bean and local municipal appropriations, Downeast charged annual fees to hotels and campgrounds for providing front door service. L.L.Bean remains committed to donating around $200,000 per year through 2012. The Island Explorer's total revenue was $1,196,580, and operating expenses were $1,143,743. The net revenue was 5 percent, which will be reserved for a future local match to FTA funding for capital expenses. A detail budget of Island Explorer is shown in Table 8.

Capital expenses for the Acadia service are covered from various sources, including federal and state grant sources such as the FTA's Alternative Transportation in Parks and Public Lands (ATTPL) program. Capital expenses for FY07 were for replacement vehicles, Intelligent Transportation Systems (ITS) and computer equipment, bus stop improvements, and the Acadia Gateway Center. During FY07, eight 28-passenger buses at a cost of $1,504,000 ($188,000 each) and two passenger vans at $78,336 ($39,168 each) were purchased to replace vehicles dating back to FY99. For this purchase, funds of $1,496,000 were obtained through the FTA ATTPL program, while $86,336 came from other FTA sources [5].

Figure 18 shows one of the vehicles that is used in the Island Explorer service. The shuttle buses are equipped with Automatic Vehicle Location —A Global Positioning Satellite (GPS) location technology. The AVL system provides a real-time location information system and estimated arrival times for the next bus due at each location. The real-time system is updated every three minutes. The AVL system was sponsored by FTA and the U.S. Department of Interior, and the

project procurement and administration oversights were provided by the Maine Department of Transportation [6].

Source: Hancock County-Bar Harbor Airport

Figure 18: Island Explorer (Acadia National Park) Vehicle

As previously noted, it can take a considerable amount of time between planning for, and implementing a transit system. Table 7 provides information on the time it took for the planning and implementation of the Island Explorer, and Table 8 shows detailed budget information for the transit system.

Table 7: The Island Explorer Development Timeline

1992	Acadia National Park (Acadia NP) adopts a general management plan (GMP) that recommends the National Park Service (NPS) work with Mount Desert Island (MDI) municipalities and others to implement an island-wide transportation system. The GMP includes a system concept that is based on a feasibility study.
1993	Downeast Transportation, Inc. (DTI), a non-profit transit provider operating in the region, introduces seasonal shuttle service between local campgrounds and Acadia NP. The system has one route and is supported by Congestion Mitigation and Air Quality Improvement (CMAQ) funds. Users pay a $2 fare to ride.
1995	Congestion problems in MDI communities become severe enough that the Mount Desert Island League of Towns (MDILOT) begins to explore options. As a voting member of MDILOT, Acadia NP participates and presents the transit concept from its GMP as a possible solution.
1996	MDILOT submits an application for funding of an island-wide transit system to the Maine Department of Transportation's (DOT) T2000 Program, an initiative designed to encourage innovative local transportation projects.
1997	With financial support from the Friends of Acadia (FOA), DTI eliminates the $2 fare for riders on the campground route. The system experiences a 600% increase in use from 3,000 riders in 1996 to 12,000 riders in the first year of fare-free service. Maine DOT awards funding to the Island Explorer Shuttle Bus System (Island Explorer) project through the T2000 Program and includes the proposed system in its biennial transportation improvement program (TIP). Acadia NP and its partners begin working closely with Maine DOT in order to implement the approved system.
1998	Maine DOT purchases eight propane-fueled buses with funding from the federal CMAQ program, a local match provided by Acadia NP, and a NPS grant.
1999	DTI begins operating the Island Explorer on six routes from June through Labor Day. Operations and maintenance funding is provided by the CMAQ program, Acadia NP entrance fees (through the NPS fee demonstration program), FOA, MDI towns, and businesses with shuttle stops. The system remains voluntary and without fare and carries more than 142,000 riders in its first season of operation.
2000-2001	The Island Explorer expands to seven routes in 2000. Nine buses are added, purchased by NPS with funds procured through the NPS Alternative Transportation Program. The buses are loaned to Maine DOT through a cooperative agreement with NPS. In its first three years of service, the system experiences a 75 percent increase in ridership, with the largest increase on routes that serve campgrounds.
2002	L.L. Bean pledges $1 million in the form of a qualified sponsor agreement to support the Island Explorer. FOA is the designated recipient of the funding, 99 percent of which will support system operations in order to extend service past Labor Day to Columbus Day.

Source: Partnering for Transportation Success at Acadia National Park, National Park Service, Alternative Transportation Program, 2003.

Table 8: Island Explorer Budget, FY 05-08

Types of Expenses	Actual Fy 05	Actual Fy 06	Budget Fy 07	Projected Fy 07	Budget Fy 08	Proj 07 to Budget 08 Increase 07 to 08	Proj 07 to Budget 08 Percent 07 to 08
ADMINISTRATIVE							
1. Salaries	78,671	83,237	89,419	89,635	84,845	-4,790	-5.3%
2. Benefits	10,940	16,372	20,225	15,228	22,199	6,971	45.8%
3. Rent	14,500	14,500	14,500	14,500	13,600	-900	-6.2%
4. Utilities	10,702	9,866	10,430	9,516	10,840	1,324	13.9%
5. Office Supplies	1,977	2,359	1,500	1,872	1,500	-372	-19.9%
6. Postage	628	606	900	741	864	123	16.6%
7. Travel	3,781	2,341	3,753	3,753	3,600	-153	-4.1%
8. Printing	14,918	10,039	17,500	19,354	17,500	-1,854	-9.6%
9. Advertising	2,025	5,470	5,350	5,264	4,600	-664	-12.6%
10. Insurance	115,998	99,823	147,322	133,048	138,582	5,534	4.2%
11. Audit	5,963	4,463	4,500	5,000	3,600	-1,400	-28.0%
12. Dues & Subscriptions	1,113	1,045	1,163	1,421	930	-491	-34.6%
13. Consulting	28,880	22,301	50,000	32,465	50,000	17,535	54.0%
14. Equipment Repairs	759	4,607	2,000	1,438	2,000	562	39.1%
15. ITS Maintenance	23,605	13,902	73,673	68,673	73,673	5,000	7.3%
16. Other	8,772	3,154	1,800	5,420	1,800	-3,620	-66.8%
Total Admin Expenses	323,229	294,085	444,034	407,328	430,133	22,805	5.6%
OPERATING							
1. Wages	332,039	329,279	358,500	363,500	405,397	41,897	11.5%
2. Benefits	51,384	48,949	63,562	61,459	71,877	10,418	17.0%
3. Fuel	67,093	84,771	89,674	105,515	122,969	17,454	16.5%
4. Repairs	148,791	189,700	165,893	186,864	176,341	-10,523	-5.6%
5. Drug Tests	1,929	4,840	5,400	5,219	5,700	481	9.2%
6. Bus Wash	4,220	0	10,800	9,214	12,750	3,536	38.4%
7. Uniforms	3,176	2,460	2,000	2,702	2,000	-702	-26.0%
8. Bus Lease	5,201	1,114	2,480	0	0	0	0.0%
9. Taxi Services		0	0	0	0	0	0.0%
10. Other	380	0	1,400	6,902	1,400	-5,502	-79.7%
Total Operating Expenses	614,214	661,113	699,709	741,375	798,434	57,059	7.7%
Admin and Operating	*937,443*	*955,198*	*1,143,743*	*1,148,703*	*1,228,567*	*79,864*	*7.0%*

Source: Tom Crikelair Associates [6].

In short, the Island Explorer has been a very effective voluntary system that has financial support from a variety of sources. The next system, in Denali National Park, however, is a mandatory system.

6.2 Denali National Park and Preserve, Denali Park, Alaska

An international biosphere reserve, Denali National Park and Preserve was established as Mount McKinley National Park on February 26, 1917. Mount McKinley, which is North America's highest mountain at 20,320 feet tall, is located in the Park. Denali National Park is well known

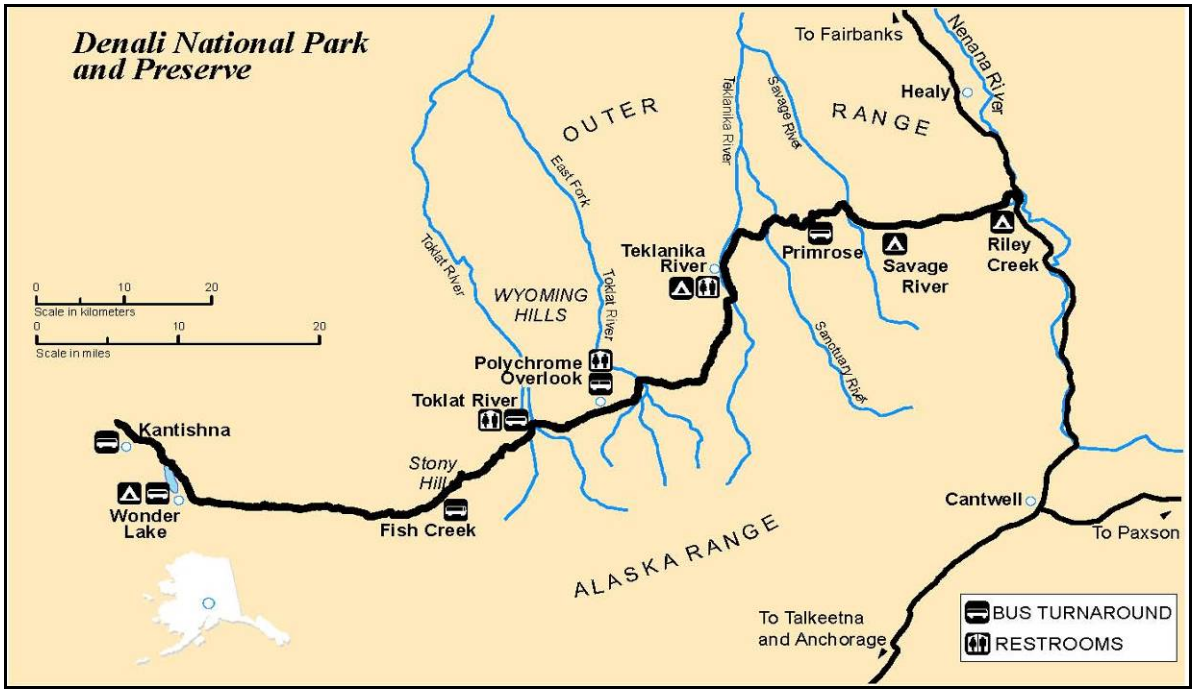
for its sub-arctic ecosystem with spectacular mountains and large glaciers, as well as large mammals such as grizzly bears, wolves, sheep, and moose. Denali National Park is open year-round, but the majority of visitors come between mid-May and mid-September. Visitation averages 400,000 visits per year [7].

Park Transit

Since the mid-1980s the Park has limited the number of vehicles trips in the more remote areas (17 miles past the visitor center). The limit of 10,512 trips is in an effort to preserve the Park's natural resources and wildlife movements. Furthermore, vehicle traffic is allowed only during mid-May to mid-September, and private vehicles are not permitted. For the balance of the year, visitors have to travel by ski or dog sled.

Alternate transportation is not a new option in Denali National Park; bus service has been available since the 1920s. Since rail travel was the only previous mode, a transit system was necessary for the Park. In 1972, the Park Service constructed a road deeper into the Park to access the most beautiful wildlife areas. But to minimize impacts on the land and wildlife, it's the transit system, the People Mover, was expanded.

Prior to 1995, the bus system was managed by the Park and operated by a private company. Funding from federal sources was used to provide a fare-free transit service until 1995. Operating costs increased beyond funding, and the Park did not see any other options for revenue. At that point, the Park decided to hand over the operation to concessioners. The current courtesy transportation (regular shuttle buses) and tour buses are operated by the park concessioners' joint venture—Doyon/Aramark Joint Venture—since 1995 [7].



Source: Doyon/ARAMARK

Figure 19: Denali National Park and Preserve Bus Routes

The park transit system is operated on a main road which accesses various camping areas and provides for wildlife viewing (Figure 19). As previously noted, there is a vehicle restriction at 17 miles from the visitor center (the Primrose Bus Stop). Bus services are divided into three different tours based on visitor interest: Short Tour; Long Tour; and Camp Tour.

The short tour is operated up to Primrose point, while the Long tour and Camp tour are operated beyond that point. The buses used by the concessioners are not standardized, however buses for the long tour typically hold 53 passengers, the short tour buses hold 48 passengers, and the camp tour buses typically hold 28 passengers. There is currently a fleet of 130 ultra-low-sulfur diesel Blue Bird and Thomas buses used in the service (Figure 20).

Source: National Energy Technology Laboratory

Figure 20: A Typical Transit Bus, Denali National Park and Preserve

In 2007, a total of 90,000 rides were provided on the short tour, 77,606 rides on the long tour, and 130,013 rides for the camp tour. Visitation and ridership figures for the Park are shown in Figure 21. Approximately 75 percent of visitors ride the buses to access various locations within the Park [9]. This is a relatively high number considering the bus system is not free, and the fare is based on the specific route (tour).

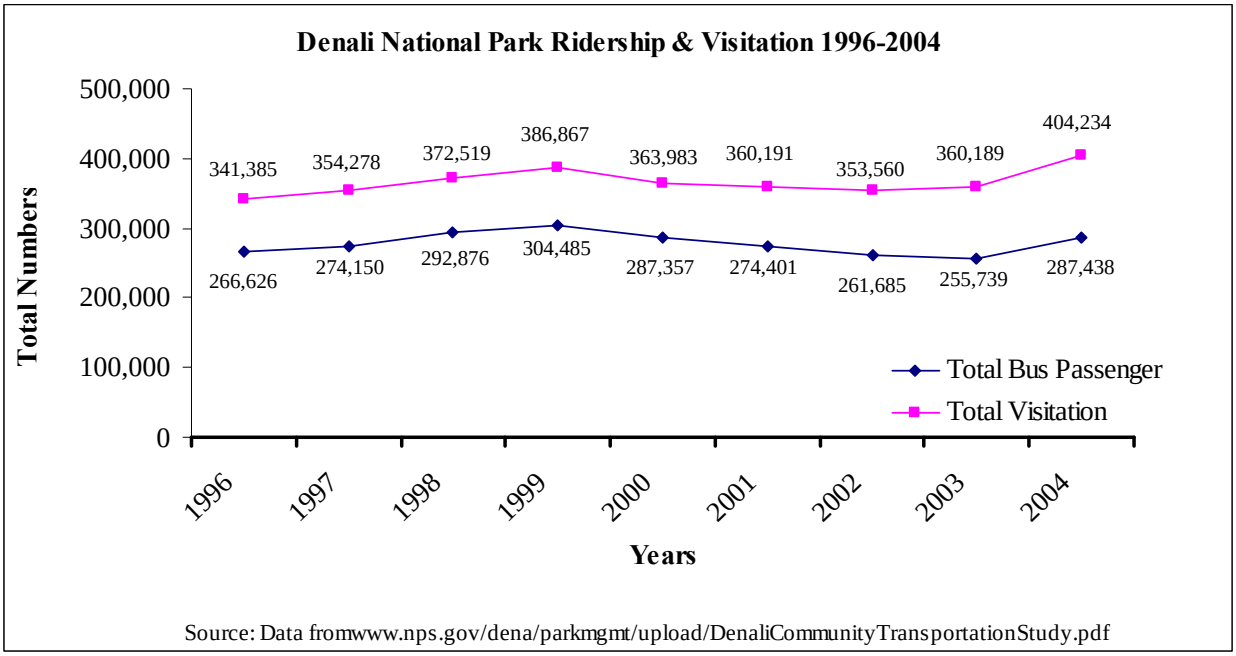


Figure 21: Denali Park Ridership and Visitation

Bus schedules are varied and complex due to vehicle restrictions and allocating slots among the various services (tours). A detailed time schedule is shown in Table 10. Information about routes, fares, trip duration, distance and service duration is shown in Table 9.

Table 9: Denali Shuttle Bus Service and Ridership Information

Shuttle Bus	Fare		Turnaround	Trip Duration	Service	Riders
	Age 18 ≥	Age 15-17				
Short Tour	$65.95	$28.00	17 mile	3 to 4 hours	May 13-Sept 21	90,000
Long Tour						
Polychrome	$22.75	$11.50	43 mile	5 hours	June 1-Aug 20	77,606
Toklat	$22.75	$11.50	53 mile	6.5 hours	May 20-Sept 11	
Fish Creek	$29.25	$14.50	63 mile	8 hours	June 1-Sept 11	
Wonder Lake	$40.00	$20.00	85 mile	11 hours	June 8-Sept 11	
Kantishna	$43.75	$21.75	91 mile	13 hours	June 8-Sept 11	
Camp Tour	$29.25	$14.50	-	-	May 24-Sept 11	130,013

Source: Data from www.reservedenali.com/shuttles/index.cfm & Motsko,Phyllis

Table 10: Denali National Park and Preserve Transit Schedule, 2008

Route	Date				
	05/24 – 05/31	**06/01 – 06/07**	**06/08 – 08/20**	**08/21 – 09/03**	**09/04 – 09/11**
Polychrome	Not in Service	***5:15****	***5:15****	Not in Service	Not in Service
Toklat	7:00, 7:30, 8:00*, 8:30, 9:00* 9:30, 10:00*, 10:30, 11:30* 12:30, 1:30*, 2:30	9:30, ***3:00****	6:30, 9:30, 11:30, ***3:00****	7:15, 9:30, ***12:00****	9:30, ***12:00****
Fish Creek/ Eielson	Not in Service	6:30, 7:00*, 7:30, 8:00*, 8:30 9:00*, 9:30, 10:00*, 10:30, 11:00* ***12:00*, 1:00*, 2:00***	6:00, 6:30, 7:00*, 7:30, 8:00* 8:30, 9:00*, 9:30 10:00*, 10:30*, 11:00 ***12:00*, 1:00*, 2:00***	6:30, 7:00*, 7:30, 8:00*, 8:30 9:00*, 9:30, 10:00*, 11:00*, 11:30, ***1:00, 2:00****	7:30, 8:00*, 8:30, 9:00*, 10:00* 11:00*, ***12:30***
Wonder Lake	Not in Service	Not in Service	5:30, 6:15*, 6:45, 7:15, 9:15 10:15*, 11:15	6:45*, 7:15, 7:45, 8:45 9:15, 10:15*, 11:15	7:15, 8:45*, 9:15, 9:45*
Kantishna	Not in Service	Not in Service	8:15*	8:15*	8:15*
Camper Bus	**7:30, *12:30***	***7:30, 12:30***	7:00, 11:00, ***2:00, 4:00***	7:00, 10:30, ***1:30,, 3:30***	7:30, 10:30, ***1:30, 3:30***

Source: http://www.nps.gov/dena/planyourvisit/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=166638
Note: ***Bold, italicized times are P.M***. (*) Asterisk denotes Handicap Accessible Buses.

Denali National Park's transit system has been in service for nearly 100 years, although it has gone through its share of changes. The next system reviewed, in Glacier National Park, has operated for only one season.

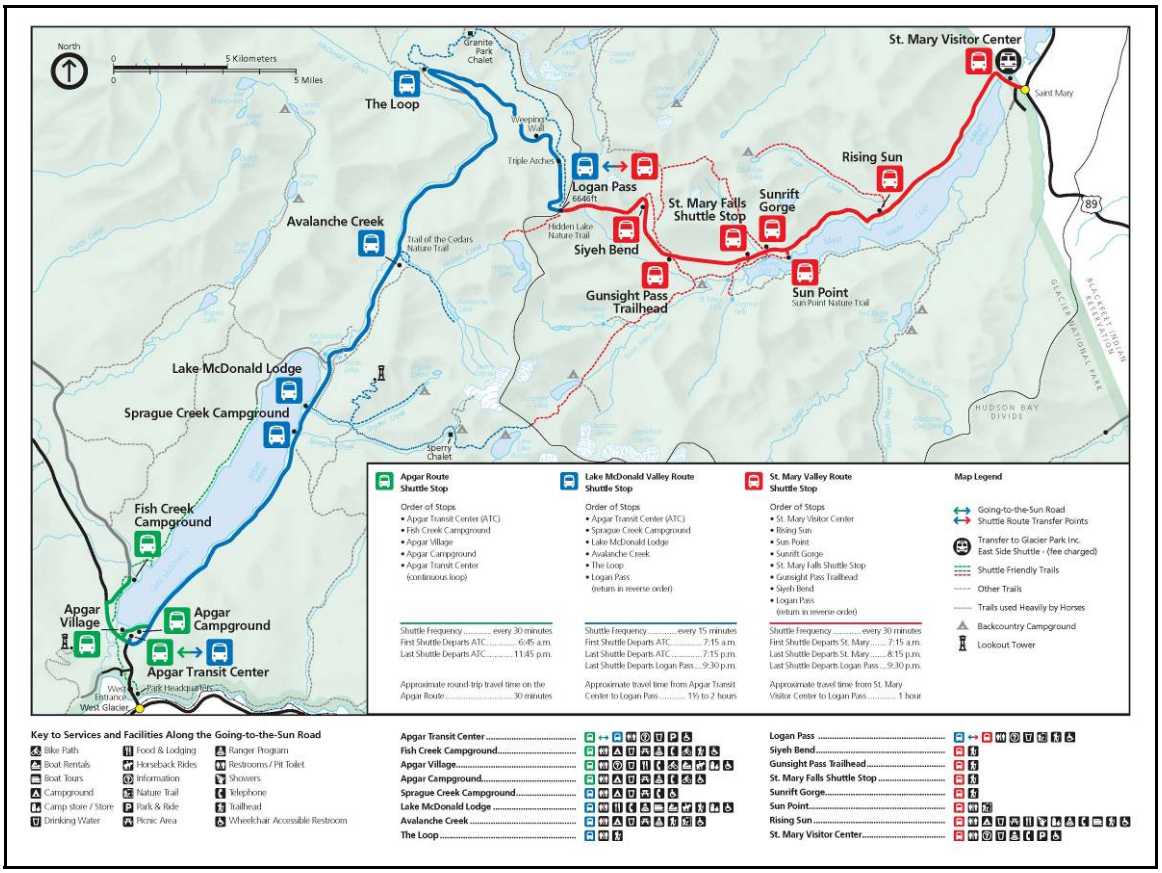
6.3 Glacier National Park, West Glacier, Montana

Glacier National Park, established in 1910, was America's 10th national park. It is located in the northwest part of Montana and shares a boundary with Canada's Waterton Lakes National Park. Glacier National Park is known for the most scenic roads in North America, and its Going-to-the-Sun Road is a National Historic Landmark due to the engineering feats required in its construction. The park is now the destination for almost 2 million people every year [11].

Park Transit

The Park initiated its voluntary and environment-friendly bus system—the Glacier Shuttle—in 2007. The genesis of the system lay in the reconstruction of the Going-To-The-Sun Road, as construction activity would increase traffic congestion on the narrow road. The aim of the transit system is to offer a travel option so traffic, parking and pollution problems can be avoided. The transit system represents a cooperative agreement between the Montana Department of Transportation, Flathead County, Glacier National Park and the Blackfeet Nation (Native American Reservation).

The buses are operated on three two-way routes: (1) Apgar Route (between Apgar Transit Center and Fish Creek Campground); (2) Lake McDonald Valley Route (between Apgar Transit Center and Logan Pass); and (3) Rising Sun (between Logan Pass and St. Mary Visitor Center). Figure 22 shows the various routes in the Park. Service frequency is every 15 to 30 minutes between 7:15 a.m. to 11:00 p.m., from July 1 to September 3 (Labor Day). During its first year, 22 small and five large diesel-powered buses were used. For the first season, 132,000 total riders took advantage of the buses for the 65 days the transit service operated. The average daily ridership was 2,100. The net operating cost was $50 per hour [12].



Source: Glacier National Park (www.nps.gov/glac)

Figure 22: Bus Route Map, Glacier National Park

Eagle Transit of Flathead County and Blackfeet Nation Transit are the companies responsible for the operation and maintenance of the transit service. The primary source of revenue is from a sustainability fund, which is embedded in park entrance fees. A total of $750,000 is raised by assessing $7.50 to the weekly ($25) and annual ($35) entrance fees. There is no daily entrance fee.

First year expense for the new service was $870,000 ($6.60 per ride) due to start-up expenses. Acquisition of eight larger Opus Optima buses was delayed, and the Park had to borrow vehicles from Yellowstone National Park. This, along with providing higher frequency than first scheduled, added to the first year's costs. The Glacier Park service utilizes two partnerships to operate the system. West side routes—Apgar and Lake McDonald Valley routes—are operated by Eagle Transit, whereas Blackfeet Nation Transit provides for maintenance and operation of the east side route, Rising Sun. For FY08, Glacier National Park plans to add additional Dodge Sprinters to its service, and should have eight Optima buses operating. Figure 23 shows the vehicles operated as part of the Glacier Shuttle system [12].

Source: Gary Dancyzk, Glacier National Park

Figure 23: Glacier National Park Transit Vehicles

The Glacier National Park transit system has been very successful in its first season of operation. Although there were some budget overruns, the system carried more passengers than expected. It will be interesting to see the ridership for the second year of operations of the Glacier system.

The next system reviewed, at Rocky Mountain National Park, has been in existence since the 1970s, and has had some additional service added within the last few years.

6.4 Rocky Mountain National Park, Estes Park, Colorado

Rocky Mountain National Park, established in 1915, is located in the north central region of Colorado. It is famous for majestic mountain views, a variety of wildlife, and varied geographical features such as wooded forests and mountain tundra. The park has five visitor centers located at park entrances on the east and west sides, and at high-use areas within the park [13].

Park Transit

The park established its first volunteer transit system, known as the Bear Lake Shuttle, on it's the most scenic drive in the 1970s. In 1999, the park added the Moraine Park route. Limited parking and traffic congestion became prominent issues for the park in recent years and, the park

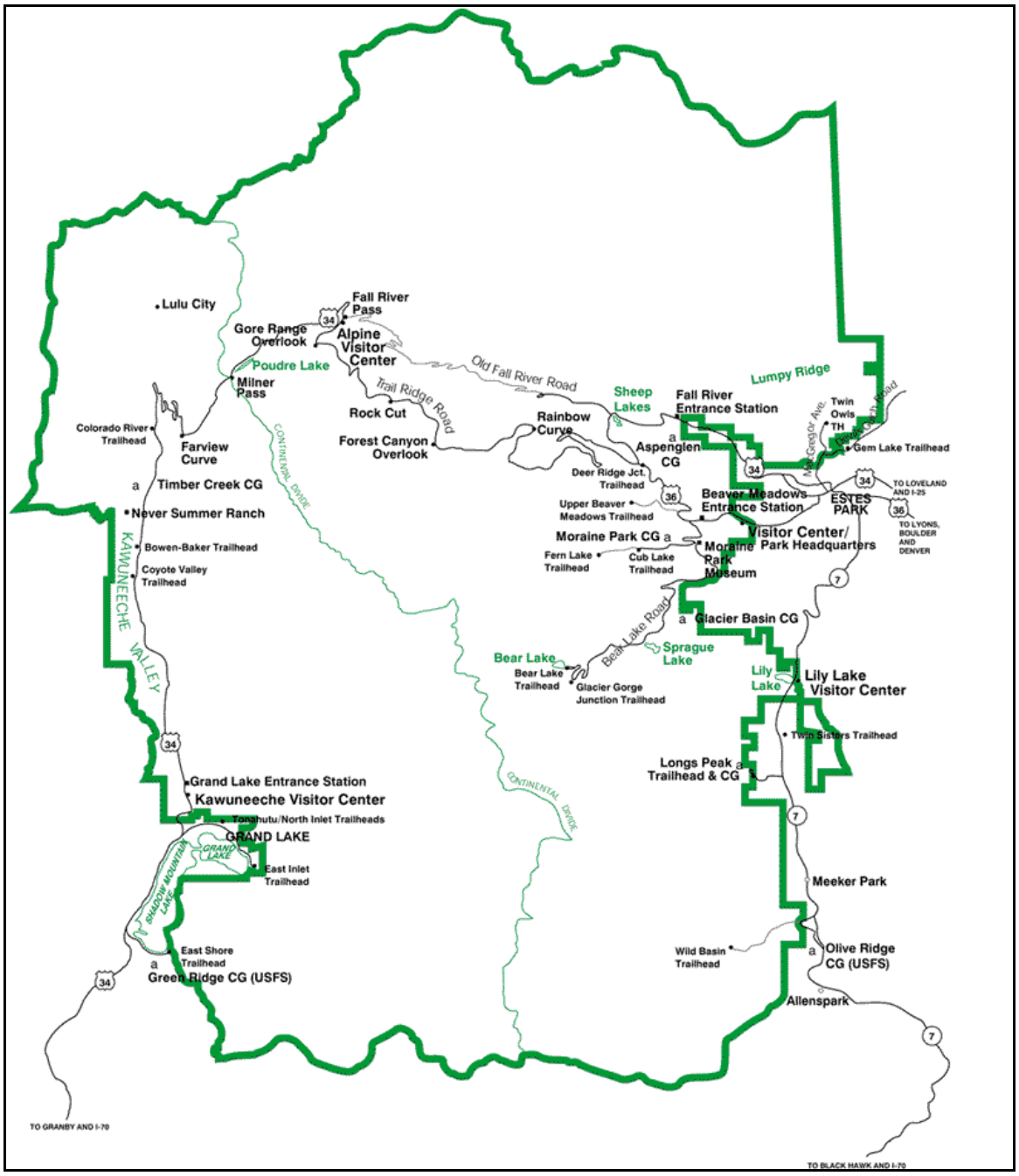
increased the frequency of buses on these two internal routes in 2001. In 2006, the park added one more route—Rocky Mountain National Park's hiking shuttle, dedicated to accessing hiking and trail sites. The hiking shuttle connects the Estes Park visitor center and a Park and Ride lot. In 2007, the Town of Estes Park decided to launch a shopper shuttle connecting the town's major lodging and commercial locations to reduce traffic congestion on the town's narrow streets during July and August, when visitation is at its peak. The shopper shuttles run on three different routes connected to the park from the Estes Park visitor center, which is now a bus terminal and transfer point for the transit system. All these routes run on different schedules and frequencies. Detailed information about routes, ridership, frequency, etc., is shown in Table 11 [14].

Table 11: Rocky Mountain National Park Transit Service

Route Name	Type of Route	Frequency	Schedule	Daily Service Duration	Establishment Year
Park Shuttle					
Bear Lake*	Internal	10-15 minutes	7am to 7pm	Jun 14 to Sept 28	1970s
Moraine park*	Internal	30 minutes	7am to 7pm	Jun 14 to Sept 29	1999
Hiking Shuttle	Internal/External	1 hour	6.30am to 8pm	Jun 28 to Sept 1	2006
Town Shuttle					
Red Route	External	20-30 minutes	8am to 10pm	Jun 30 to Sept 3	2007
Brown Route	External	20-30 minutes	8am to 10pm	Jun 30 to Sept 3	2007
Blue Route	External	20-30 minutes	9am to 10pm	Jun 30 to Sept 3	2007

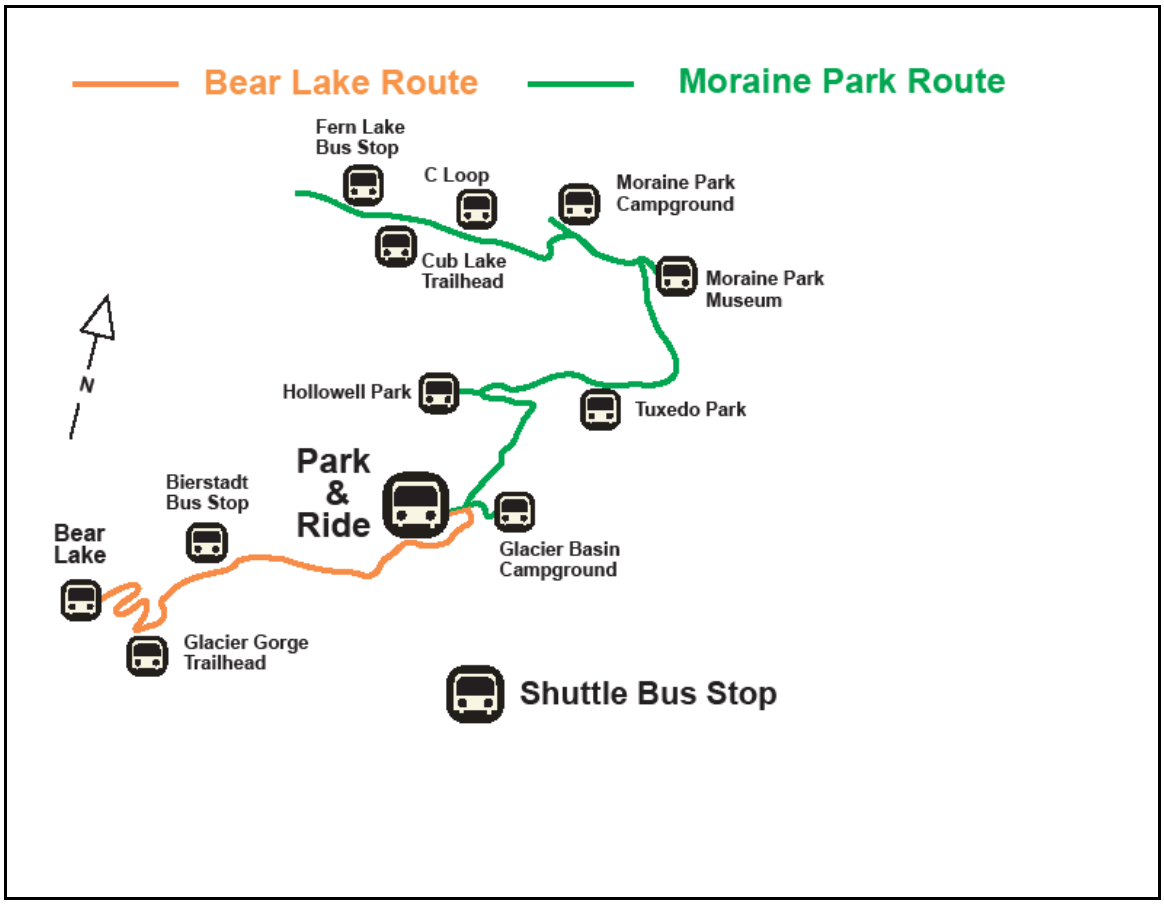
Source: Estes Park Convention & Visitors Bureau.
* Buses run only on weekends starting Memorial Day through June 8.
Notes: 1) Park Shuttle is funded by Rocky Mountain National Park; 2) Town Shuttle is funded by the Town of Estes Park.

As shown in Figure 24, most of the park's major destinations, and its gateway community of Estes Park, are located on the eastern side of the park. The majority of park visitors access the park from this direction, and the park and gateway community provide transit service in this area only. Details of the routes of this service are shown in Figures 26, 27, and 28.



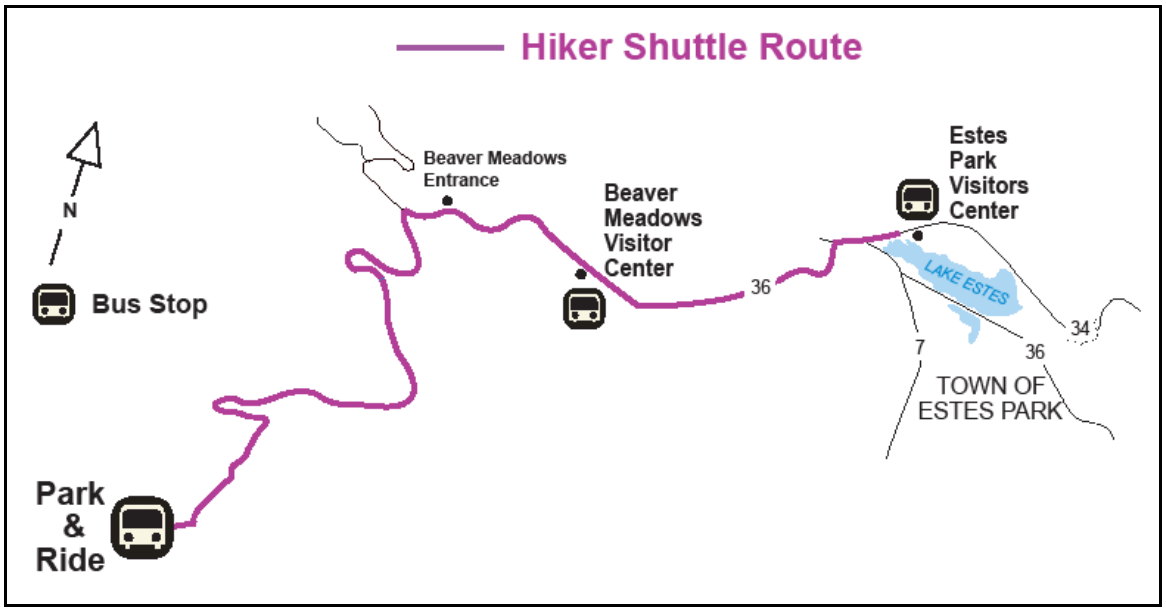
Source: Rocky Mountain National Park (www.nps.gov/romo)

Figure 24: Rocky Mountain National Park Area Map



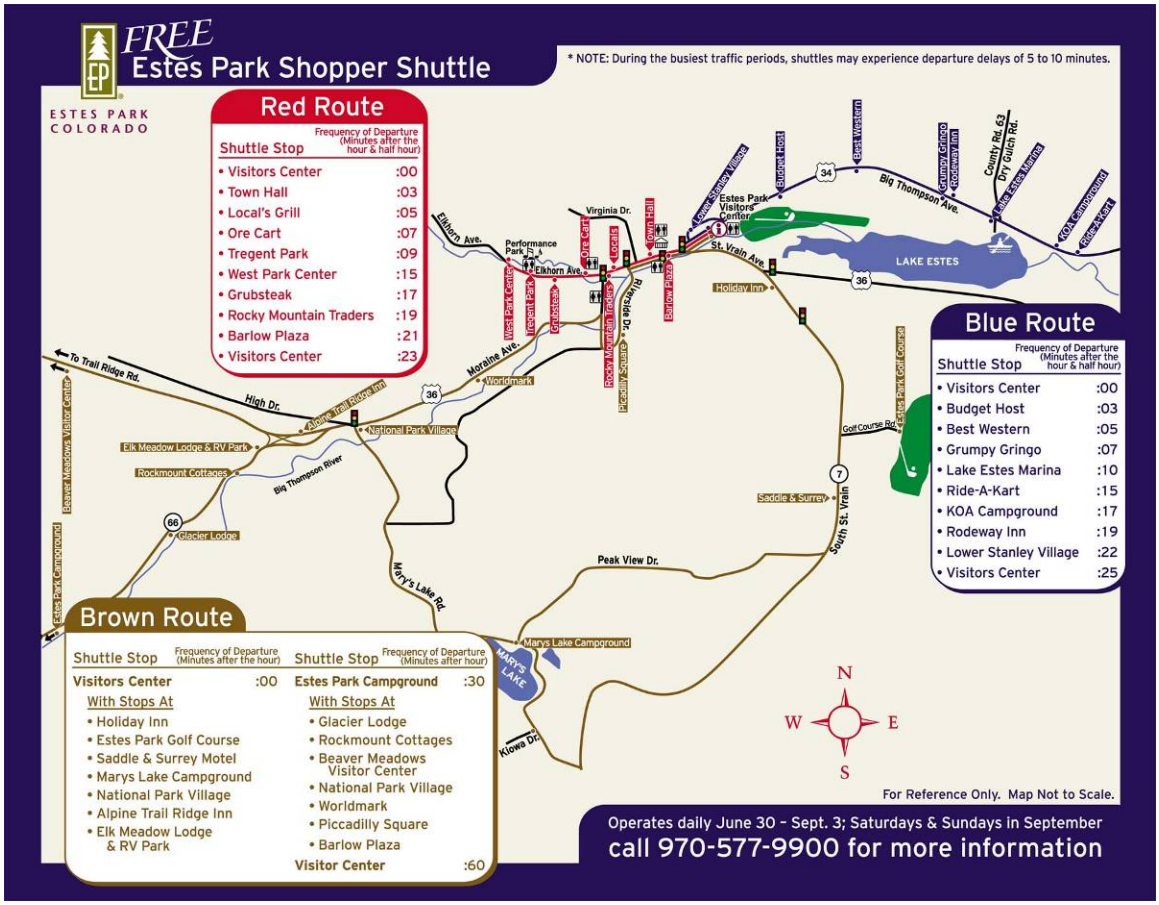
Source: Rocky Mountain National Park (www.nps.gov/romo)

Figure 25: Rocky Mountain National Park Transit Map 1



Source: Rocky Mountain National Park (www.nps.gov/romo)

Figure 26: Rocky Mountain National Park Transit Map 2



Source: Estes Park Convention and Visitors Bureau (www.estesparkcvb.com)

Figure 27: Estes Park Shopper Shuttle Map, Town of Estes Park

As shown in Figure 29, the majority of Rocky Mountain National Park's visitors come during the April through October time frame.

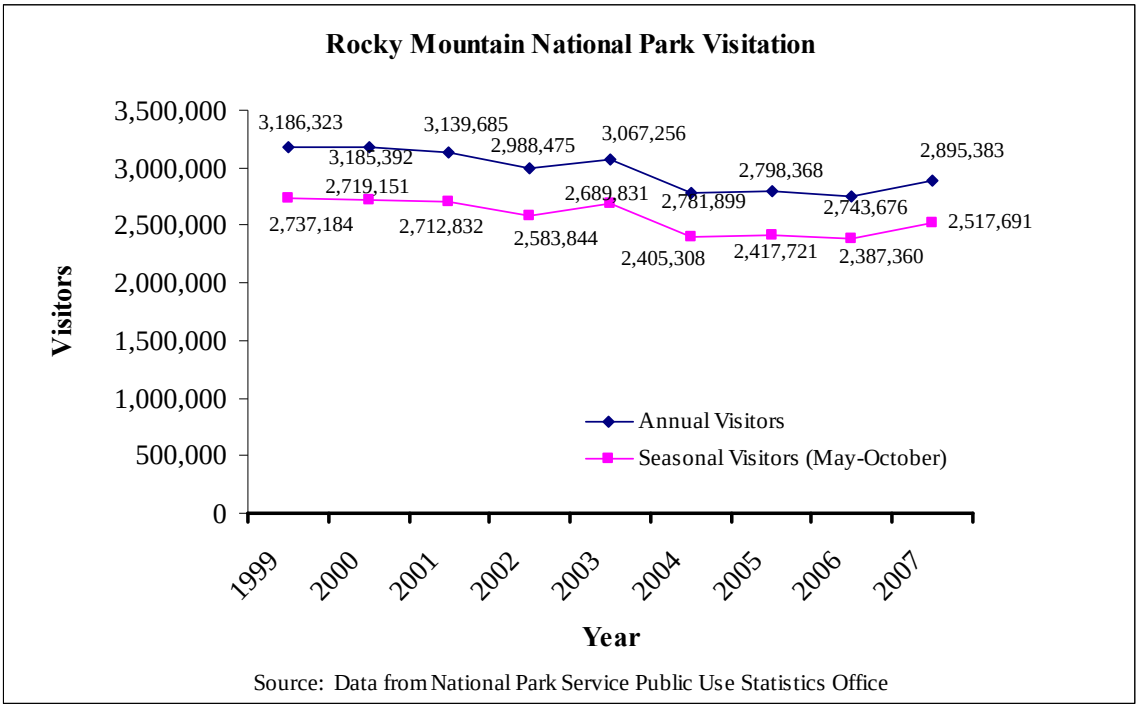


Figure 28: Rocky Mountain National Park Visitation Analysis

As shown in Figure 30, ridership grew by nearly 2.5 times from 130,000 rides in 1999 to 325,000 in 2007, even with the decrease in 2004.

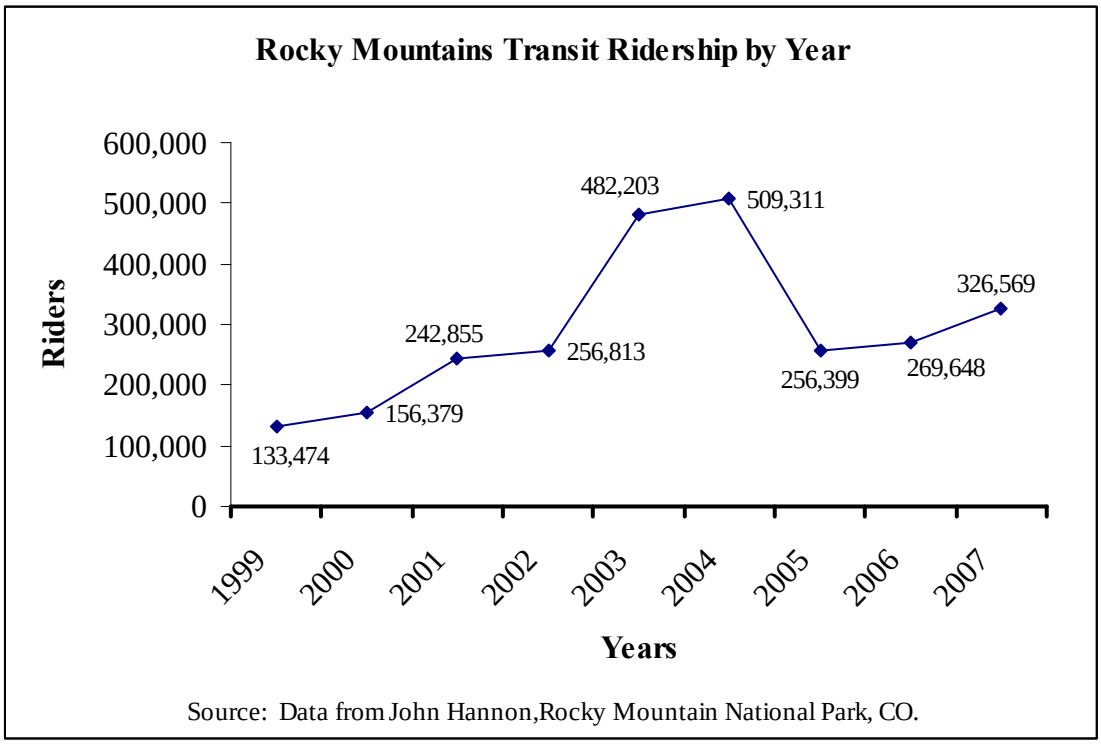


Figure 29: Rocky Mountain National Park Transit Ridership

The fare-free shuttle is operated by a service contractor, McDonald Transit Inc., from the end of May through October. There are ten 26-passenger low-floor and three 15-passenger cutaway diesel buses in the park transit fleet and the Town of Estes Park has four buses ranging from 21 passengers to 28 passengers capacity. A typical transit bus is shown in Figure 31.

Source: Estes Park Convention and Visitors Bureau, Colorado

Figure 30: Rocky Mountain National Park Transit Bus

A financially self-sustained transit system, it receives $7 that the park sets aside from the $20 entrance fee. The transit service contractor is paid through this collected revenue. McDonald Transit charges $144/hr to the park for the service, including operating, capital and maintenance expenses. In 2007, the transit system operated for 8,300 service hours for a total cost of $1.2 million. The park does not own any of the buses or bus facilities. The Town of Estes Park pays the park for the free shopper shuttle transit service, which it pays for out of its general fund. The operating cost for the town is $45/hr for its first three years trial period. After the first three years pilot project, the operating cost will be double. No service fee is charged to town businesses or riders. The ATTPL fund has been used for the construction of shuttle stops, but not for operation costs [14] [15].

While the transit system at Rocky Mountain National Park has expanded services, the next system reviewed is likely to have ended its operations after a three-year trial period.

6.5 Santa Monica Mountains National Recreation Area, Thousand Oaks, California

Santa Monica Mountains National Recreation Area (SMMNRA) is the world's largest urban national park comprising 153,027 acres of land controlled by National Park Service, California State Parks, the Santa Monica Mountains Conservancy, private landowners, and county and city governments. More than 70 government entities share jurisdiction within the SMMNRA boundary. The SMMNRA is known for its archeological sites, beaches, grasslands, canyons, oak woodlands, and coastal mountain range.

Of the 153,027 acres that comprise SMMNRA, the National Park Services controls 21,500 acres (14%), and California State Parks controls 42,000 acres (27%). Private recreation and local

public parklands comprise 6,000 acres (4%), military and preserve lands comprise 33,527 acres (22%), while private land consists of 50,000 acres (33%). During the last three years, almost half a million people have visited the National Park Service land within SMMNRA [16].

Park Transit

In the 1990s, SMMNRA identified the need for a transit system. In 1998, it hired a consultant to conduct a transit system feasibility study, which was published in late 2002. To ease traffic and parking congestion, the SMMNRA launched a shuttle service (Park-Link) in July 2005 as a three-year demonstration project. The vehicles were purchased through ATTPL funding. As highlighted by the budget in Table 12, the service was a joint effort by the National Park Service, California State Parks, Los Angeles County Beaches and Harbors, and Mountains Recreation and Conservancy Association (MRCA) [17].

Table 12: Santa Monica Mountains NRA Budget, FY 05 to FY 07

Revenue & Expenses	Amount	Percentage
Revenue		
ATTPL	$1,130,000	65%
FTA Transportation Enhancement Fund	$385,047	22%
MRCA	$210,000	12%
Park funds, fares and donations	$1,200	0.06%
Expenses		
Capital		
Vehicles (5@$125,000)	$625,000	36%
Transit infrastructure	$541,247	31%
Operating	$560,000	32%

Source: Data from Christopher MacKechnie, SMMNRA

For the first and second year of the service, the fare was $1 per ride; however, the service became free in 2007. The operating cost in 2007 was $59.42 per hour, with ridership averaging 90 riders per day and 500-1,000 per month [18].

Operation of the Park-Link system was contracted to Veolia Transportation Inc. The shuttle operated during weekends and holidays on a year-round basis (i.e., no weekday service). There were three main routes, which operated every 60-90 minutes (Figure 31). The system was coordinated with Metro Transit to establish pick up points at Malibu and the San Fernando Valley.

Source: Christopher MacKechnie, SMMNRA

Figure 31: Park-Link Transit System

The Park-Link system used 20-passenger air-conditioned vehicles that could accommodate two wheelchairs and three bicycles (Figure 32).

Source: Christopher MacKechnie, SMMNRA

Figure 32: A Typical Park-Link Shuttle, SMMNRA

According to SMMNRA staff, the system will not be operated in 2008. Christopher MacKechnie, a transportation professional, was engaged to study the Park-Link system through the National Park Service's Transportation Scholar program in 2007. He suggested the following reasons for why the system did not succeed:

- The shuttle's marketing plan was not completed until the shuttle had been in operation for a year.
- Staff and constraints did not allow for full-scale implementation of the system, once the marketing plan was completed.
- Vehicles were selected based on their weight, due to weight limits on certain roads in SMMNRA. Because the contractor was not familiar with some of the technologies on the vehicles, repair time was more than estimated. Reliability of the system was compromised due to longer maintenance periods and a lack of spare vehicles.
- There was a lack of coordination between the SMMNRA system and other transit authorities, and the part-time transit employee for SMMNRA had limited decision-making authority.
- The transit service operated throughout the year on weekends and holidays only. If the transit system was operated daily during summer months (May through September), funding would have allowed for an additional two years of operation, which may have improved the chances for the transit system to succeed.

- Incentives were not provided to riders, such as a free parking spot when using the transit service.
- The vast majority of visitors to SMMNRA were found to visit only one site rather than multiple destinations, which may have limited the perceived value of the system.

While the Santa Monica Mountains National Recreation Area transit system did not succeed, the final system reviewed, in Zion National Park, is an example of a very successful system.

6.6 Zion National Park, Springdale, Utah

Utah's first national park—Zion National Park—was established as Mukuntuweap National Monument by President William Taft in 1909. Zion National Park is famous for its massive canyon walls and unique sandstone cliffs. Visitation at Zion fluctuates between 2.2 and 2.7 million visits per year [19].

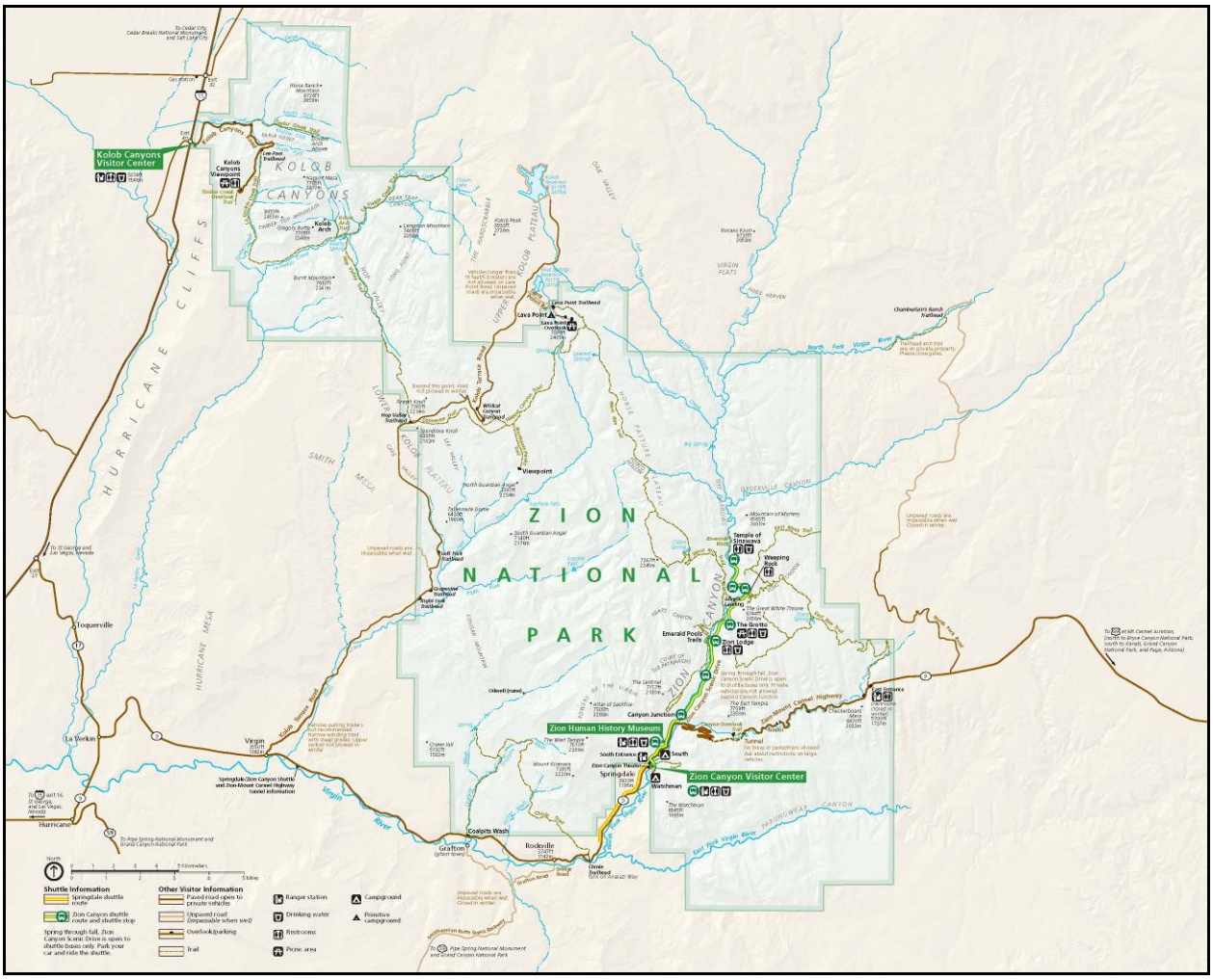
Park Transit

In the 1970s, Zion National Park first tried to bring partners together to address transportation issues in the area. These partnerships would eventually be realized in the mid-1990s as various stakeholders realized the extent of traffic congestion problems within the park and gateway community of Springdale. Traffic congestion, noise, parking and air pollution became prominent issues for Zion National Park and Springdale.

Only 400 parking spots existed for the 5,000 visitor vehicles on the 6.3-mile main scenic road on the South Rim area of the Park, leading to people "trolling" for parking places, and cars parking off of the pavement. These traffic management issues significantly impact the natural resources and visual quality of park. Concerned park authorities began considering an alternate transportation system to replace private vehicles, with input from the local gateway community. After five years of discussion and planning, the Zion Canyon Transportation System started operating in May 2000, serving the park and the town of Springdale. Zion NP secured earmarks of $9.4 million through a Department of Interior appropriations bill for capital expenses related to transit infrastructure and vehicles. At the same time, the town of Springdale received $838,000 of Transportation Enhancement funds through the Utah DOT. This helped the local community construct transportation infrastructure such as bus stops, bus shelters, crosswalks, and traffic calming islands. Zion National History Association, a cooperative association within the Park, contributed $50,000 to be used as local match for the Transportation Enhancement funds[3][14].

Later on, the Zion Canyon Theater, local businesses, the state Office of Energy and Resources Planning, the Federal Highway Administration and Zion Canyon Visitors Bureau contributed to various planning and operating efforts. Zion Canyon Theater helped to construct a visitor's complex on the northern loop terminus of town which is connected to the Park visitor center. The Office of Energy and Resources helped with the transportation system's sustainability efforts, including installation of the visitor center's photovoltaic panels.

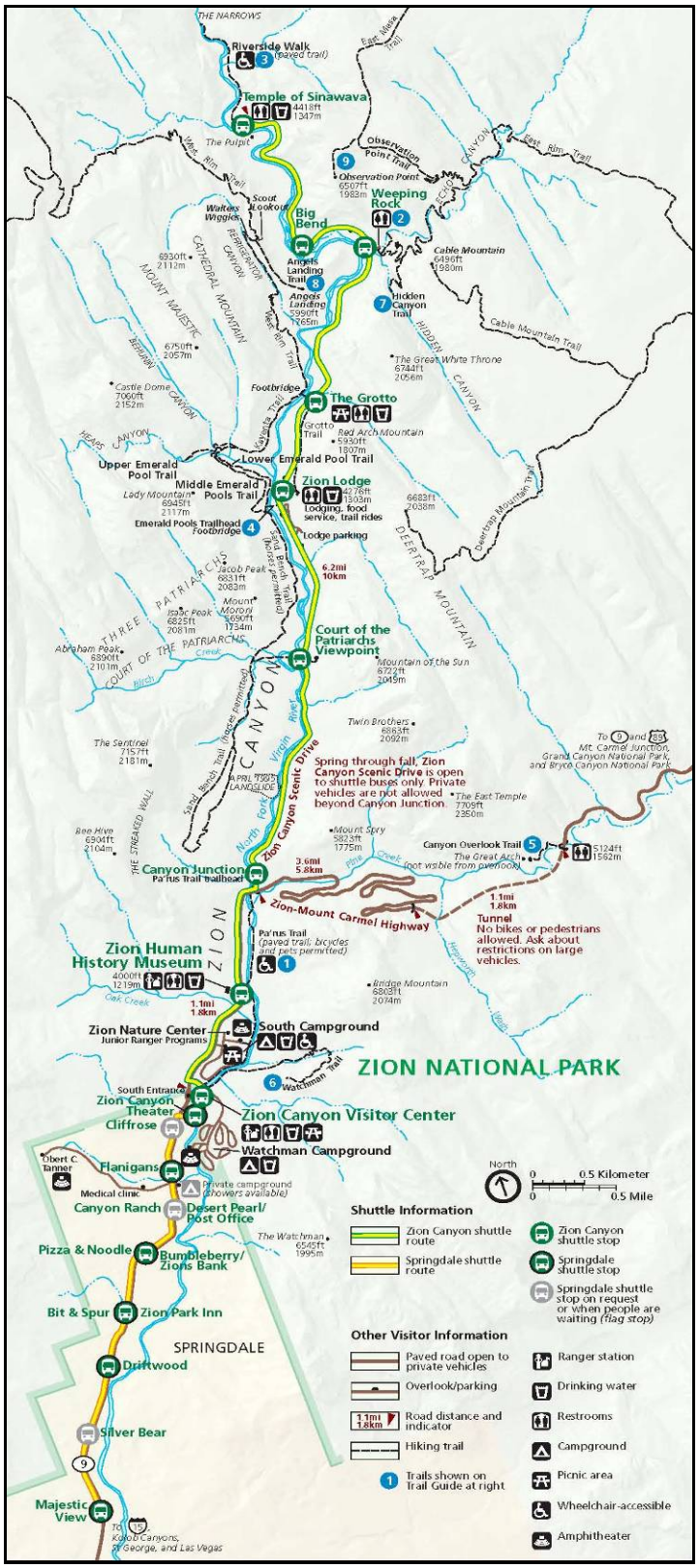
The fare-free shuttle is operated by Park Transportation, Inc., from April through October. Park Transportation, Inc., is the local subsidiary of McDonald Transit, a contractor based in Waco, Texas. There are 30 park-owned propane-based shuttles (with 21 accompanying trailers) in the transit fleet. Each bus with trailer has a capacity of 68 riders (31 in the bus and 37 in the trailer unit). The buses are operated on nine park and six town stops from 5:45 a.m. to 11:15 p.m., with stops every seven minutes [19].



Source: Zion National Park (http://www.nps.gov/zion)

Figure 33: Zion National Park Area Map

Transit service in Zion is provided only on its most scenic road, located on the south rim of the Park, and in Springdale (Figure 33). This road in Zion Canyon is the main destination of many of the Park's visitors. The detail routes of the service are shown in Figure 34 and some of the vehicles used are shown in Figure 35.



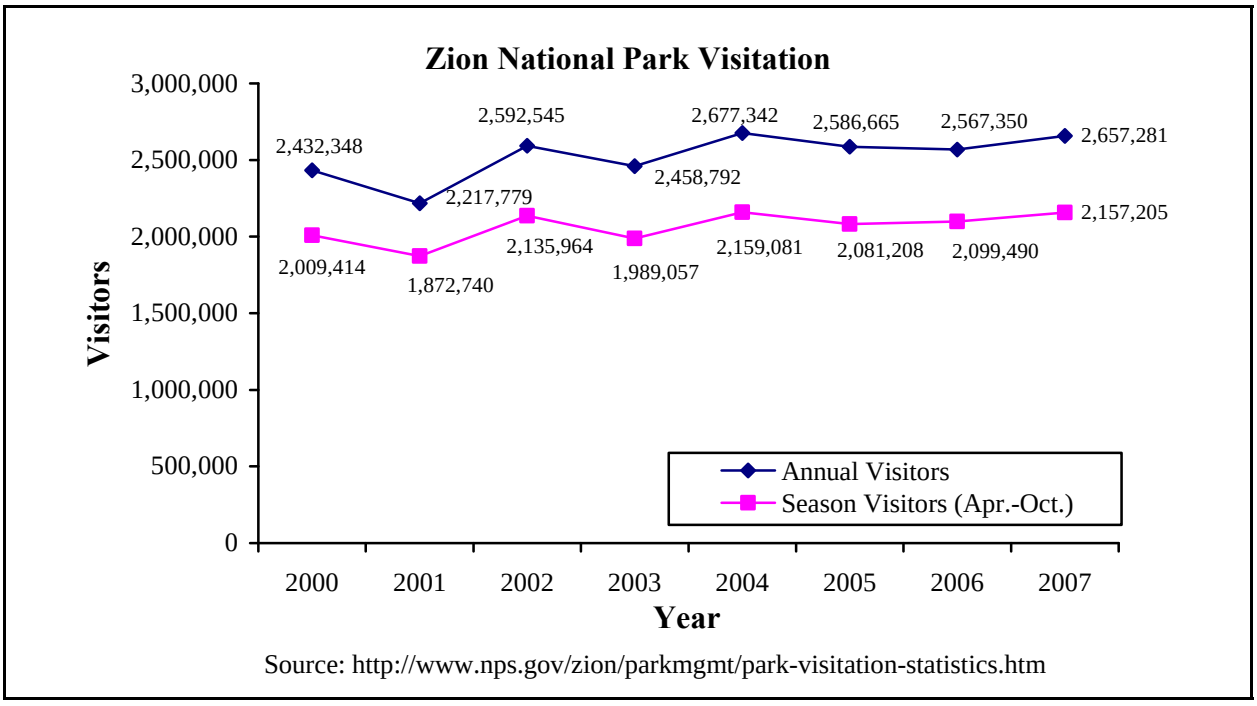
Source: Zion National Park (http://www.nps.gov/zion)

Figure 34: Zion Park Transit Route Map

Source: Zion National Park, www.nps.gov/zion

Figure 35: Zion National Park Transit Buses

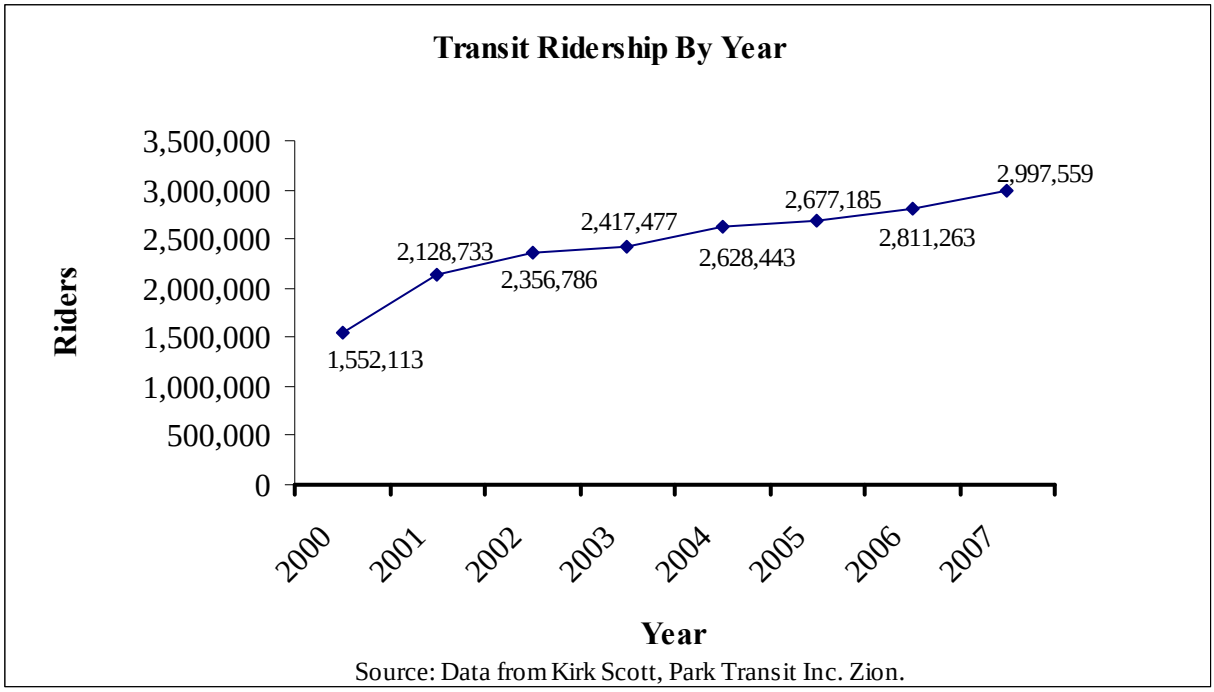
As shown in Figure 36, the major portion of Zion's visitors comes during the April through October timeframe.



Source: http://www.nps.gov/zion/parkmgmt/park-visitation-statistics.htm

Figure 36: Zion Visitation Analysis

As previously noted, the Zion Shuttle is the only option to access the Park's most scenic road from April to October. Thus, ridership on this mandatory system is high during these months. As shown in Figure 37, ridership has nearly doubled from 1.5 million rides in 2000 to just fewer than 3 million rides in 2007. The Zion Shuttle service provided 426,052 in-town rides and 2,562,490 park rides in 2007.



Source: Data from Kirk Scott, Park Transit Inc. Zion.

Figure 37: Zion Transit Ridership

A financially self-sustained transit system, Zion National Park sets aside $19 out of the $25 entrance fee for the transit system. Zion National Parks transit service has grown in ridership, and its operating expenses have grown as well. In 2000, total operating expenses were $1,978,239 ($1.27 per ride). By 2007, total operating expenses were $2,692,808 but the cost per ride was just $0.89 (Figure 38). The hourly operating cost of $41.95 in 2001 has increased to $48.14 in 2007. This hourly operating cost does not include fuel, which is paid for directly by the Park. An average propane price of $1.38 per gallon was reported for 2007. The operating cost of $48.14 per hour includes off-season monthly fees of $48,278 paid to McDonald Transit [21].

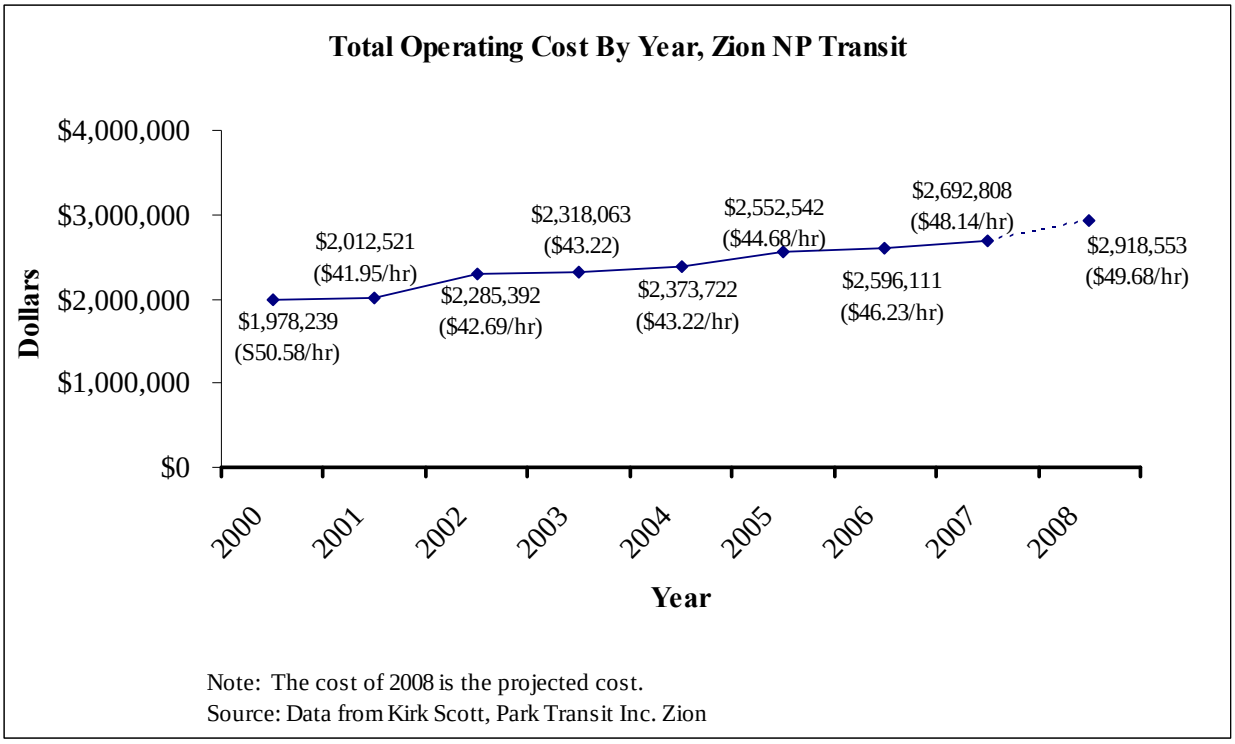


Figure 38: Zion Transit Operating Costs

McDonald Transit, Inc., which operates the system, is responsible for daily operations, driver pay, maintenance and overhead expenses. Payment to the contractor is made directly from the revenue earned through the transit fee assessed on the park entry free. Buses are not used in the off season (November to March) and remain in the park [21]. Fleet replacement is a critical issue for the Park because the vehicles are reaching their designated service life, and a definite source of funding for vehicle replacement has not been identified. The Park is able to use any net revenue (income versus expenses) for future capital improvements including vehicles, however [22]. Details of transit service hours, town and park ridership, and operating cost are shown in Table 13 and Table 14.

Table 13: Zion Service Hours, Ridership of Town and Park

Year	Total patronage	Riders per hour of service	Wheel-chair lift uses	Town riders	Town rides / hour	Park riders	Park rides / hour	Hours of service
2000	1,552,113	**45.53**	747	176,245	**24.65**	1,373,5	**51.20**	34,091
2001	2,128,733	**48.13**	1,878	208,295	**24.00**	1,913,4	**54.60**	44,227
2002	2,356,786	**51.59**	3,118	241,515	**27.10**	2,107,0	**54.98**	45,681
2003	2,417,477	**53.45**	3,156	248,761	**27.75**	2,159,1	**59.96**	45,225
2004	2,628,443	**57.91**	3,522	318,890	**33.73**	2,301,2	**64.64**	45,388
2005	2,677,185	**56.83**	3,797	341,649	**35.87**	2,326,8	**62.50**	47,109
2006	2,811,263	**61.58**	3,264	376,932	**41.11**	2,426,4	**67.18**	45,655
2007	2,997,559	**64.75**	4,353	426,052	**44.61**	2,562,4	**70.45**	46,292

Source: Kirk Scott, Transit Manager, Park Transit Inc.

Table 14: Calendar (Contract) Year Cost and Budget, Zion Shuttle System

Year	Total amount of shuttle service billings	Revenue hourly billing rate	Budgeted revenue hours based cost	Actual revenue hours based cost	Off-season monthly charge	Budgeted propane cost	Actual cost of bus propane
2000	**$1,978,239**	$50.58	NA	**$1,724,325**	**$156,642**	NA	**$97,272**
2001	**$2,012,521**	$41.95	$1,892,196	**$1,625,318**	**$287,870**	$112,765	**$99,332**
2002	**$2,285,392**	$42.69	$1,956,793	**$1,950,129**	**$265,815**	$115,143	**$81,948**
2003	**$2,318,063**	$43.22	$1,950,389	**$1,954,654**	**$259,495**	$ 87,949	**$103,913**
2004	**$2,373,722**	$43.66	$1,996,746	**$1,981,636**	**$255,285**	$113,596	**$144,434**
2005	**$2,552,542**	$44.68	$2,116,101	**$2,104,819**	**$234,050**	$168,118	**$213,672**
2006	**$2,596,111**	$46.23	$2,125,817	**$2,110,653**	**$237,550**	$213,991	**$193,538**
2007	**$2,692,808**	$48.14	$2,256,314	**$2,228,543**	**$241,390**	$216,072	**$223,060**
2008	**$2,918,553**[1]	$49.68	$2,428,575	**-**	**$245,585**	$244,393	**-**

Source: Kirk Scott, Transit Manager, Park Transit Inc
Note: [1] 2007 and 2008 "Total amount of shuttle service billings" are estimates.

6.7 Peer Review Summary

While Glacier National Park's service is only one year old, and there were some issues in obtaining vehicles, it appears to be successful, based on its ridership being higher than projected. However, data from its second year of operation will help if it is trending in the right direction.

In addition to Glacier, the all of the other systems reviewed, except the Santa Monica Mountains National Recreation Area, have been successful by increasing ridership, and finding sustainable funding. Table 15 provides an overview of the systems reviewed.

While this section did not review all transit systems in the National Park Service and other Federal lands, the information gathered from this review helped to determine how feasible the potential transit system in Grand Teton National Park may be, and factors critical to the success of the potential system.

Table 15: Peer Review Summary

	Acadia National Park	Denali National Park & Preserve	Glacier National Park	Rocky Mountain National Park	Santa Monica Mountains NRA	Zion National Park
Location	Maine	Alaska	Montana	Colorado	California	Utah
Type of Transit System	Bus	Bus	Bus	Bus	Bus	Bus
Season of Operation	June 23-October 16	May 1-September 11	July 1-September 3	June 14-September 30	Weekends (year-round)	April-October
Hours of Operation	6:45 a.m. to 10:45 p.m.	7:00 a.m. to 4:00 p.m.	7:15 a.m. to 11:30 p.m.	6:30 am to 10:00 pm	8:00 a.m. till Sunset	5:45 a.m. to 11:15 p.m.
Frequency	15 to 30 minutes	Varies by route	15 to 30 minutes	10 minutes to 1 hour	60 to 90 minutes	7 minutes
Fuel Type	Propane	Diesel	Diesel	Diesel	Diesel	Propane
Service Fees (Fares)	Free	Fare-based	Free	Free	Free	Free
Types of Service	Voluntary	Mandatory	Voluntary	Voluntary	Voluntary	Mandatory
Operators	Downeast Transportation, Inc.	Doyon/ARAMARK Joint Venture	Glacier Park, Inc.	McDonald Transit	Veolia Transportation, Inc.	Park Transportation, Inc.
Visitation (2007)	2,202,228	458,308	2,083,329	2,895,383	577,686	2,657,281
Ridership (2007)	351,378/season (4,120/day for summer; 1,144/day for fall)	287,438/yr	132,000/season (2,100/day)	326,569	90/day	2,997,559/season
Annual Budget (2007)	$1,078,030	Not available	$870,000	$1,200,000	$210,000	$2,730,395
No. of Buses	29	130	(22 Vans, 5 Buses)		5 Small Buses (20 passenger)	30 (21 with trailer)
Hourly Operating Cost	$48.49	Not available	$50	$144 & $45 (City shuttle)	$59.42	$48.14
Year Planning Initiated	1993	Not available	2004	1970s	1998	1994
Year Service Established	1999	1972	2007	1970s	2005	2000
Partners	1. Acadia National Park 2. US DOT 3. Maine DOT 4. Friends of Acadia 5. Six Municipalities 6. Private Businesses	1. Denali National Park and Preserve 2. Doyon/Aramark Joint Venture (Park Concessioner)	1. Glacier National Park 2. Flathead City 3. Montana DOT 4. Blackfeet Nation	1. Rocky Mountain National Park 2. Estes Park, Colorado 3. Colorado DOT	1. Santa Monica Mountains NRA 2. California DOT 3. Monica Mountains Conservancy Agency	1. Zion National Park 2. Town of Springdale 3. Zion Natural History Association 4. Utah Office of Energy and Resources Planning 5. Utah DOT 6. FHWA 7.Zion Canyon Visitors Bureau

This Page Intentionally Left Blank

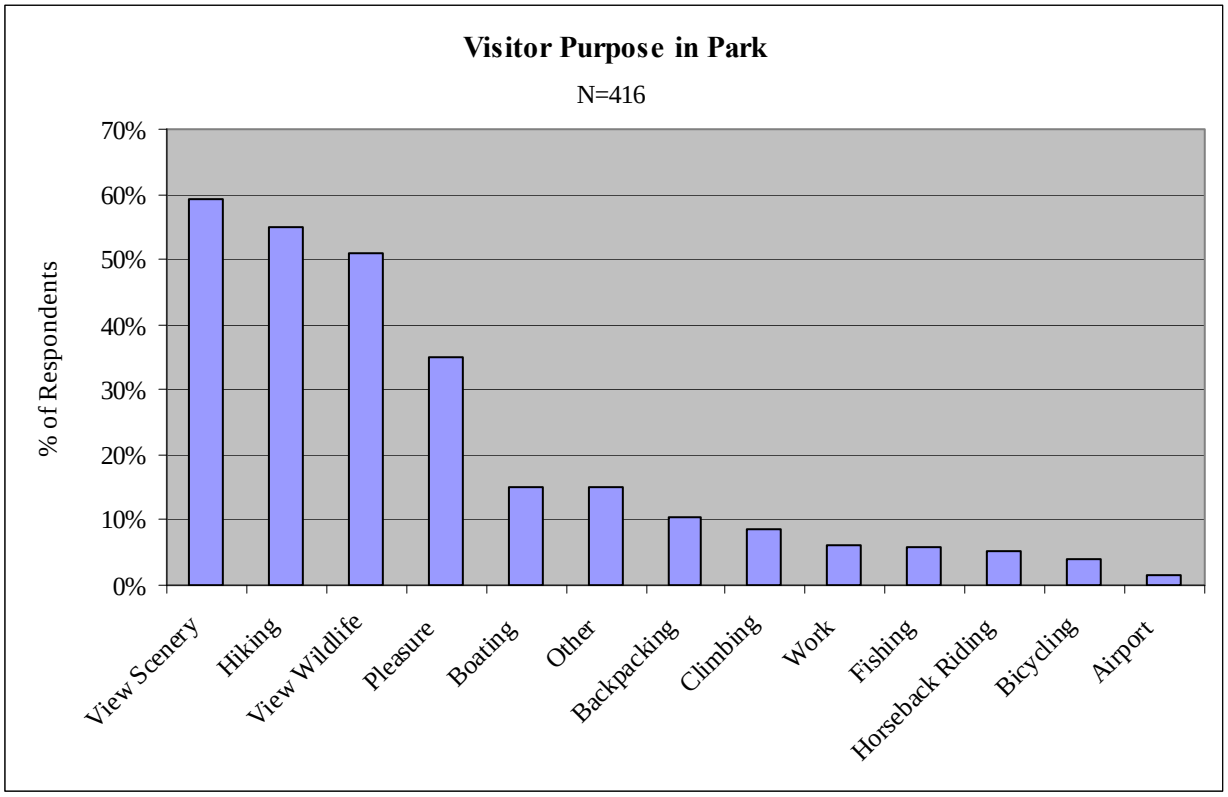
7. APPENDIX B: VISITOR SURVEY RESULTS

Visitor surveys were distributed August 16-18, 2007 (Thursday-Saturday), in the Park by WTI staff.

A total of 418 surveys were collected, and were at least partially completed. The number of surveys completed provides for a 95 percent confidence level at a 5 percent interval. For example, if 45 percent of the respondents indicated that they were very likely to ride a bus within the Park, we are 95 percent confident that the true answer is within the 40-50 percent range.

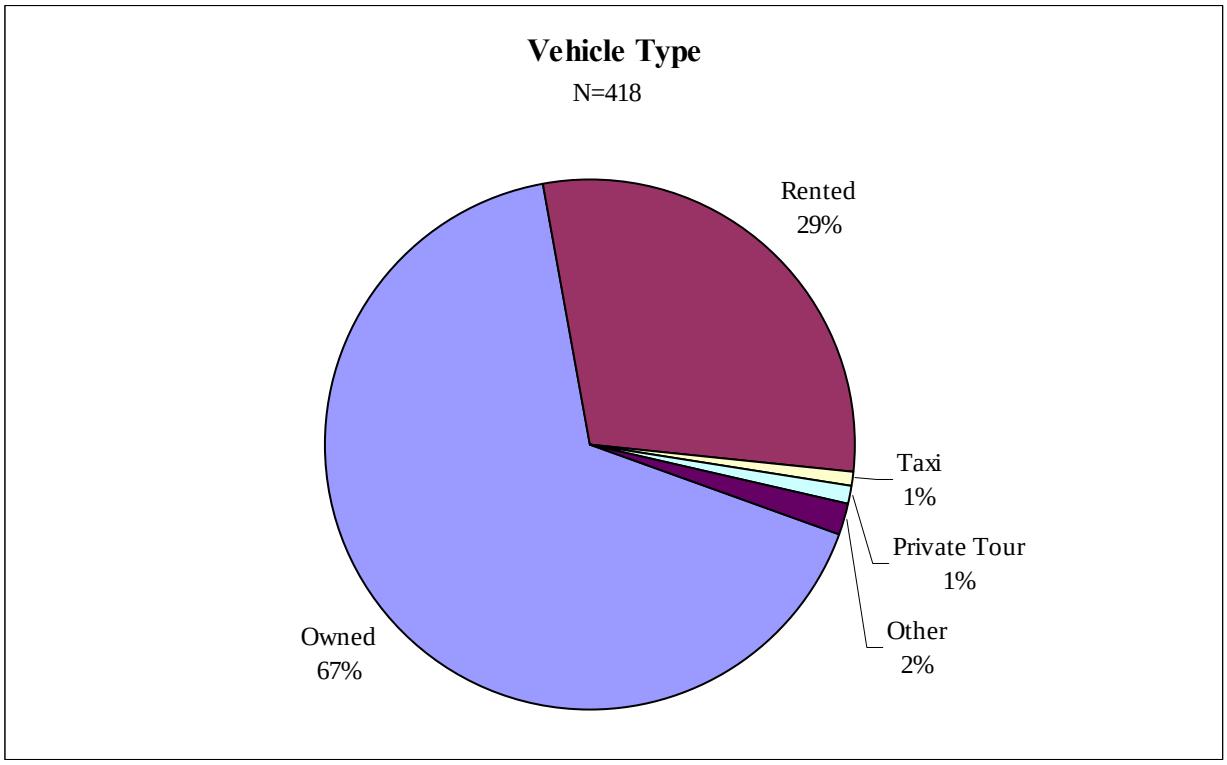
The results noted herein are based on the total number of responses to a particular question, and not the total number of surveys, unless noted. If only 380 answers are provided to a question, the percentage of responses is based on 380, not the 418 total surveys. Each graph or table provides the number ("N") of answers to a particular question.

1. What is the purpose of your visit to Grand Teton National Park today? *(check all that apply)*



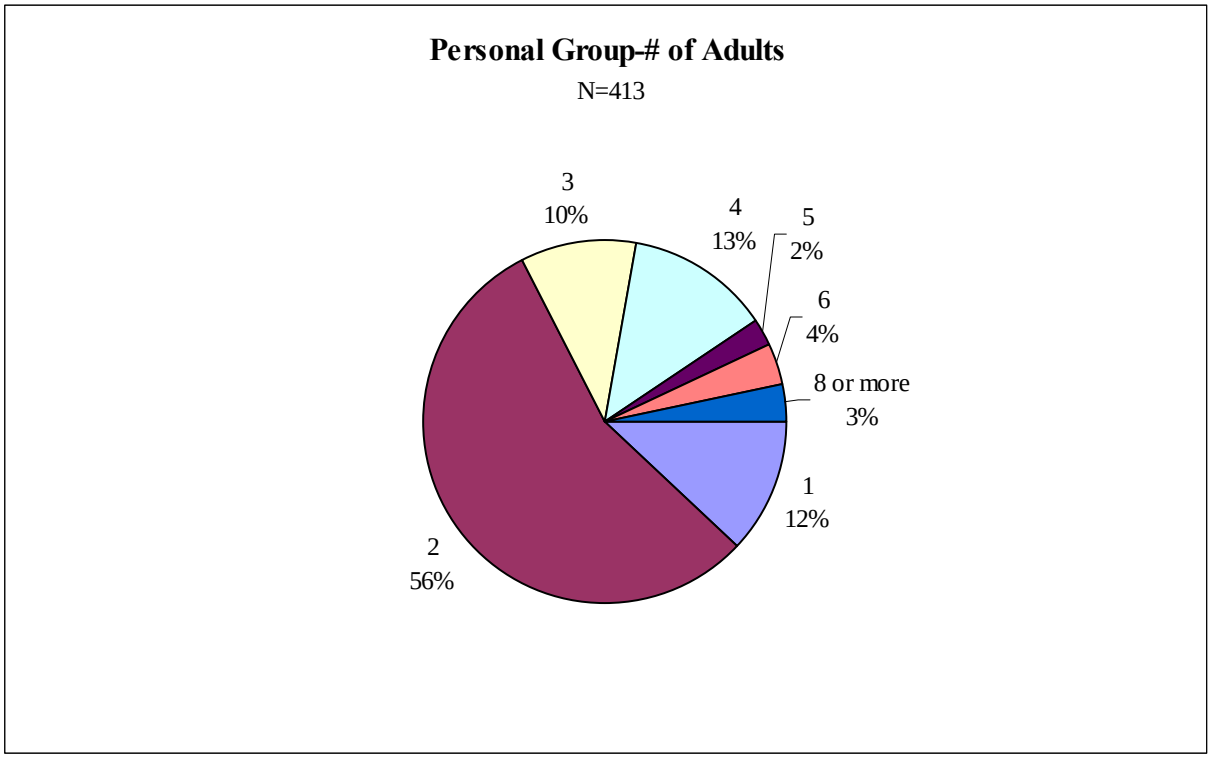
"Other" purposes included "camping" (22 responses), "photography" (five responses), and miscellaneous, such as "passing though," "wedding," and "I live here."

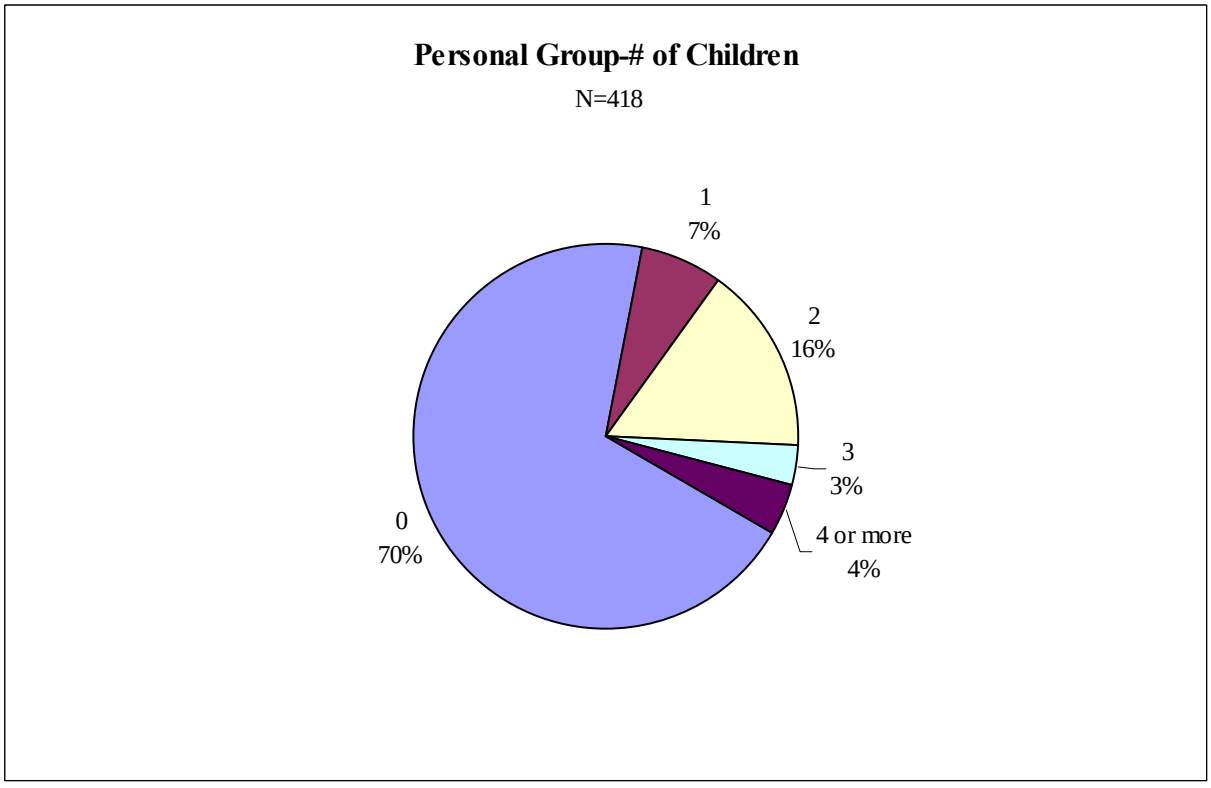
2. What type of vehicle are you traveling in today? *(check only one)*



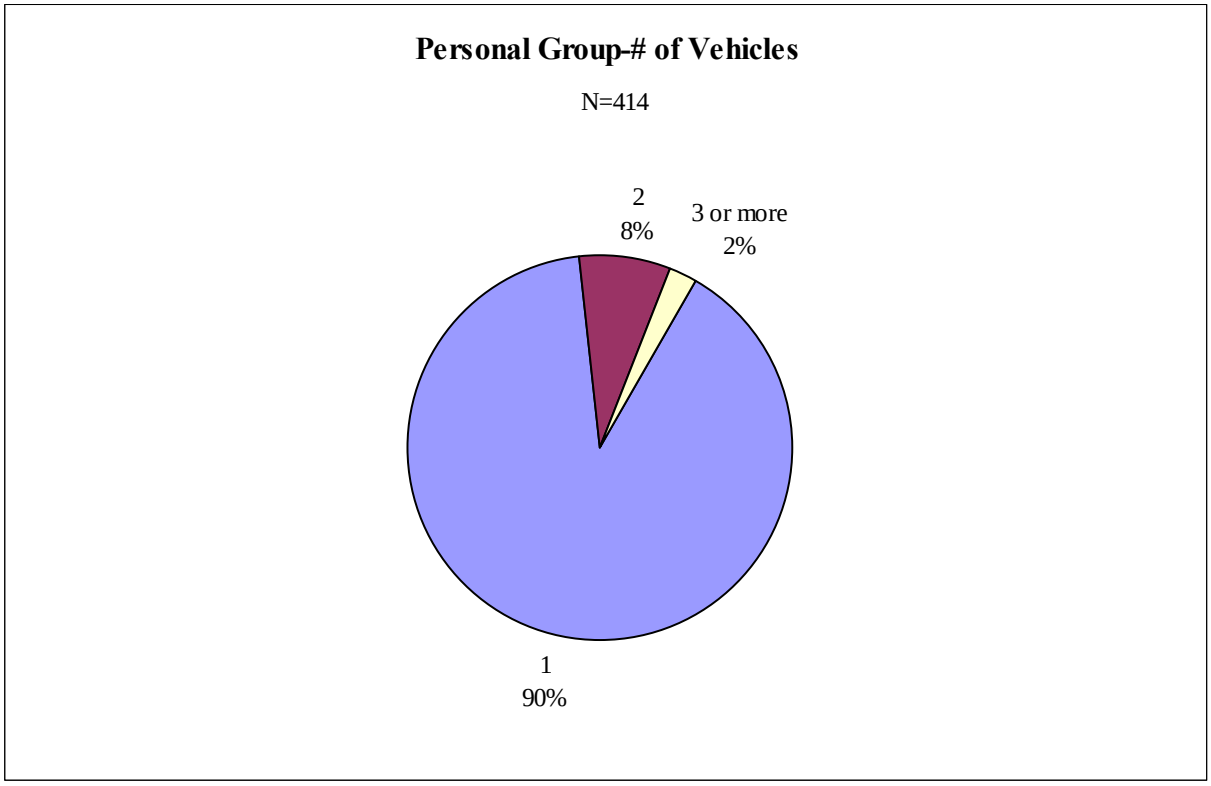
3. For the following question, your personal group is defined as anyone who you are visiting the park with, such as family, spouse, friends, etc. This does not include the larger group you may be traveling with, such as school, church, or tour groups.

3.a. How many people, including yourself, are in your personal group today? Number of Adults, Number of Children (under 18)

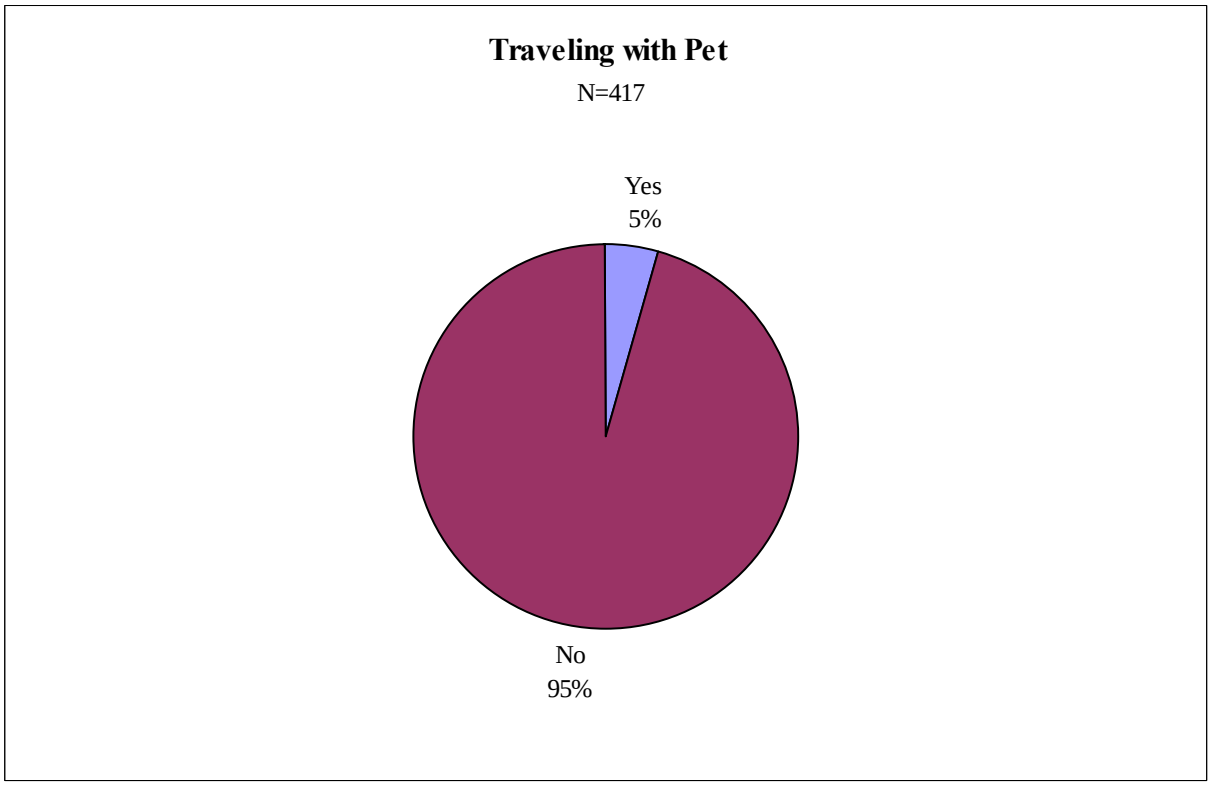




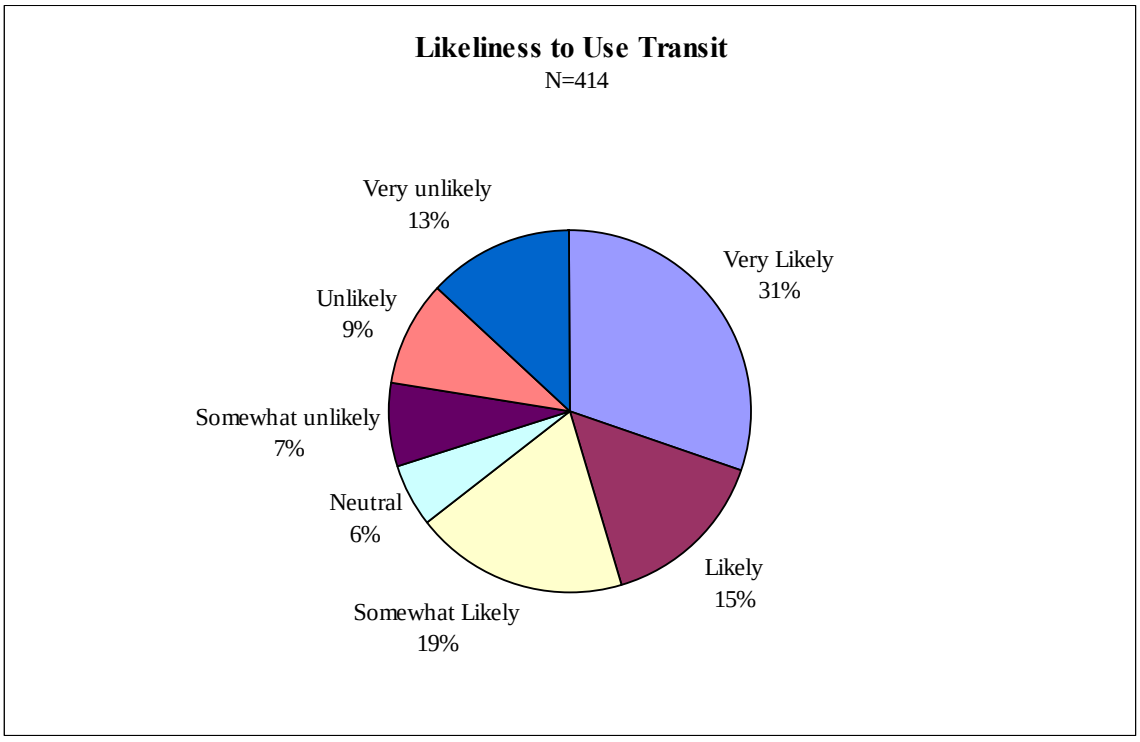
3.b. How many vehicles did you and your personal group use to enter the park?



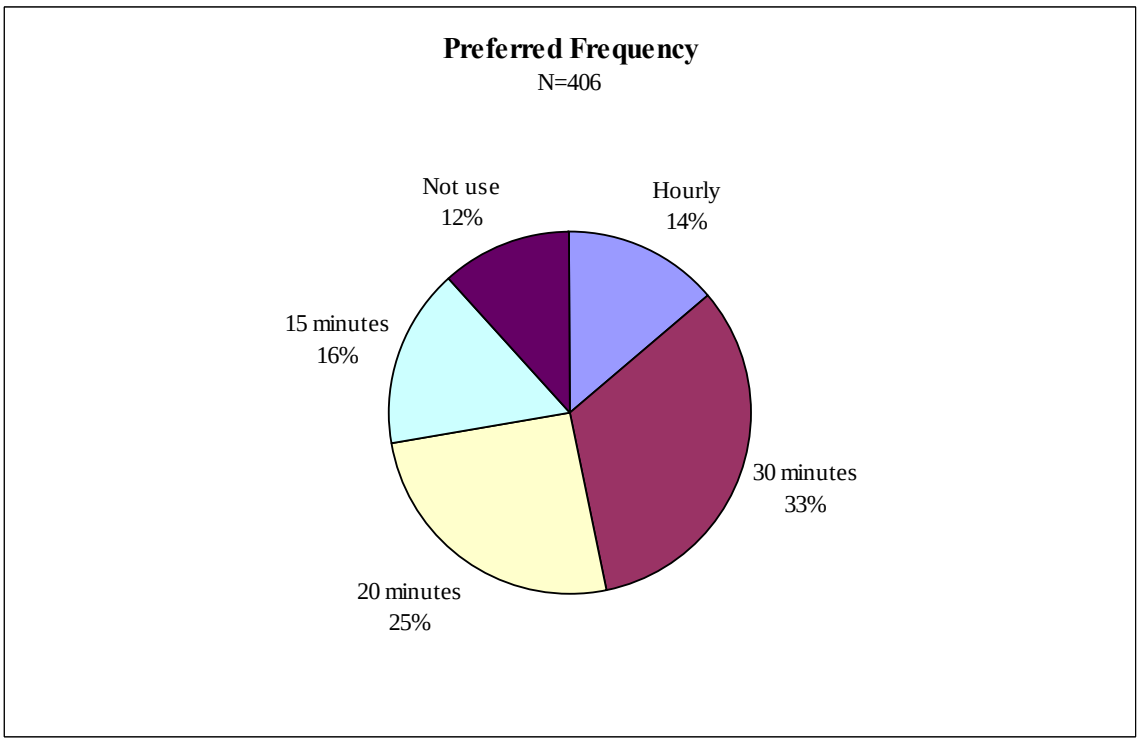
4. Are you traveling with a pet today?



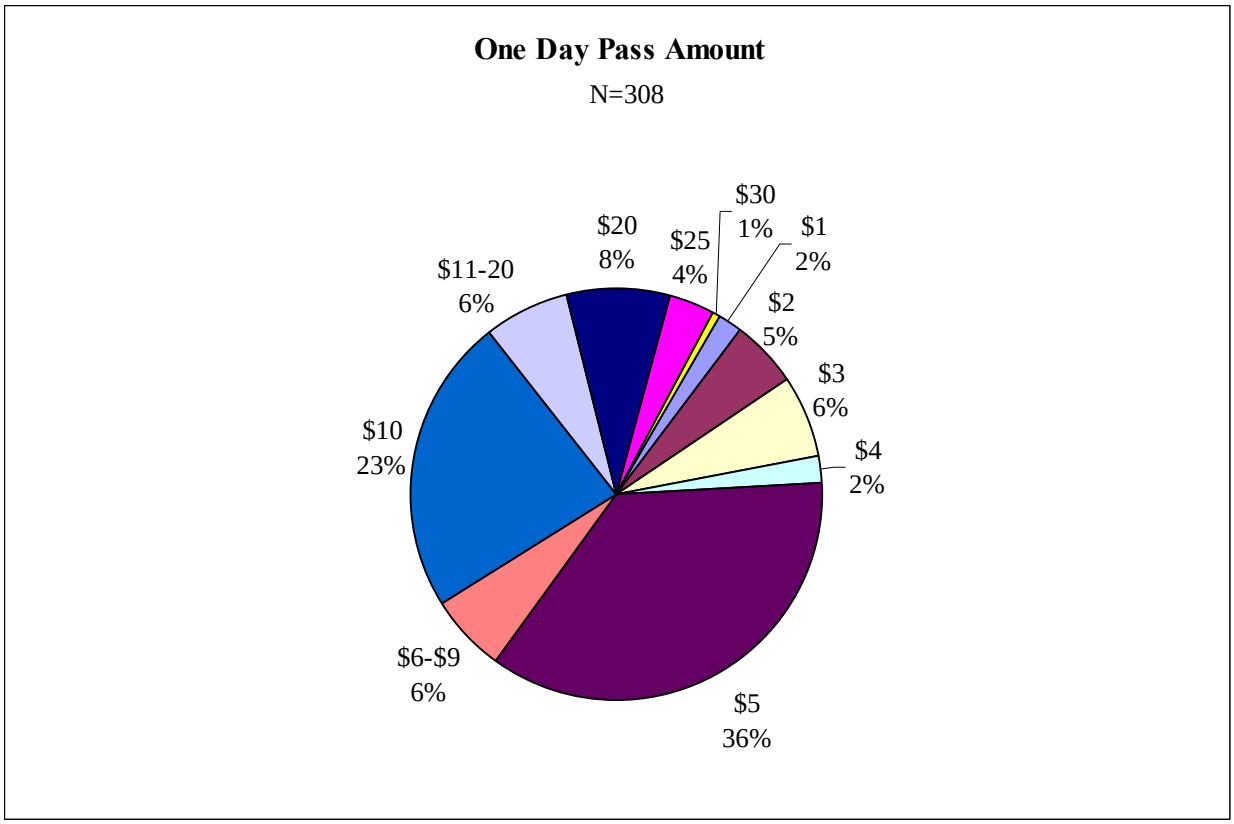
5. If a transit (bus) service existed within Grand Teton National Park, with service to the Park's major destinations, how likely would it be that you would use such a service? *(check only one)*



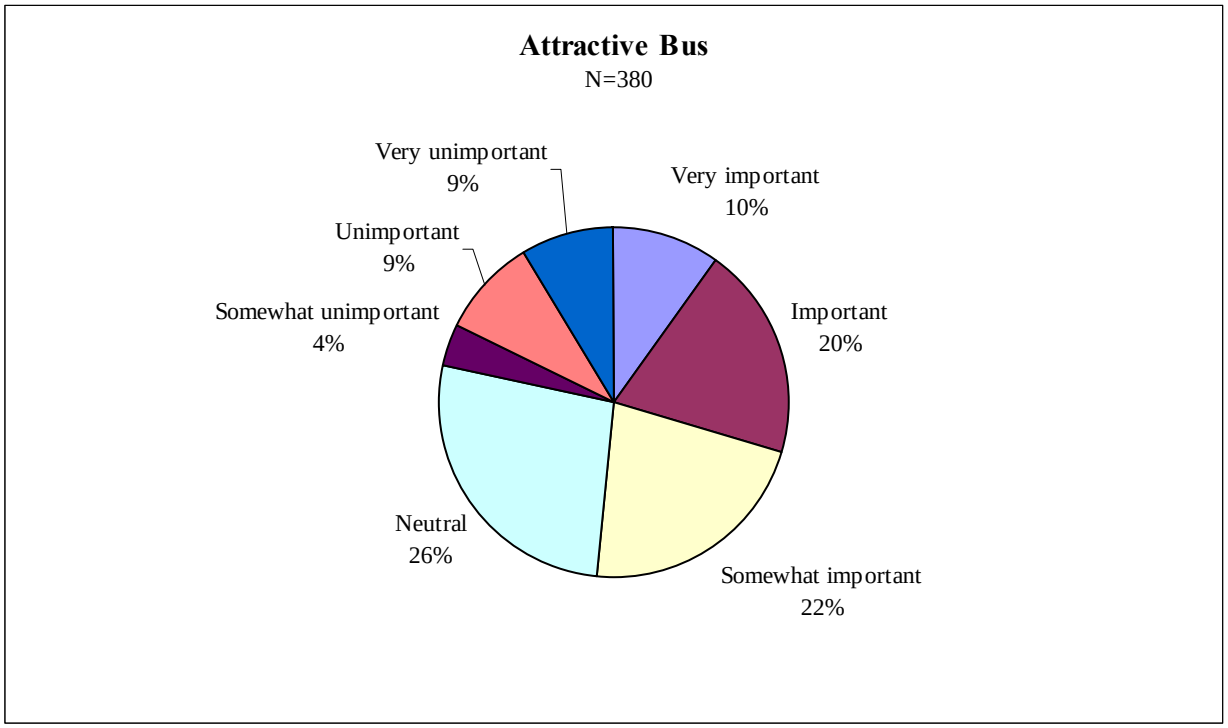
6. How frequently would a bus need to pass by a stop (pick-up point) for you to consider using the service in Grand Teton National Park? *(check only one)*

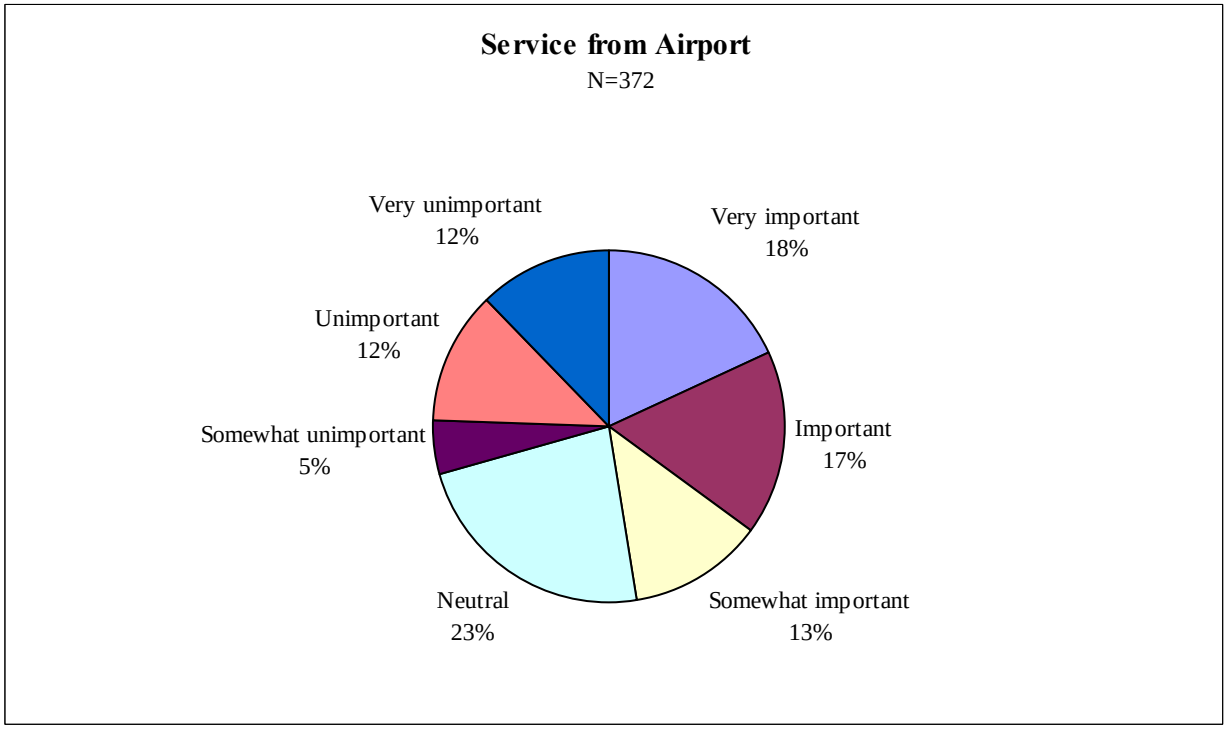


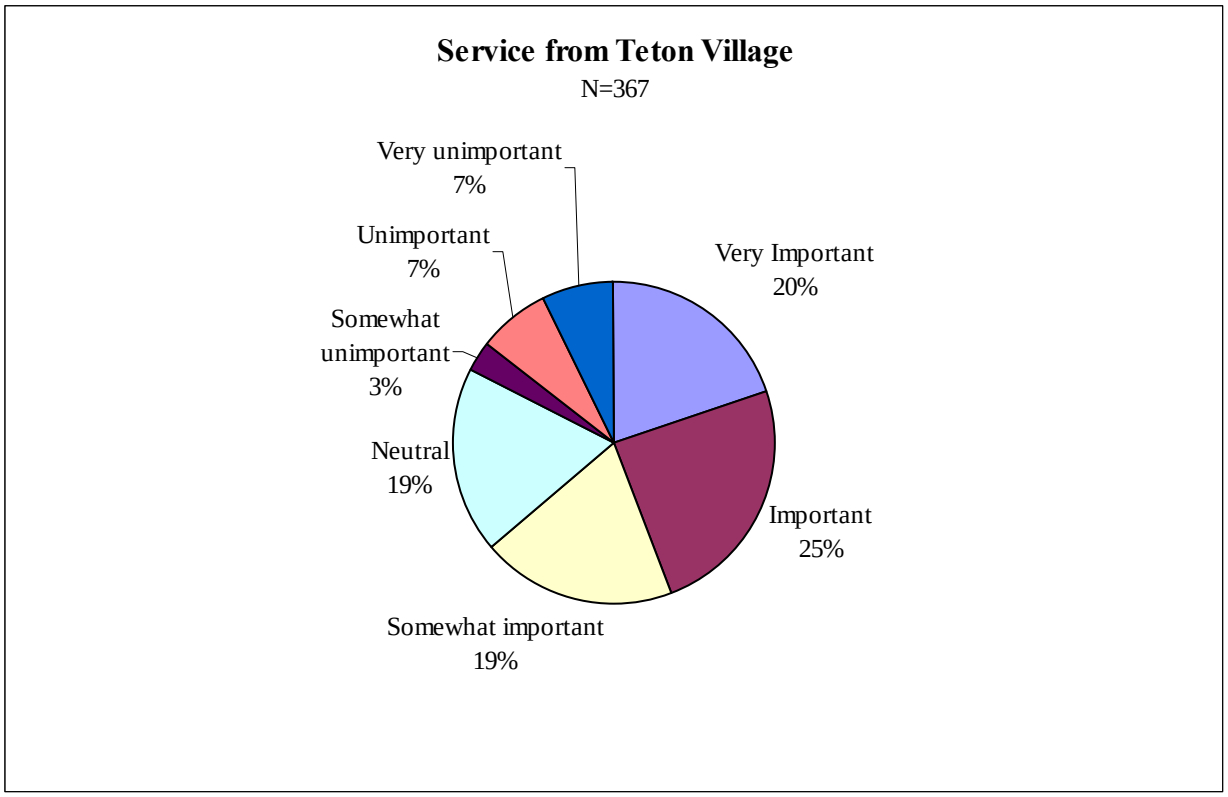
7. How much would you be willing to pay, per person, for a one-day pass (unlimited rides) for a transit service that operated between Jackson and Grand Teton Nation Park, with service to the major destinations within Grand Teton National Park and buses running at least once every hour?

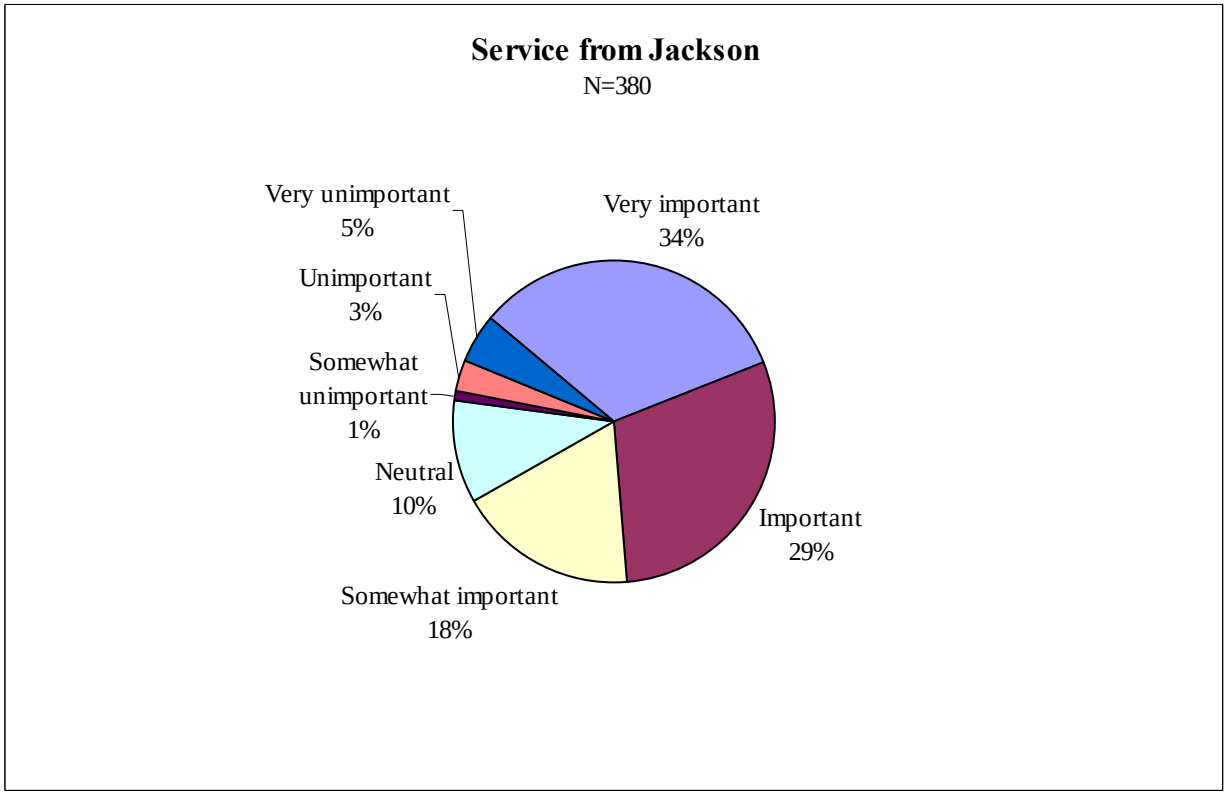


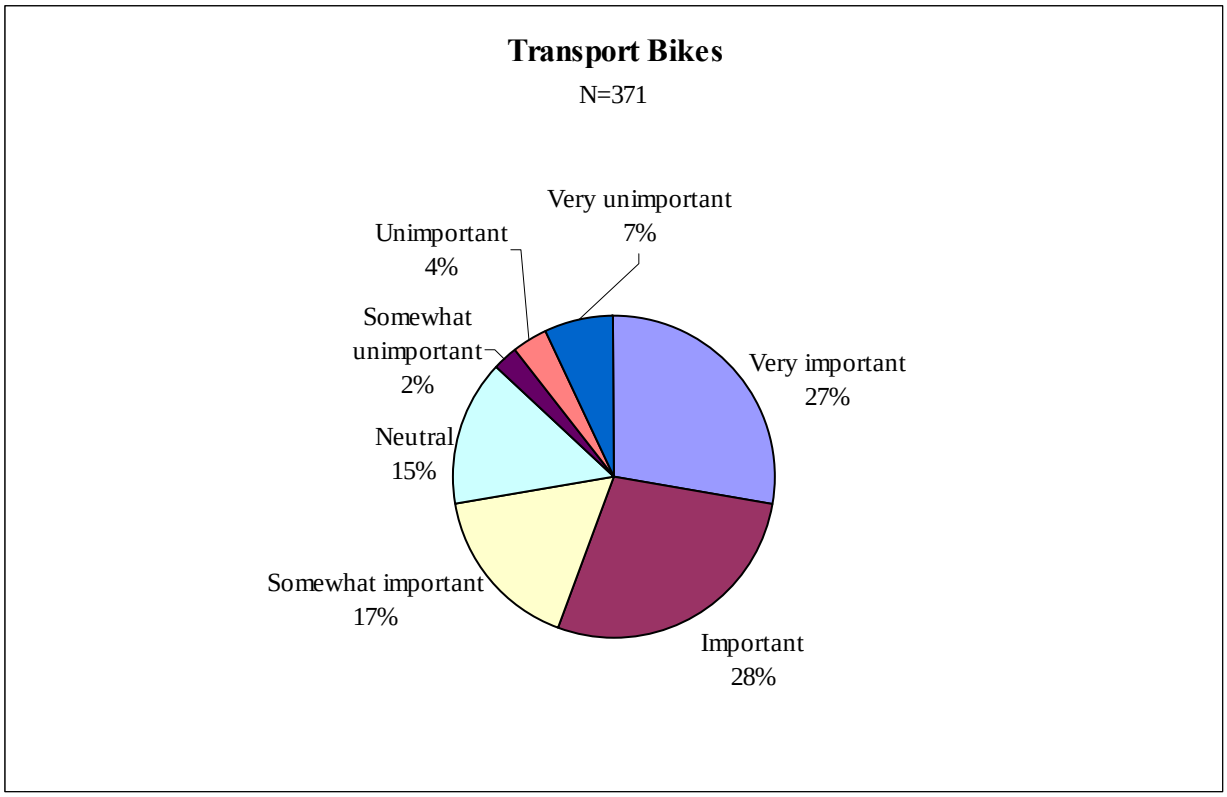
8. How important are the following features for a transit (bus) service within Grand Teton National Park?

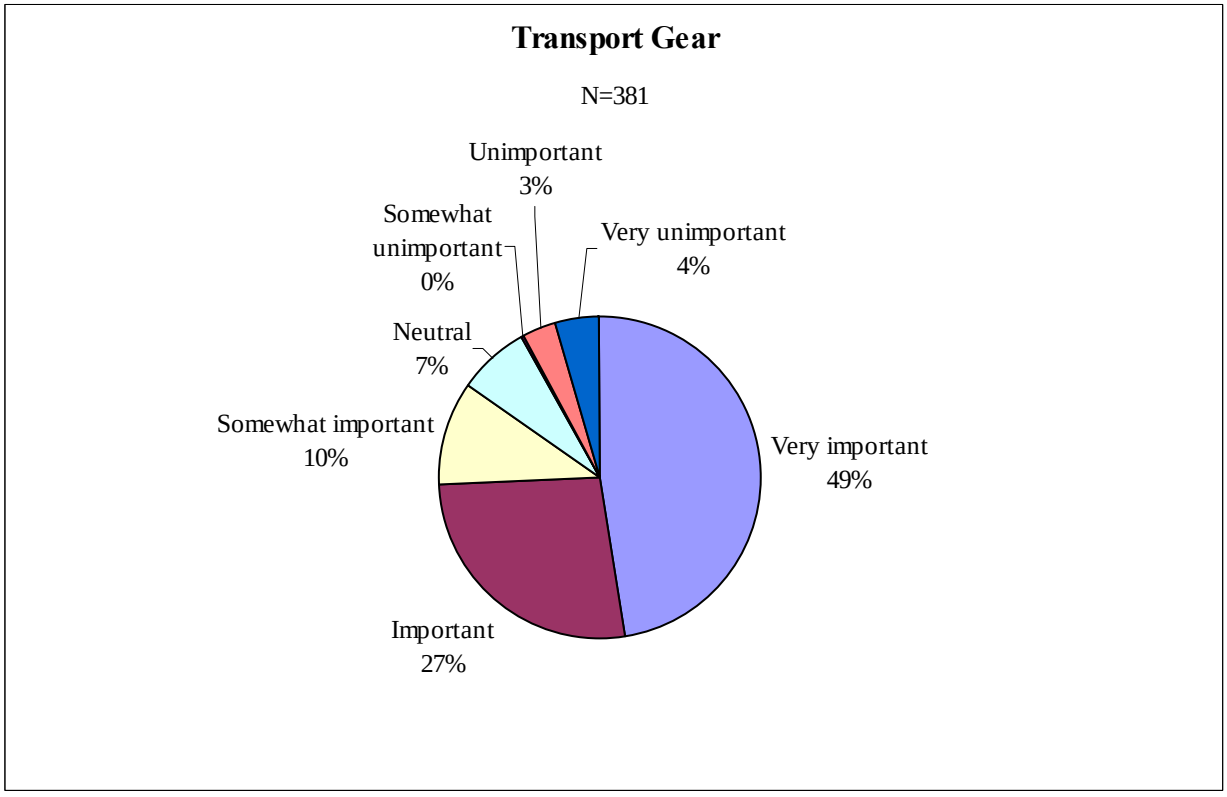




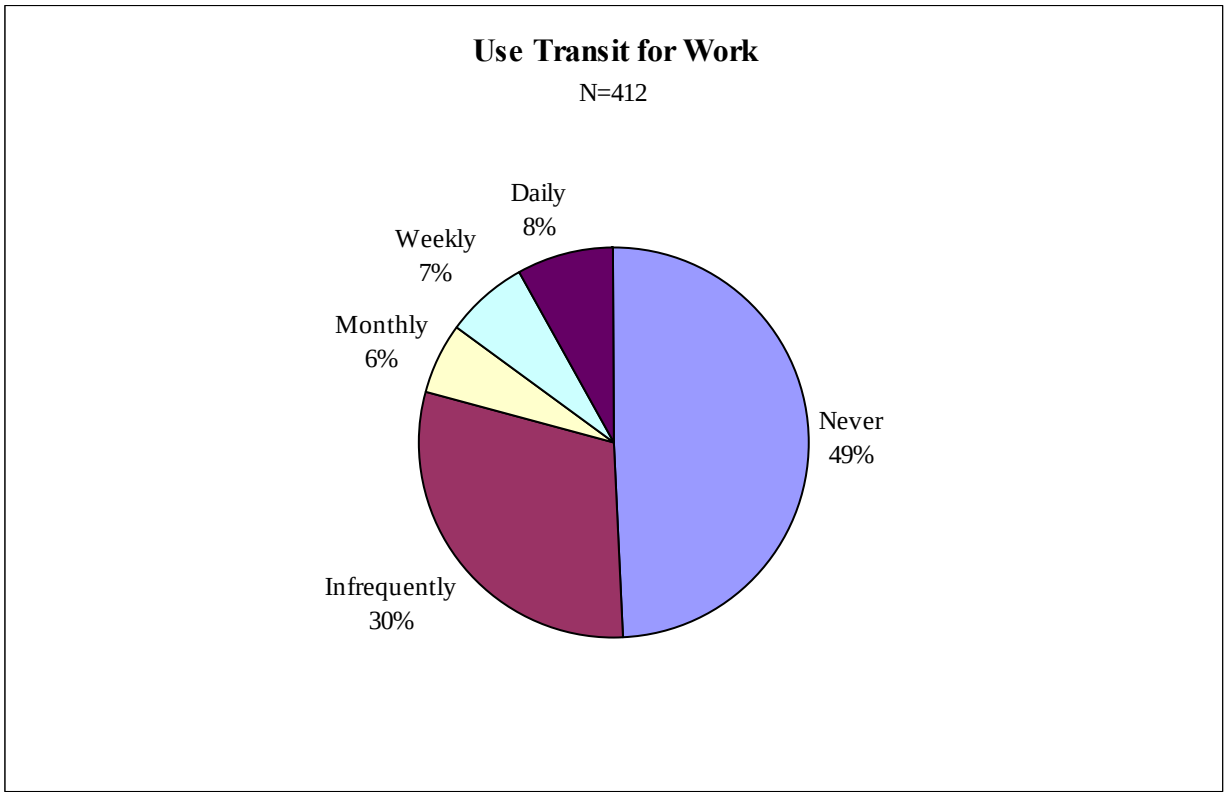

Service from Teton Village
N=367
Very unimportant
7%
Unimportant
7%
Somewhat
unimportant
3%
Neutral
19%
Somewhat important
19%
Important
25%
Very Important
20%


Service from Jackson
N=380
Very unimportant
5%
Unimportant
3%
Somewhat
unimportant
1%
Neutral
10%
Somewhat important
18%
Important
29%
Very important
34%


Transport Bikes
N=371
Very unimportant
7%
Unimportant
4%
Somewhat
unimportant
2%
Very important
27%
Neutral
15%
Somewhat important
17%
Important
28%


Transport Gear
N=381
Unimportant
3%
Somewhat
unimportant
0%
Very unimportant
4%
Neutral
7%
Somewhat important
10%
Very important
49%
Important
27%

9. How frequently do you ride public transit for work or commuting? *(check only one)*



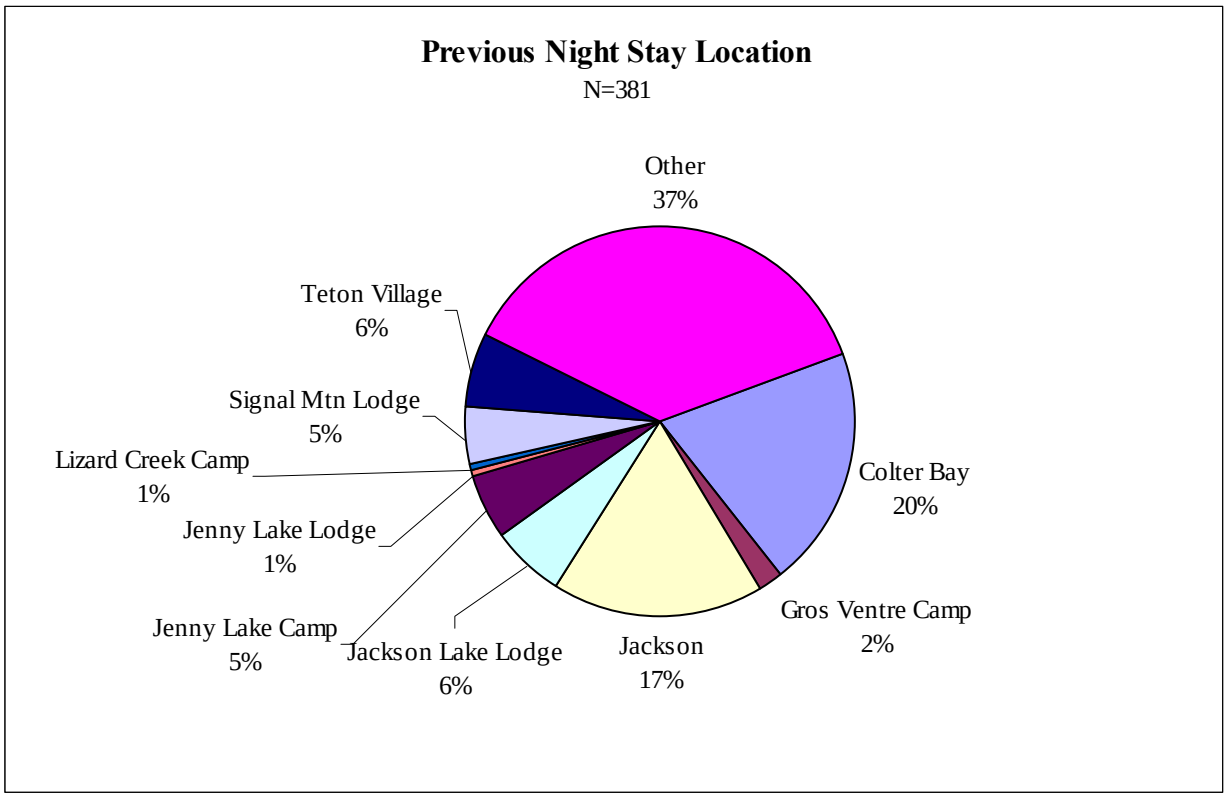
10. Have you used transit in a National Park? If yes, please specify park or parks.

Fifty percent of respondents indicated that they had previously used transit in a park, while 50 percent indicated they had not (N=413). A total of 176 respondents noted the other parks where they had used transit, which included: Zion (40%), Yosemite (27%), Grand Canyon (19%), Glacier (10%), Rocky Mountain (9%) and Denali (6%). Other parks mentioned were Acadia, Bryce and Yellowstone.

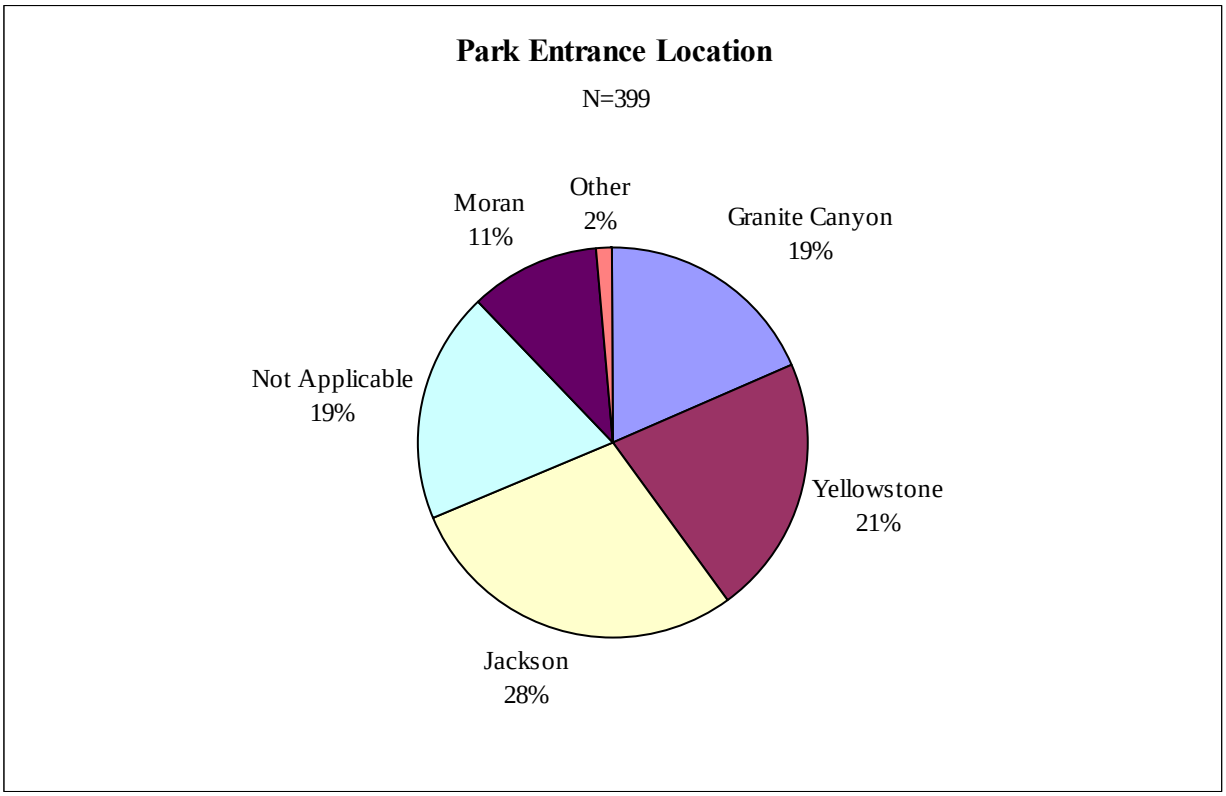
11. Where are you coming FROM and going TO on your visit today?

11a. I stayed last night (slept last night) at:

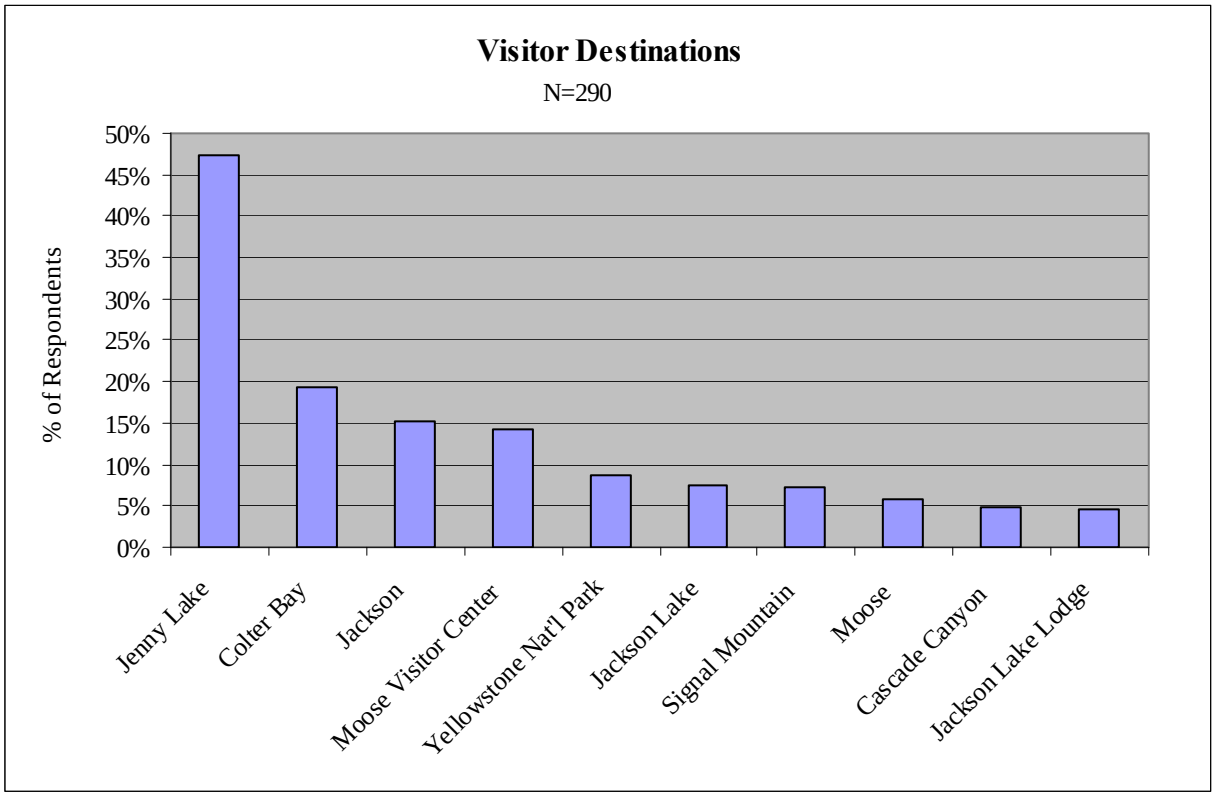
"Other" locations included the Climbers Ranch and Flagg Ranch. The most frequently mentioned "other" location was Yellowstone/West Yellowstone with 40 responses.



11b. I entered the park today at:

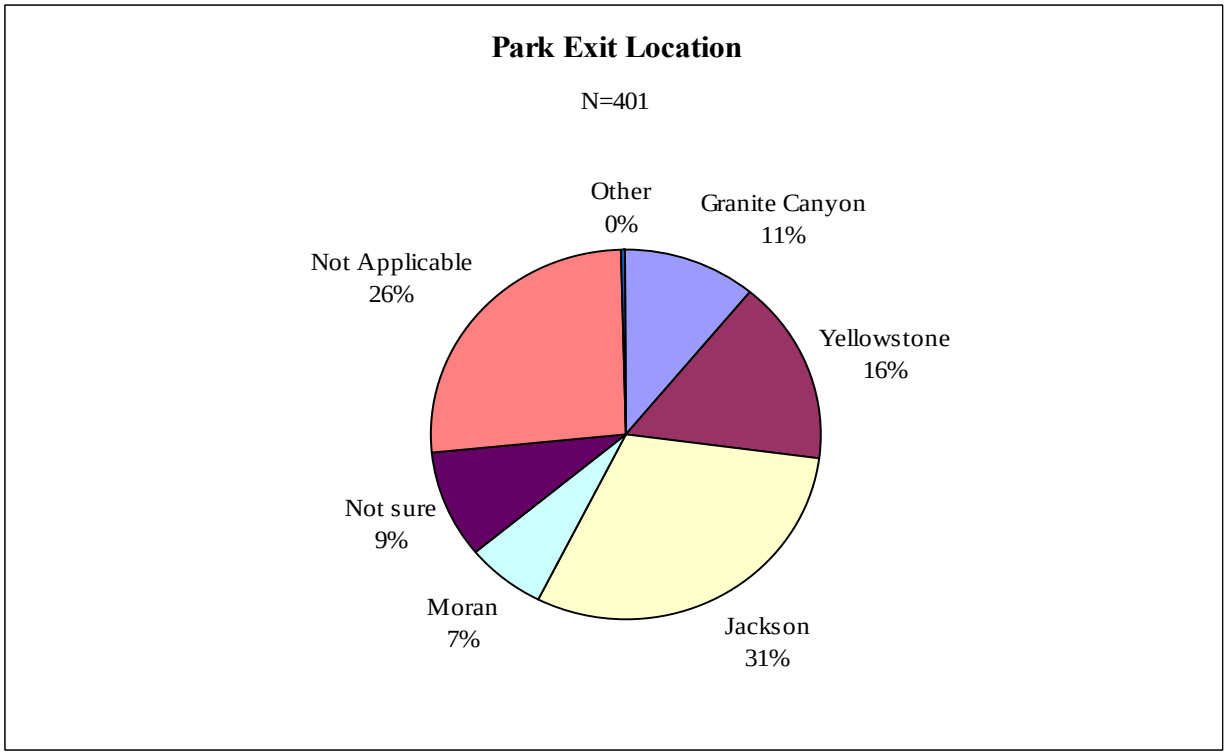


11c. I visited, or plan to visit, the following locations today (list in order of your visit, refer to map).

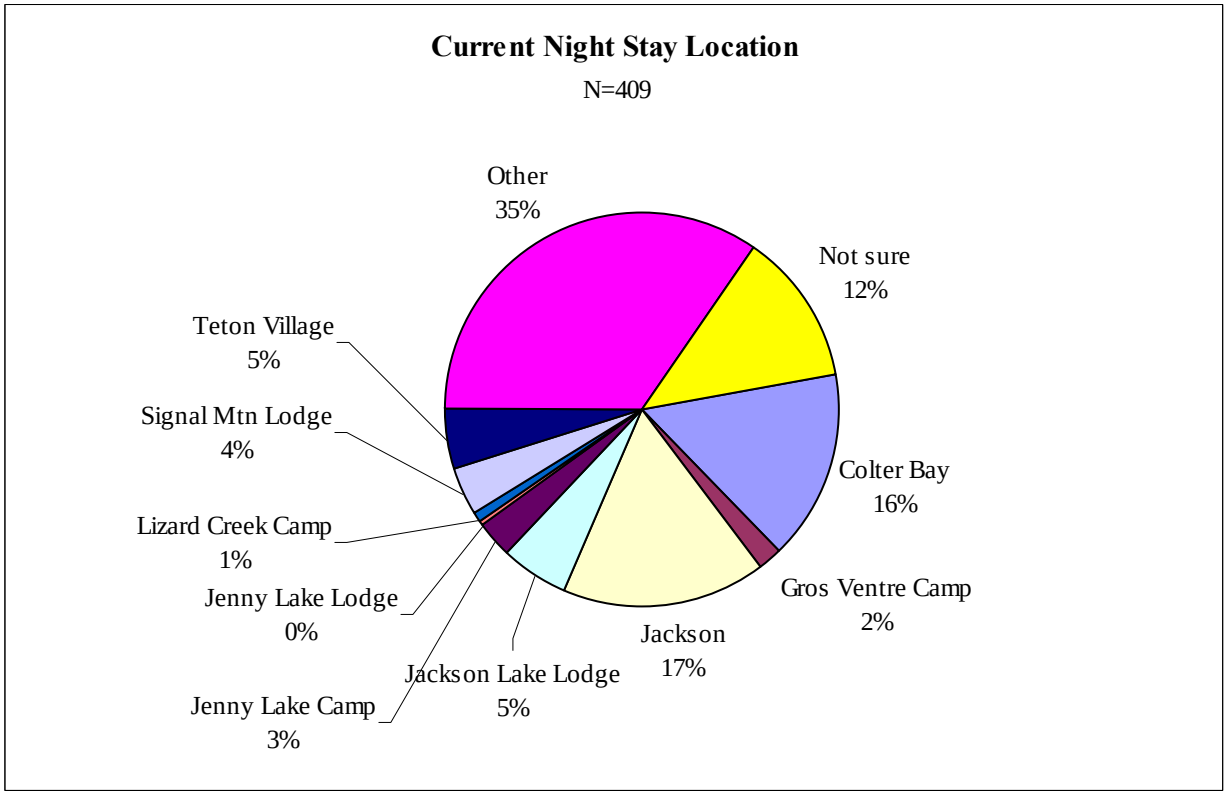


Note: Only 290 of 331 responses were able to be classified. Answers such as "all," "most stops," or "not certain" were not included in the analysis. Other locations people were to visit that were less than 5 percent of the total included (in order of the most to least number of responses): Lupine Meadows, String Lake, Moran, Taggert, Gros Ventre, Oxbow Bend, Teton Village, Antelope Flats, Death Canyon, Kelly, Leigh Lake, Menton Ferry, Teton Park Road, Climbers Ranch, Cunningham Cabins, Lower Saddle, Moose-Wilson Road, Split Lake, Airport, Bar J Ranch, Bradley, Dornan's Glacier Canyon, Grant, Holly Lake, Hurricane Canyon, Lizard Creek Campground, Murie Ranch, Phelps Lake, Sawmill Ponds and Willow Flats.

11d. I will leave the park today at:



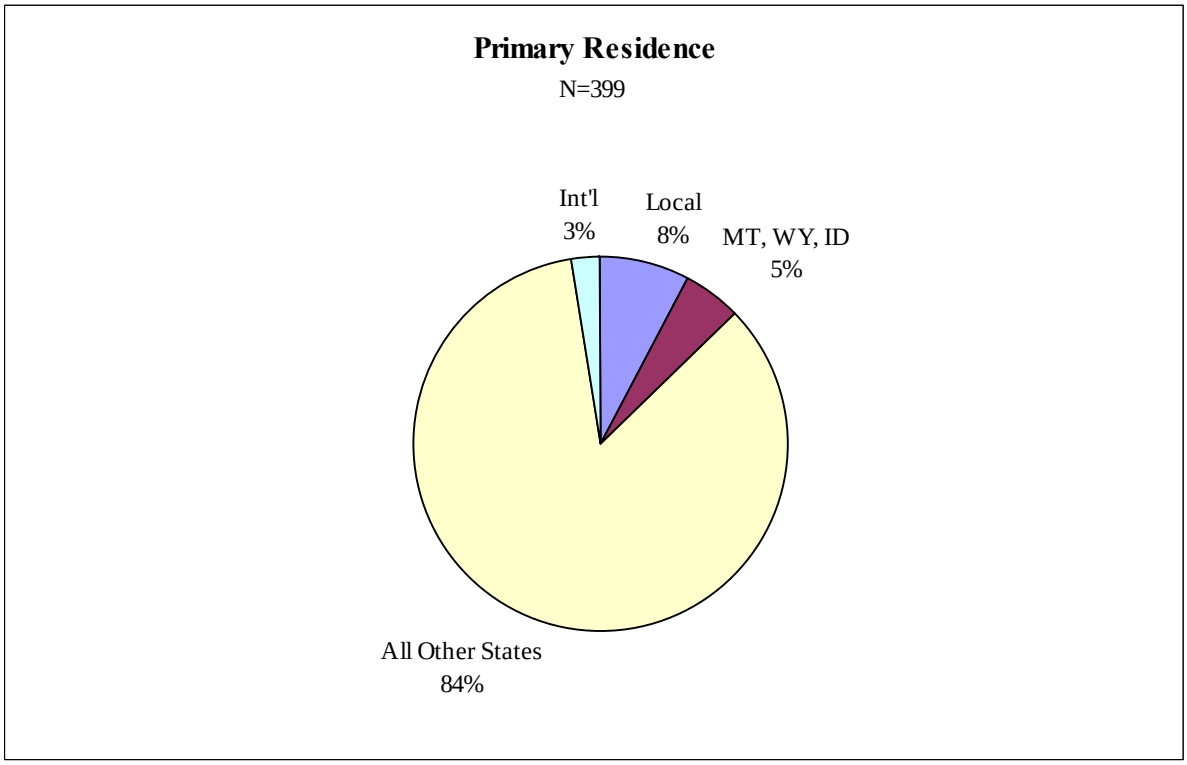
11e. I will spend the night (tonight) at:



"Other" locations included the Flagg Ranch (six responses), Yellowstone/West Yellowstone (24 responses), and "home" (20 responses).

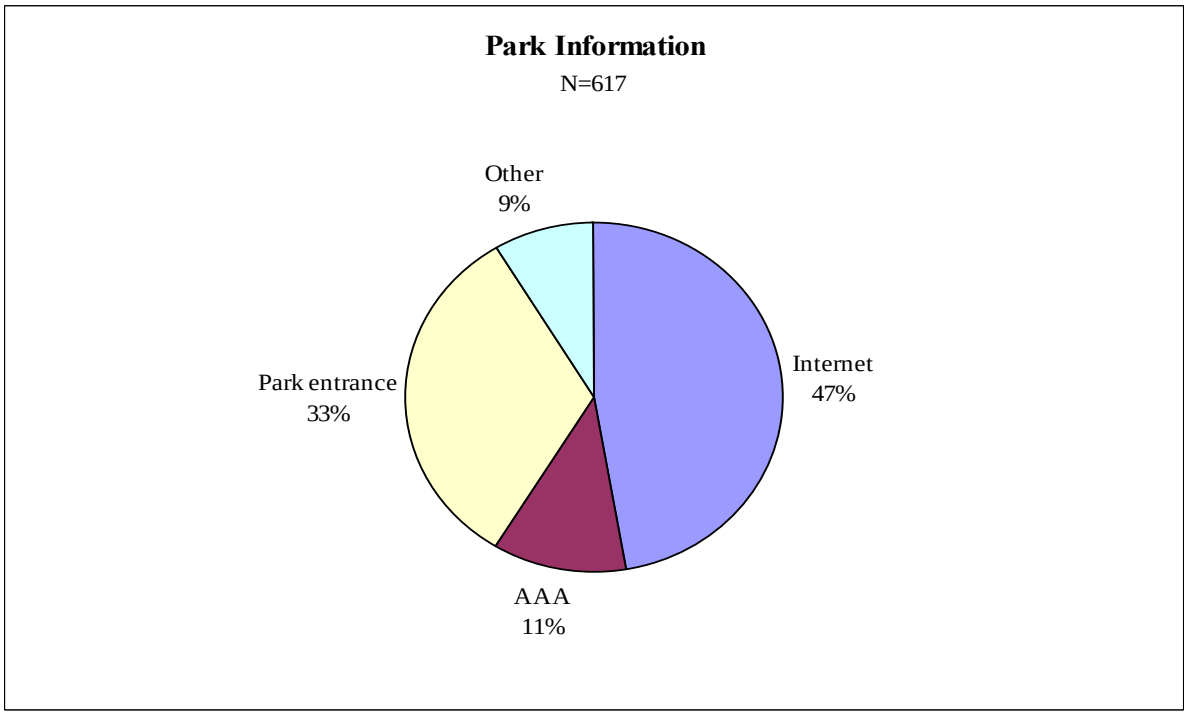
Perhaps the most important data about where people stayed is that 60 percent of respondents indicated that they were staying in the same location for at least two nights. These are people who could use a transit system.

12. What is the USA zip code or international postal code of your primary residence?

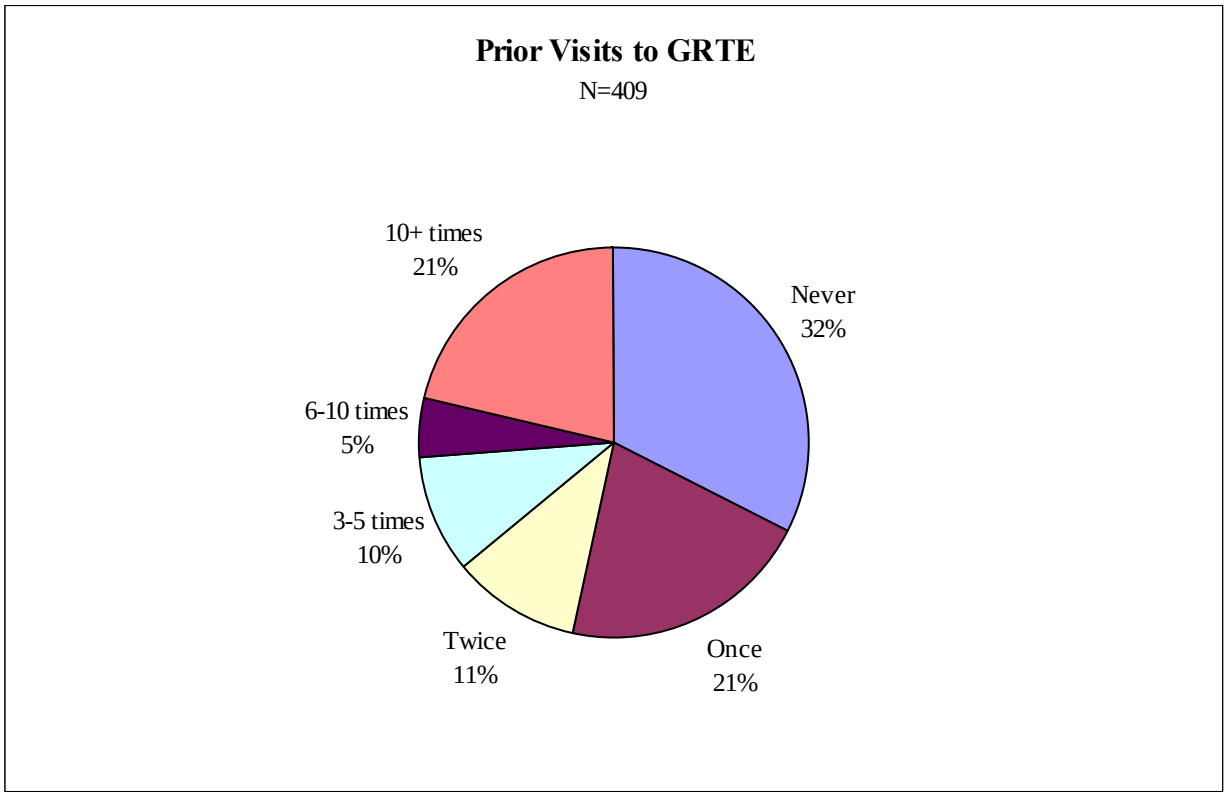


"Local" is defined as Teton and Lincoln counties in Wyoming, and Teton County in Idaho.

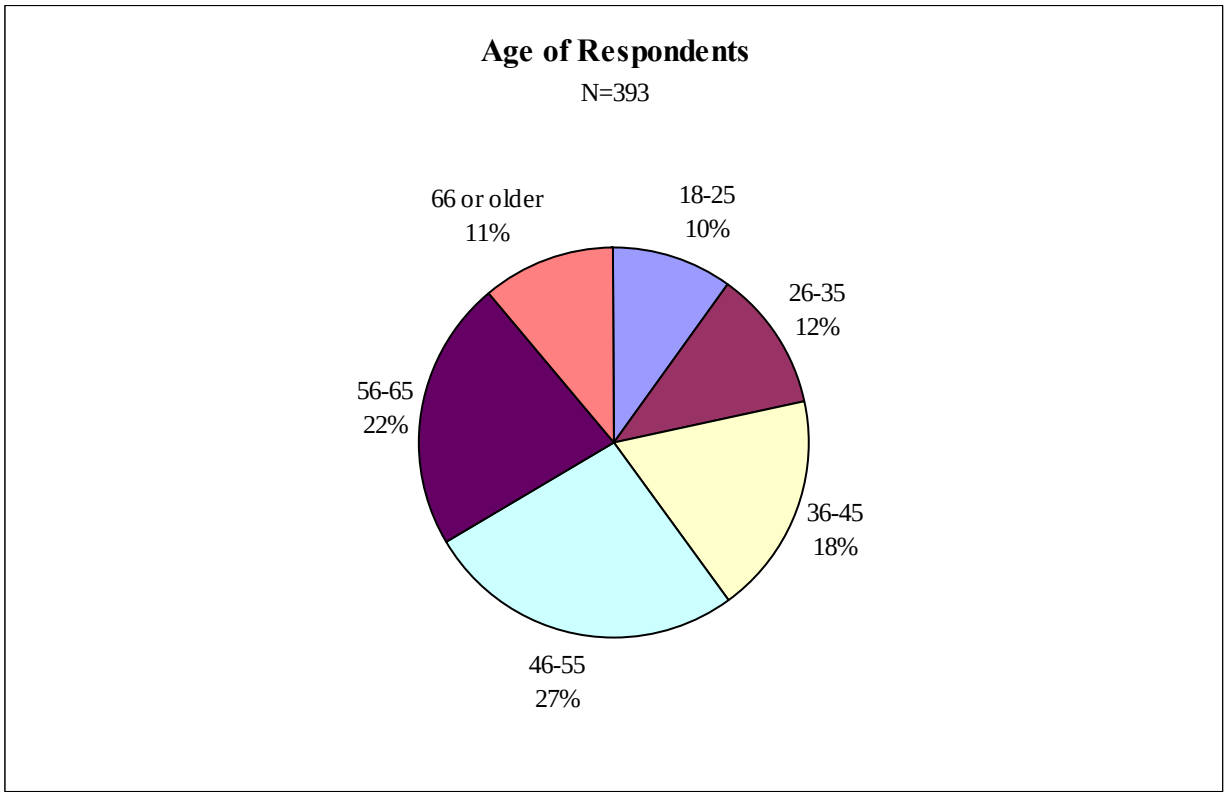
13. Where do you prefer to get your National Park trip planning information *(check all that apply)*?

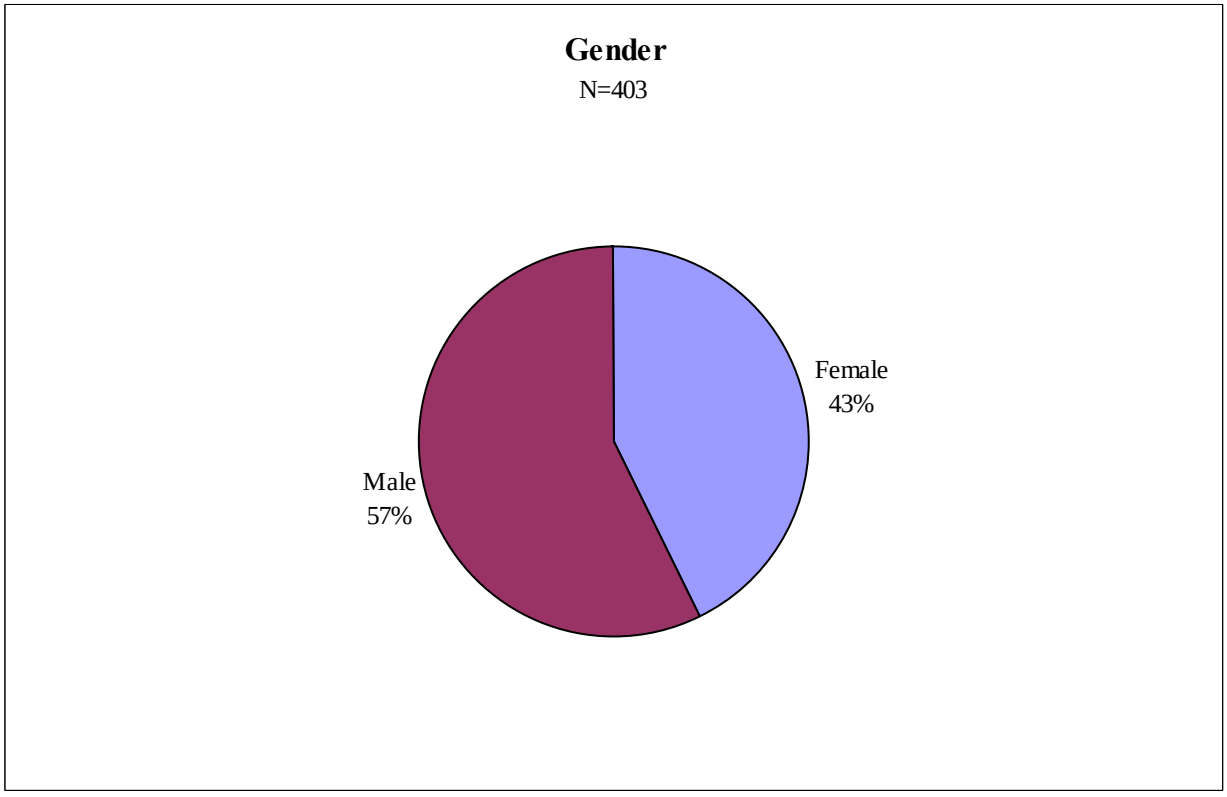


14. How many times have you visited Grand Teton National Park before this visit?



15. What is your age? What is your gender?





16. Please provide any other comments you may have about transit (bus) or transportation issues in Grand Teton National Park.

(A total of 182 comments were received. The comments have not been edited, but have been grouped based on general trends/categories)

Pro transit comments (58 total)

1) Transit is great, reduces traffic and smog

2) Transit between campgrounds & lodging areas and major points of interest would be nice

3) Buses would certainly help with the traffic, being able to interact with other people, having someone to point out the sights. This park is better than Yellowstone

4) Good idea

5) We definitely need this in GTNP but preferably with a biodiesel

6) It would be a great possibility for people who are not travelling by car, bicycle, hiking, backpacking. There would be less traffic through the park where people would use the transit instead of cars, which is good for the environment, the animals

7) Even though we've been traveling by shuttle truck seeing the country side more independently I would surly use a public transit system for more frequent visits to the park or if I came back to spend more time at the park

8) Shuttle service for bikers, hikers and other tourists would make this a much more convenient and pleasant visit

9) It would be nice for a family traveling in one vehicle to have to ability to split up and have transportation available at least to the major park locations

10) Transport within park would be great Zion's model is the best I've seen. Buses must run 1-2 hours after sunset

11) Parks like Zion that offer free shuttle service throughout the park is great I use it all the time. All National parks should adopt that type of service. It would save a lot of wear on our parks

12) A loop bus that would run all day from Colter Bay to Jackson would be great

13) Please, Please, Please, I lived in Jackson for almost 5 years with no car and would love to visit the park more often more easily

14) I feel that a transit system would greatly add to the enjoyment of Yellowstone/Teton village. Too many cars now

15) This sounds like a great idea to move people and have less car traffic and pollution, but it would have to be moderately priced with minimal waiting times. I think people would like it

16) Great idea

17) Bus would be a great idea

18) Would be a great idea

19) Could be a very worthwhile service

20) Please make a mandatory bus system like Zion

21) Transit is so appropriate for this park, I am so glad you're moving forward with it

22) Public transit is a good idea

23) If possible, free circulation buses are needed

24) I would like to see mass transit and maybe limit cars and outlaw large RV's all others use mass transit

25) Yes please!!! I spent $30+tip to pay for a one way taxi for 2 people to get here today

26) A bus / shuttle system would keep the roads running smoothly but also provide cleaner air

27) Transit in the park is a great idea

28) Needs to be mandatory

29) Bus service between Jackson and GTNP is long overdue

30) Please, Please, Please yes! Yes! Bring the bus

31) Please, Please, Please yes! Yes! Bring the bus

32) Busses Good! Need more public transport to enhance the experience! Thank you

33) Go for it

34) I would love to be able to travel by bus in from Jackson, WY I prefer not to drive so public trans would be ideal

35) I love the idea! I would be able to bus into Jackson and do some backcountry w/out renting a car. I think that others would respond well to a transit system. It could cut down on pollution and risks to wildlife! People should be encouraged to drive less any way possible. I would certainly return if there was a shuttle as I don't own a vehicle.

36) Think public transport improves visitor experience and assures park message is conveyed

37) Bus would be a great Idea

38) Would be great to have

39) Great idea

40) It would be awesome!

41) The Zion transit system was great, would use it here for sure

42) Excellent idea

43) Do it

44) I think it would be great good luck

45) Great idea

46) Great idea - it will be necessary in the future

47) I would like to see buses in the park for general transport with lots of parking at park entrances. I would like to see a ban of cars/trucks in Yellowstone and only transport by bus

48) Public transport is a very important in maintaining national parks

49) I am in favor of a transit system in GT so maybe people can enjoy the scenery and animals without creating traffic jams and unsafe stops. I am also in favor of bicycle or multi-use paths in the park

50) Great Idea to try and get more cars off the road to make it work we should try and make it free and encourage it's use after people have reached their destinations. Zion's system was great

51) We strongly need buses. It will cut down on congestion pollution and road kills. It also makes for a more preferable visit during peak season due to the reduction in crowds

52) A bus transit system would improve the over all experience of the park. It would also make bicycling the roads of Teton a more viable safer option. It would make the park even more popular than it is today

53) Great idea, reduce car traffic and pollution

54) Great idea, but it has to be environmentally friendly

55) Public transportation here would be great

56) Do it

57) Great idea

58) I feel it is very important to have public transportation to GTNP from Jackson and through the park. It is not only environmentally responsible but a safer way to travel and avoid wildlife collisions, be able to do shuttle hikes, etc.

General transit comments (62 total)

1) I think transit systems would be better for the elderly

2) Not sure how economically feasible it would be

3) A good start, simple for us with lots of drop-offs or pick-ups

4) Small pets (under 20 lbs) should be allowed

5) Works well in Yosemite and Zion. Should not stop everywhere

6) High season vs. low season might make a difference

7) I would go to Jackson on a bus but avoid it otherwise due to the traffic

8) Shuttle service for river rafting, kayaking, biking would be nice

9) Well it would depend on the tour guide and the stops necessary to take for pleasure and personal stops

10) It would be nice to let someone else drive so I could look at the scenery

11) Decreasing tire prints on the national parks will benefit all involved

12) We travel in a motor home so public transportation would not be an issue for me however it could be a very nice option for others

13)) Two shuttle sources - one (free) within the park to key points of interest 30 minutes would Minimize interior traffic. One service (pay) from Jackson to get people into the park with out their vehicles

14) Would probably be nice for older folks

15) As long as cars would not be limited

16) I would prefer an option that is most consistent with the mission of the park and the spirit of what folks come for - which for me is time to connect with wilderness and history

17) I prefer a clean smelling exhaust on a bus

18) Taxes and entry fees should cover all public transportation costs

19) Small van of 30 or 50

20) Would only use transit if traffic became so congested that it was difficult to drive and especially to park. We often stop at some overlook for just 5-10 minutes. Transit would mean less destination points per day

21) Would be great to decrease the traffic in the park but would need to be very convenient and would like to still have the option to drive my own vehicle

22) Great in Zion and pretty good in Yosemite

23) Yes I can imagine hikers, drivers, bikers using a bus that sounds good. I used the service in Zion and thought it was great but that was before I had dogs

24) Use green resources

25) Transit system should keep people moving

26) It could relieve some jam-ups with wildlife spotting

27) Was just discussing the need for public transit in Teton Park yesterday, as some people in our 3-person party want to do different things but we only have 1 car

28) There should be a family price, discounts for seniors and disabled persons

29) Have route in good view of transportation

30) Transit needs to operate early and late enough such that weary hikers who need every bit of daylight can use it (both earlier and later than Jenny Lake boat)

31) Green fuel busses

32) Old style tour bus like the jammers and park busses at other parks. Rustic looking transport bus is nice even open side train bus

33) It should be free

34) I would pay $10 for myself but I need a discount if I was in a group

35) Buses for sight seeing only would be great

36) Mass transit is fine as long as it is not the only way to enter the park

37) I recognize it’s important for people who cant walk, but I think it is best to keep buses out of the park Jenny lake is already very accessible

38) The park is very long and spread out, you need your own vehicle to transit the park

39) I do not feel that car traffic should be eliminated as it limits your time in any one place and any side trips you may want to take along the way

40) Buses keep one from being in control of when and where and how long one can use her time her way within the park which also does belong to me

41) Good for people who are just site seeing, but maybe not for those with equipment

42) Use 100% ethanol

43) Didn't find traffic too bad maybe weekends are worse a bus would limit ability to stop and video wildlife

44) Good idea if needed by many

45) The drivers need to be cool and knowledgeable

46) See Yosemite and if they work

47) Good idea for gas and pollution but pretty close to unrealistic

48) Bus transit or trolley system in park is ok as long as it does not result in limited access for those who prefer to drive their own vehicles through out the park, no forced used of the bus

49) Eliminate parking areas and demand will soar

50) Liked the free bus system in Glacier. Free and frequent

51) From all exits of Yellowstone into park to Colter or Jackson

52) Maybe making some areas off limits to cars like the Jenny Lake scenic loop and providing a guided shuttle, things like that would work

53) Public transport around outside loop to Jenny Lake would be nice and provide relief from critter jams

54) Has to be like clock work and always should have space

55) Will it up noise, pollution, overcrowding, destruction of pleasant environment?

56) I think you should get a 7 day pass for the transit bus, should cost $15 and a family pass for 2 adults and 2 children for $50

57) I would pay $25 for a weekly pass

58) I think that a great idea, but I don't think it should be a taxi service to/from the airport

59) I'd pursue corporate sponsorship like Acadia NP did with LL Bean. Seems to work great

60) Buses should connect with buses that should be in Yellowstone, otherwise I would still have to drive a car

61) I would prefer to ride in a hybrid /propane bus

62) It'd be great maybe a quick stop at Gros Ventre Junction as it's a great commute parking area

Anti transit comments (6 comments)

1) No mandatory use like in Zion, which I no longer visit because of it

2) I'm not at all interested in changing the way I use the park. I've been to parks where transit is used and it takes the spontaneous experience away

3) No buses!!!

4) Opposed to bus transportation, hated it in Zion

5) No buses!!!

6) Would not use

Transit/hiking comments (18 comments)

1) I would use the transit system to get to hiking trails mostly if there were more trails accessible to each campground it would be ideal to minimize driving

2) When backpacking in the Rockies I found the public transportation extremely helpful in seeing a larger amount of the park in a reasonably small amount of time

3) Parking is a problem at all the parks - easier access to trail heads would reduce cars on the road and make it easier for groups to divide up

4) It would be a good addition would be important to provide stops at trailheads then climbers and hikers could take advantage and not need to leave a car at both ends of a hike, climb or bike

5) I would love a bus that would take backpackers and other visitor between the various trail heads there are a lot of hiking loops and a bus would be very helpful

6) Service between trail heads

7) Transit between the backcountry trailheads on the west of the Teton Range would be wonderful

8) We love having a hiker/climber shuttle between various trail heads and campgrounds

9) I think a shuttle would be great with bike and gear transportation abilities

10) Transportation system for backpackers would be great we spent 7.5 hours shuttling 5 cars for backpacking friends - it would have been nice for them to have a transport system from string back to granite or vise versa

11) We would use transportation from campground to trail heads

12) A bus transit system is much needed as a backpacker the availability to come in at one point and catch the bus several days later at a different location would be useful

13) Seems to be most useful to backpackers who avoid renting a car entirely

14) It would enable one-way hikers

15) If transportation were available for backpackers (over to the west side or vice versa) we would be more likely to use the service

16) It would be helpful to get to different hiking locations and visitor centers

17) Safety and drop off at major hikes at reasonable intervals

18) Important to provide for hiking shuttles

Park-related comments (16 comments)

1) Too much traffic in the park something needs to be done. Not enough enforcement of the traffic laws

2) Please do what it takes to preserve the park. If eliminating autos would help then by all means do so

3) Impressed by clean park and friendly staff

4) I like to park in a lot and ride to an attraction, it stays cleaner and pristine

5) Please enforce parking regulation (lazy drivers parking in bus zones loading zones etc.), educate people on using turnouts and blinkers

6) Beautiful

7) Last Visited in 1959 I prefer less commercialism

8) I HATE large RV's that go slowly and take up a great deal of space I wish people with small economical cars could be rewarded some how

9) The Moose entrance was extremely slow this morning and with very few vehicles. I suggest problems be requested to move aside for resolution so that those with routine transactions passes can move through the gate

10) General Slight Congestion

11) It's just beautiful here

12) Great park

13) There is a shortage of picnic areas

14) Keep RV parking clear of passenger vehicles, sign appropriately

15) Need to stop car stopping in the middle of the road to view wildlife

16) Decriminize hitchhiking in the park and make it easier by putting in stop until transit becomes available

Biking comments (7 comments)

1) Make the park more bike touring friendly

2) Looking forward to a bike trail

3) Bike Paths

4) Glad to see bike paths in future, highly approve of buses as Zion and Yosemite

5) Must have bike paths

6) A bus system would be great but what is also desperately needed is a bike path system for safety

7) Need bikes paths and option for bus transit

Other comments (15 comments)

1) I've not really felt there were issues

2) Rented a car, very happy

3) How feasible would it be to have the Tetons moved to within sight of my house in Santa Cruz, CA

4) Love the boat service

5) Keep it beautiful

6) Will return

7) Gods Country

8) I do like to drive

9) Very impressed

10) Great, thank you

11) Wonderful, thanks for keeping it good campground

12) Awesome

13) Be careful

14) Prefer rented vehicle

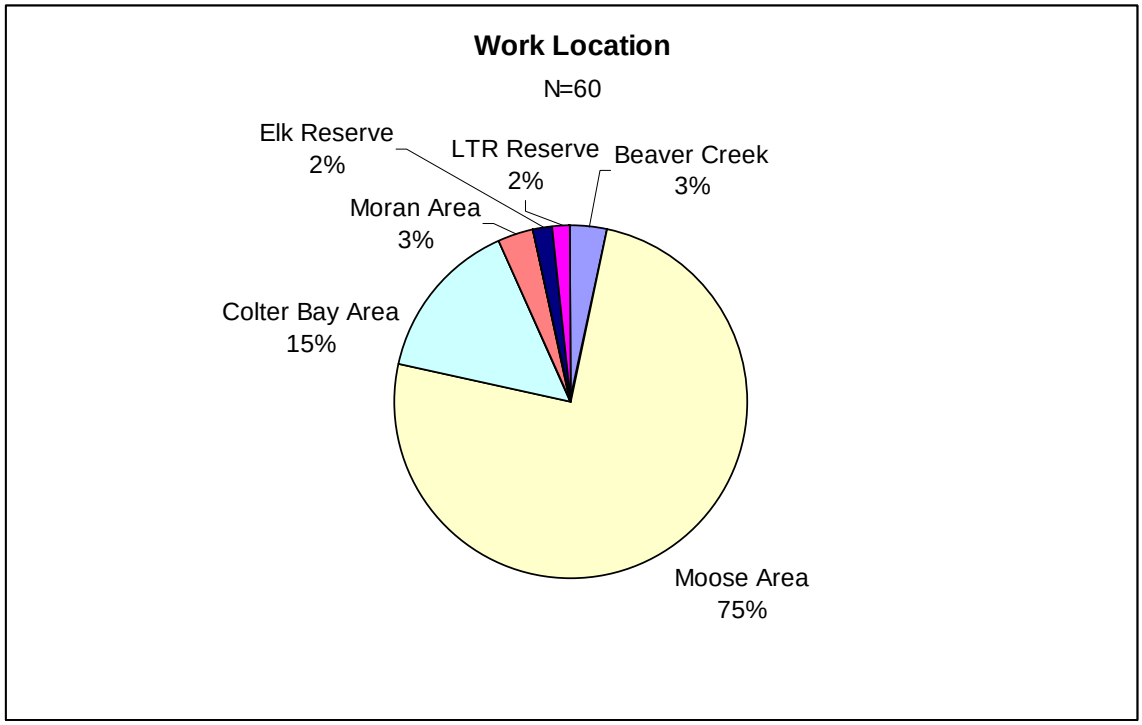
15) Fabulous, great, fantastic, keep it up

8. APPENDIX C: EMPLOYEE SURVEY RESULTS

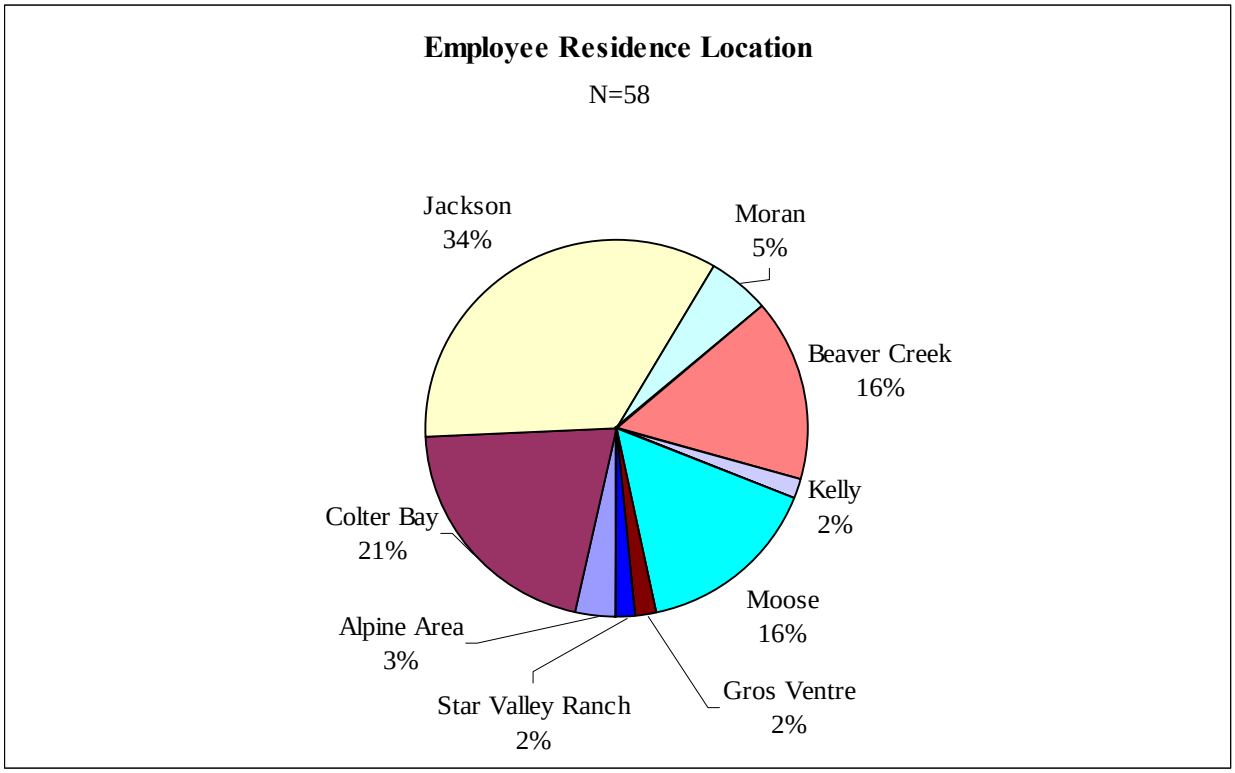
The survey was administered through an on-line service (Survey Monkey), although employees who did not have access to a computer were provided paper copies. The survey process took place from August 29 through September 13, 2007. A total of 79 online and 14 paper surveys were received, for a total of 93 surveys at least partially completed.

The results shown in this appendix are based on the total responses to a particular question (noted as "N"), and are not based on the total number of surveys, unless so noted.

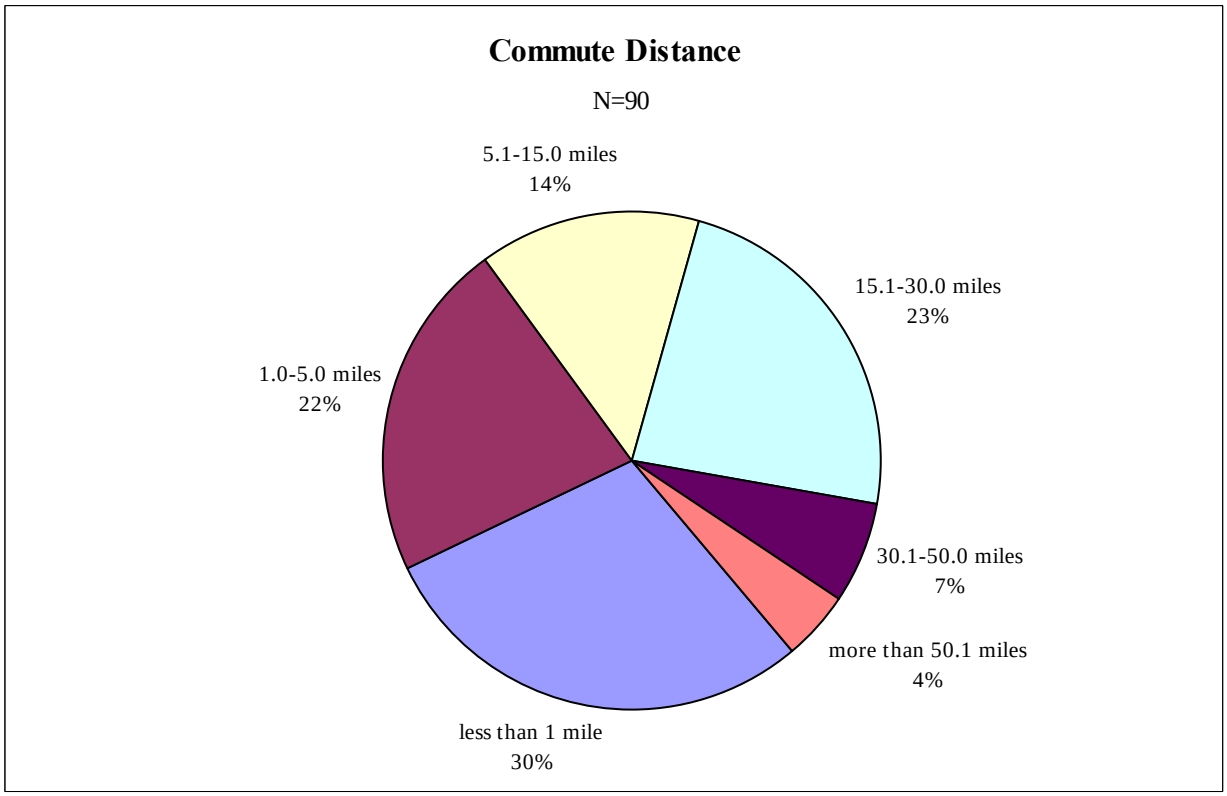
1. Where in the park do you typically work? (Where is your "office")? *(check only one)*



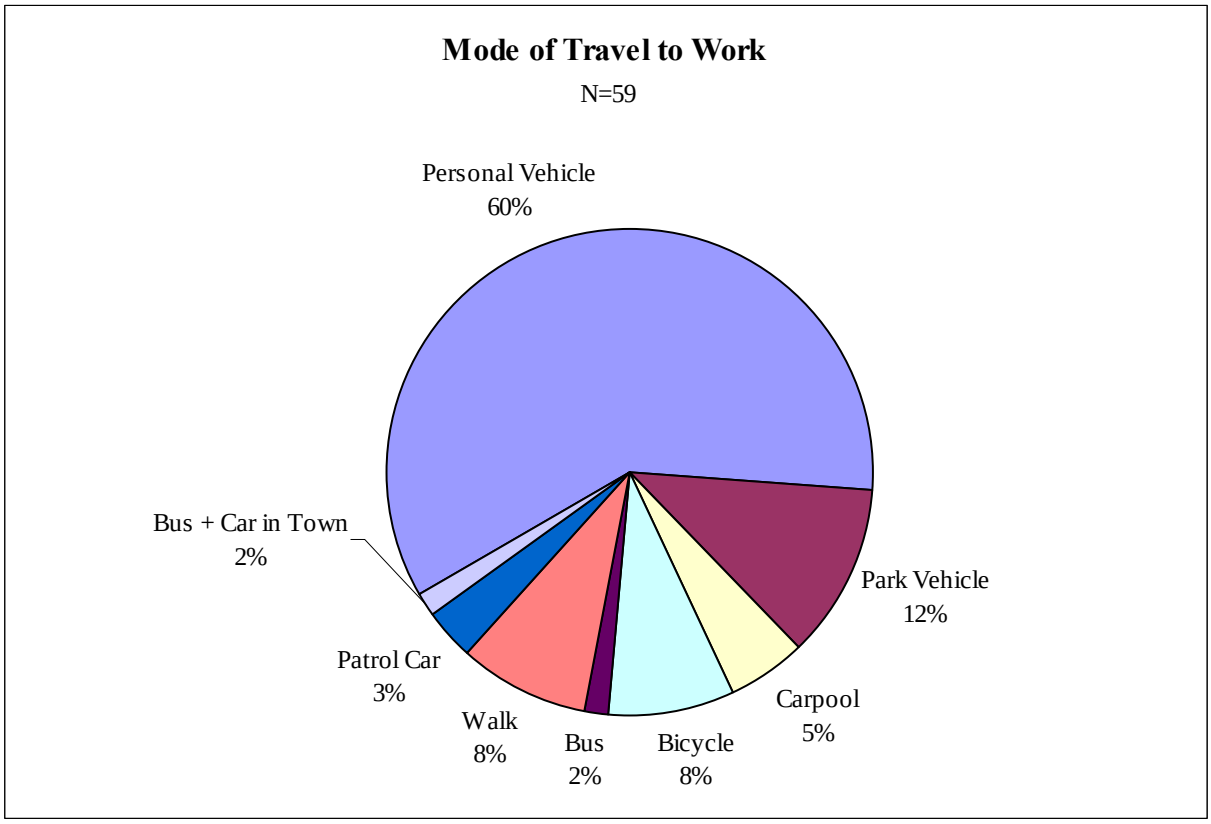
2. Where do you live? *(check only one)*



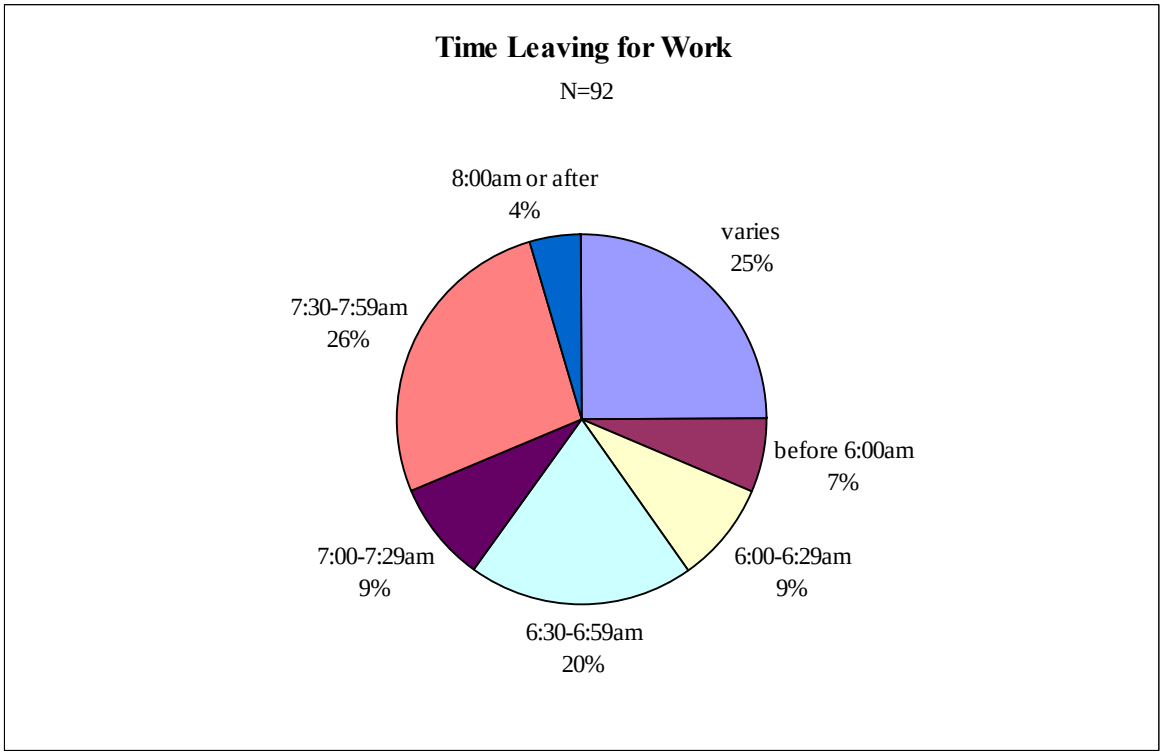
3. How many miles is it (one-way) from where you live to your work?



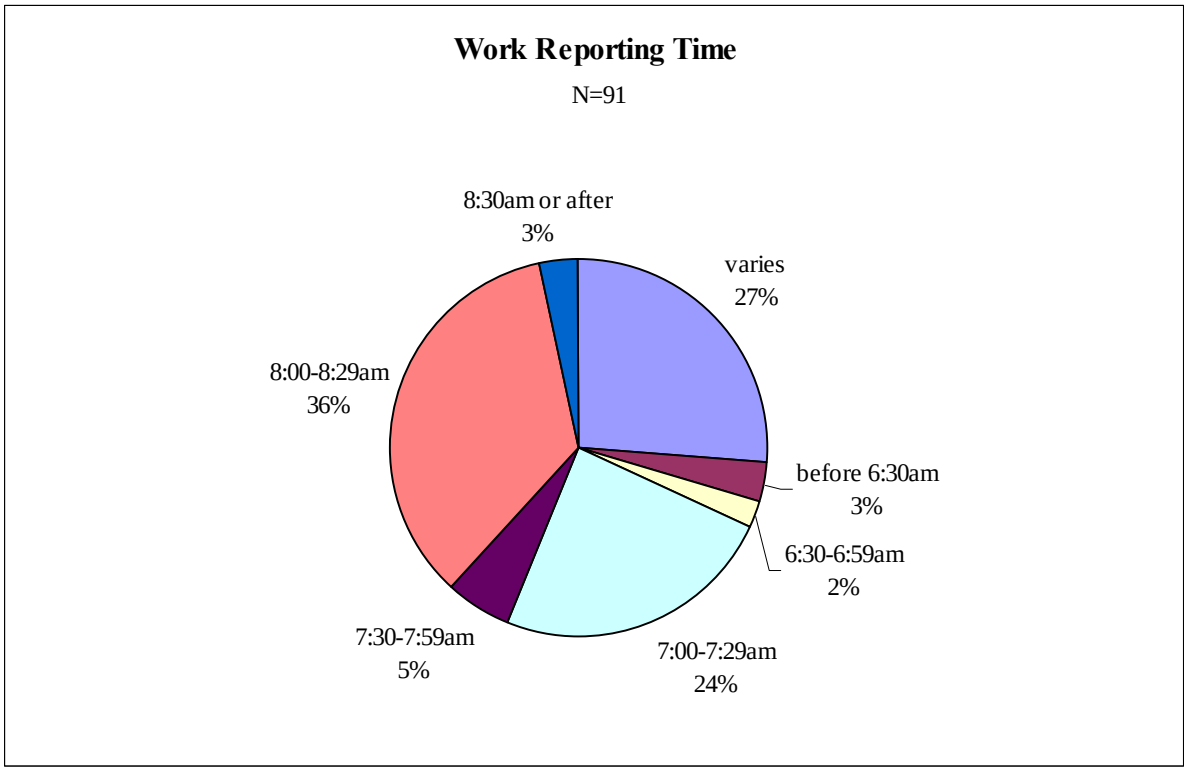
4. How do you usually get to and from work? *(check only one)*



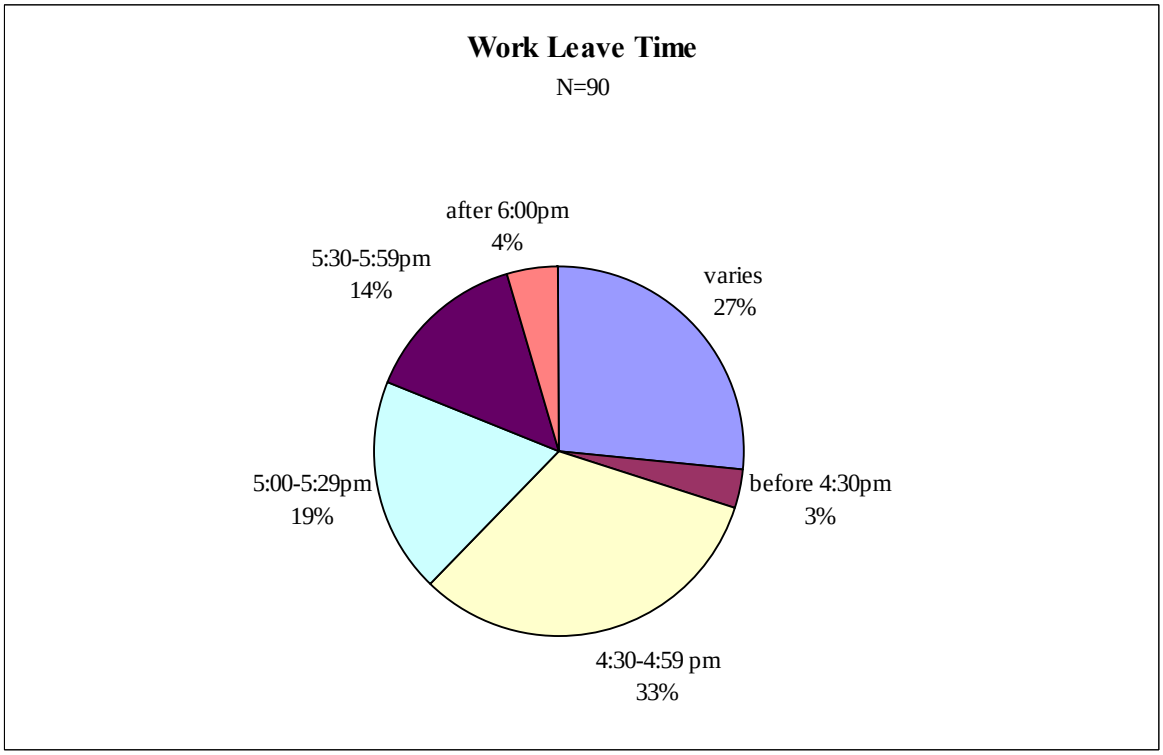
5. At what time do you typically leave home to go to work?



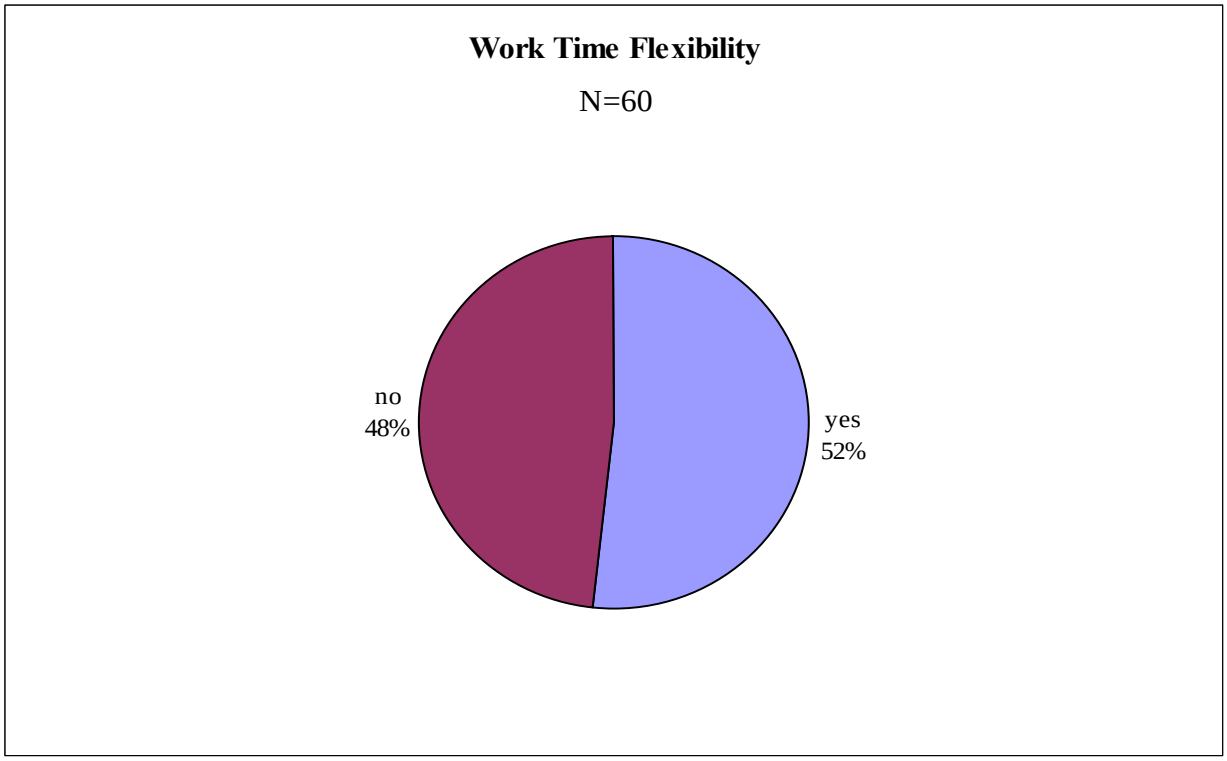
6. At what time do you typically need to report to work?



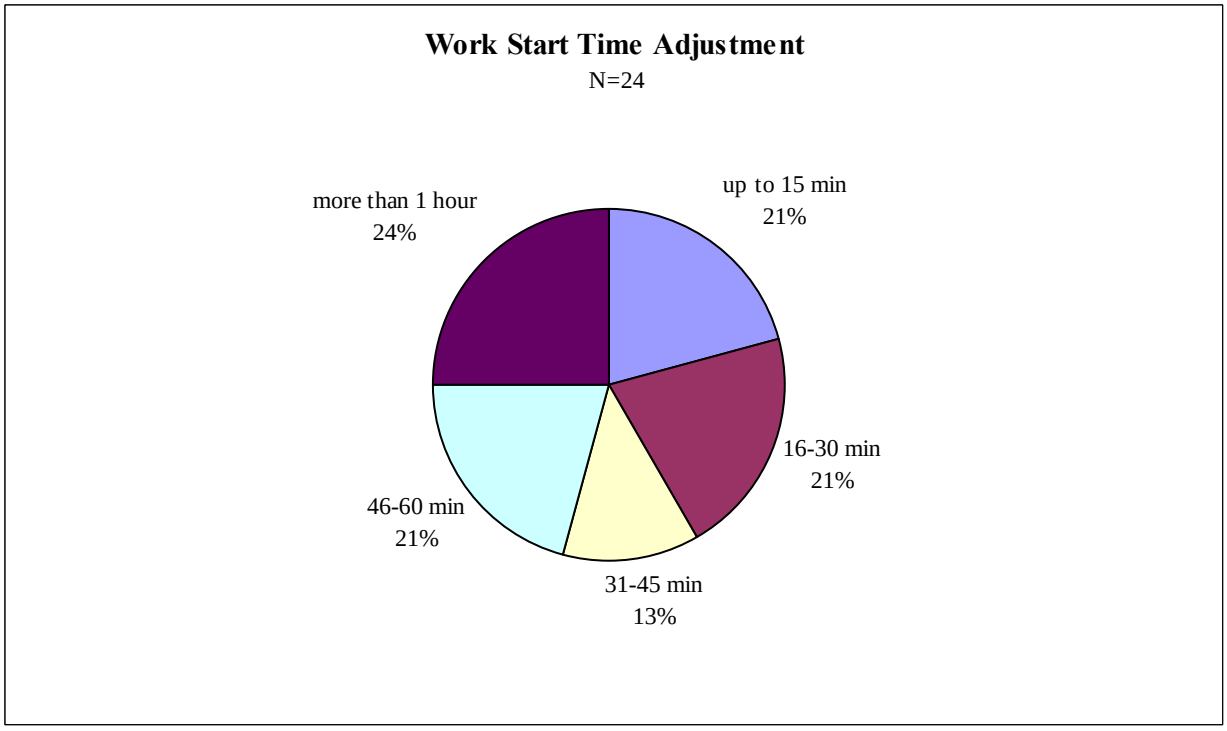
7. At what time do you typically leave work?

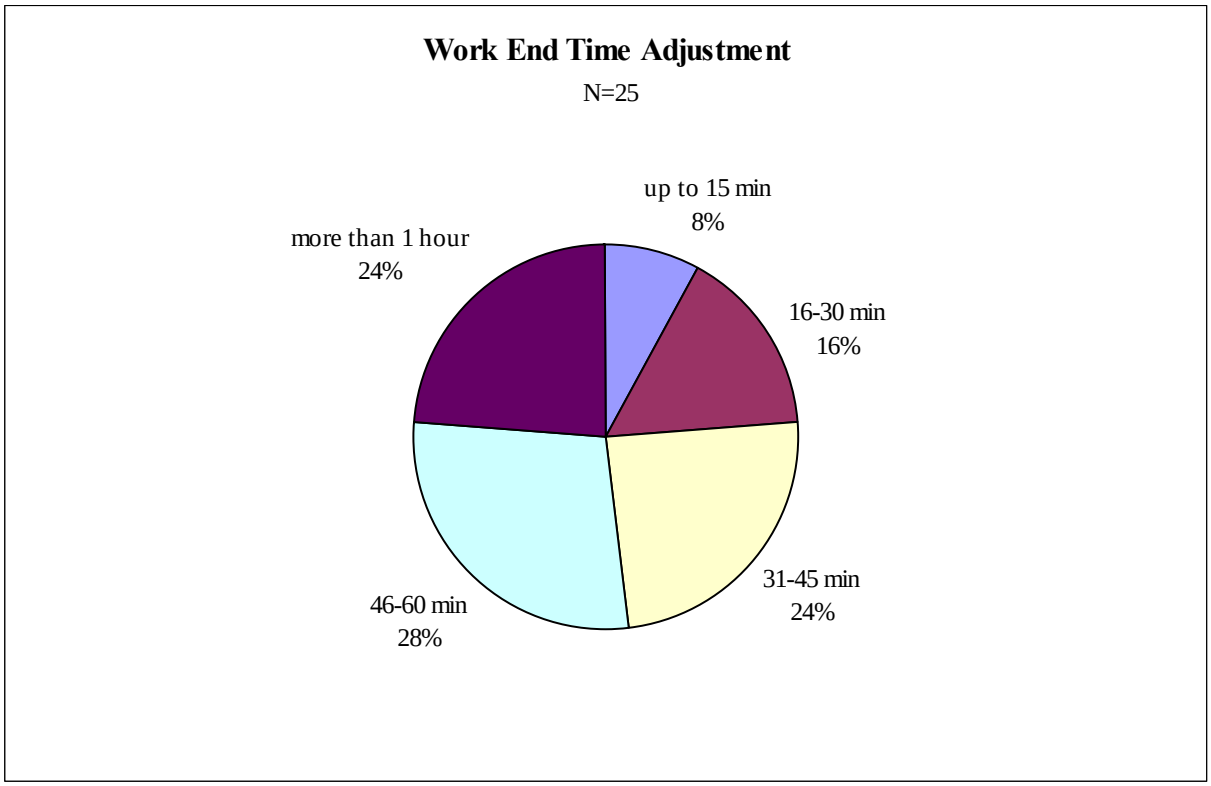


8. Are your start and end times for work flexible?

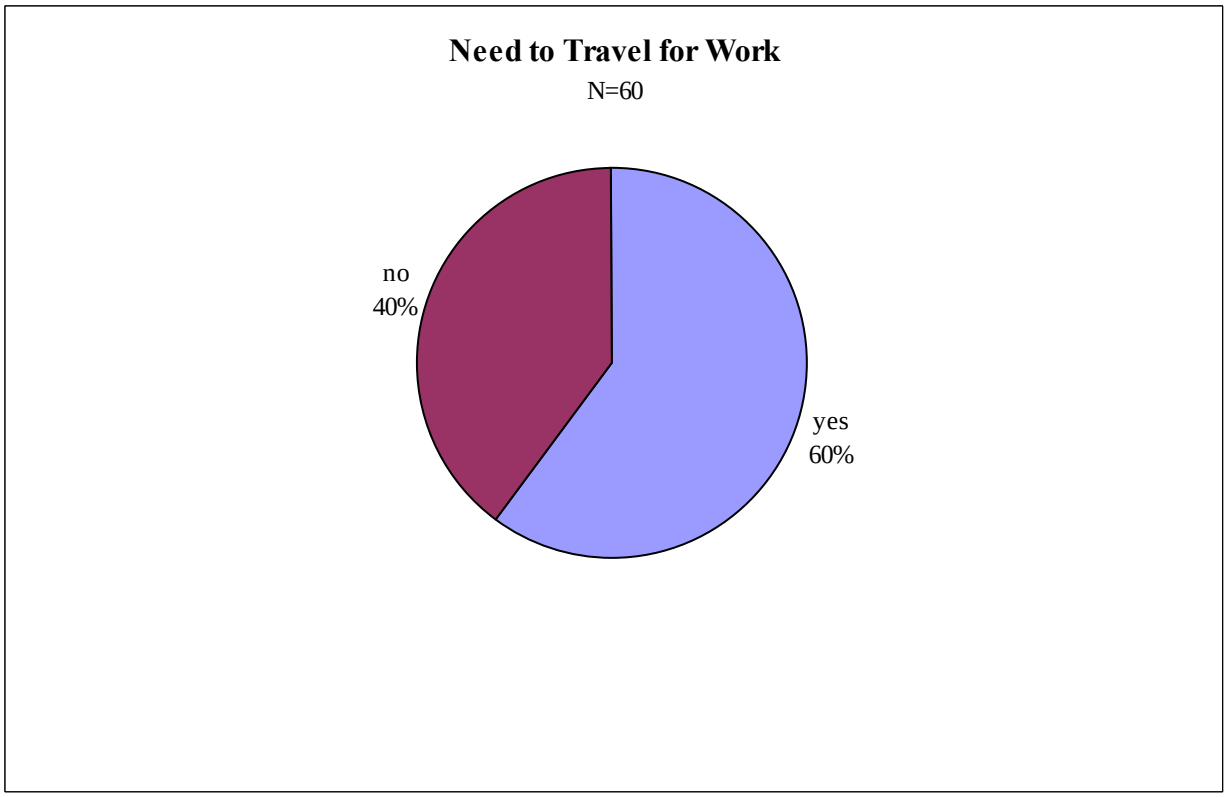


9. If your work schedule is flexible, by how much could you adjust your workday (both starting and ending times?

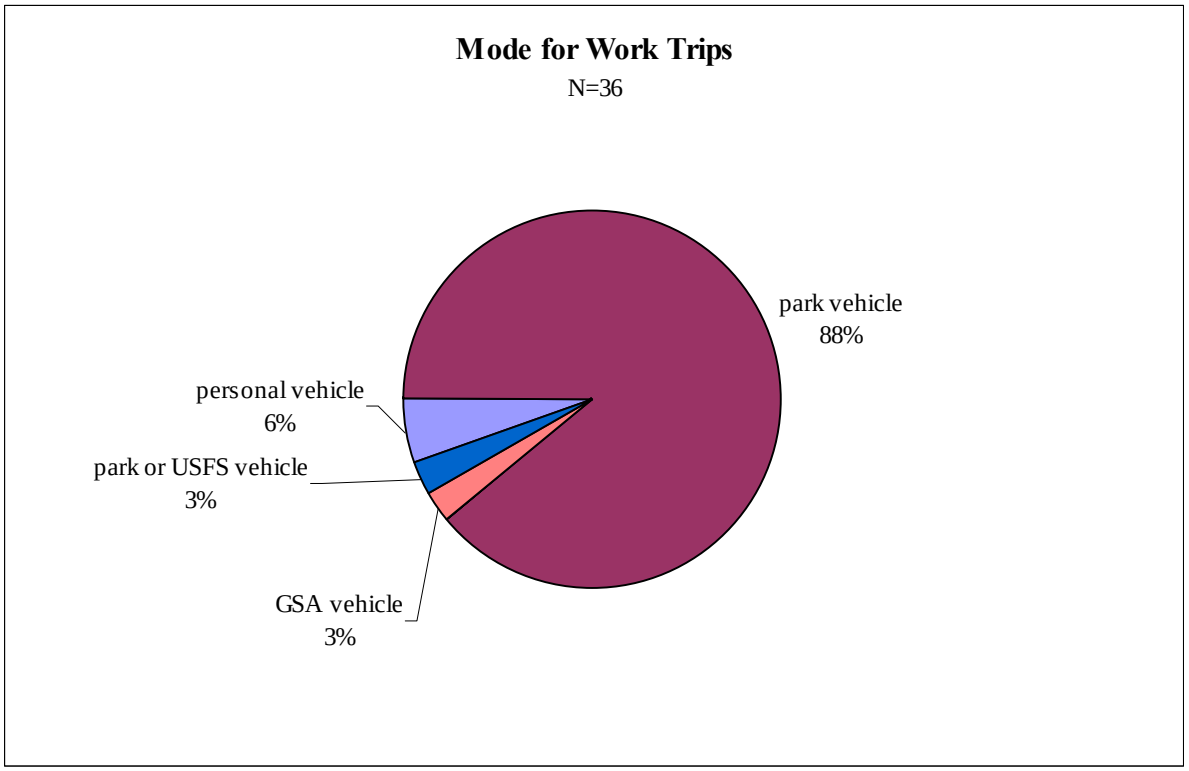




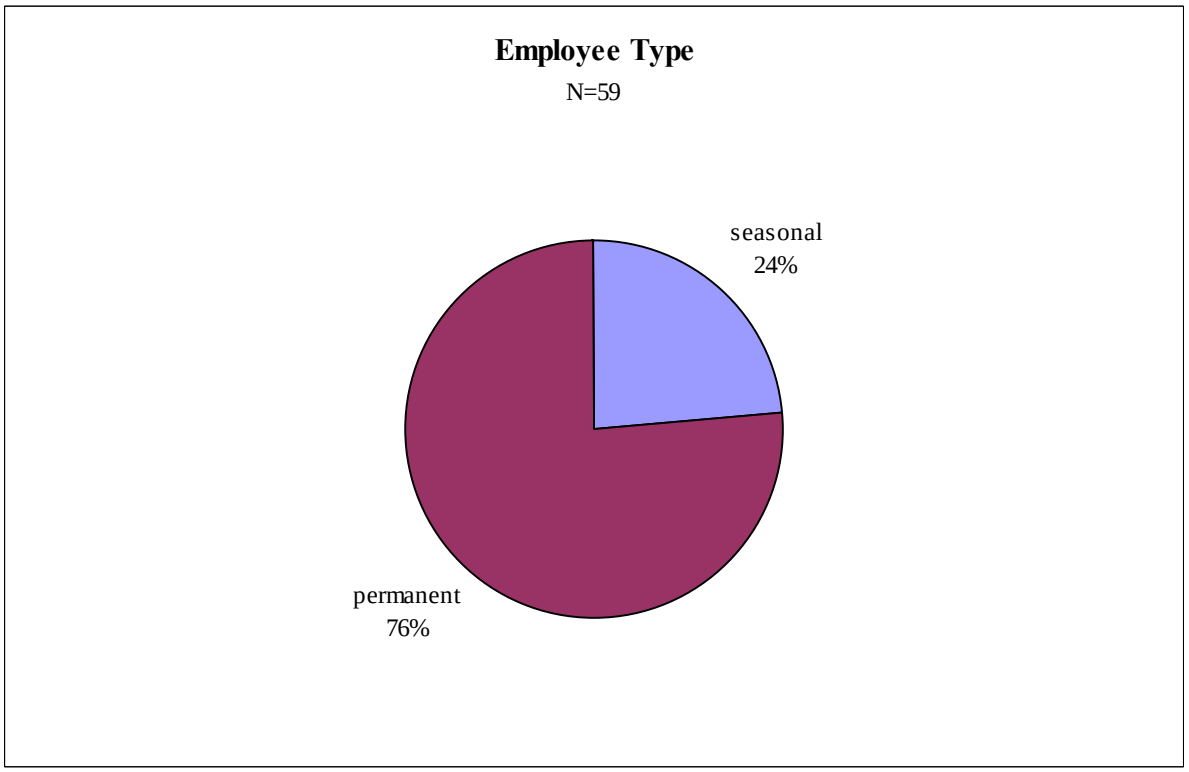
10. Do you need to travel during the day for your work?



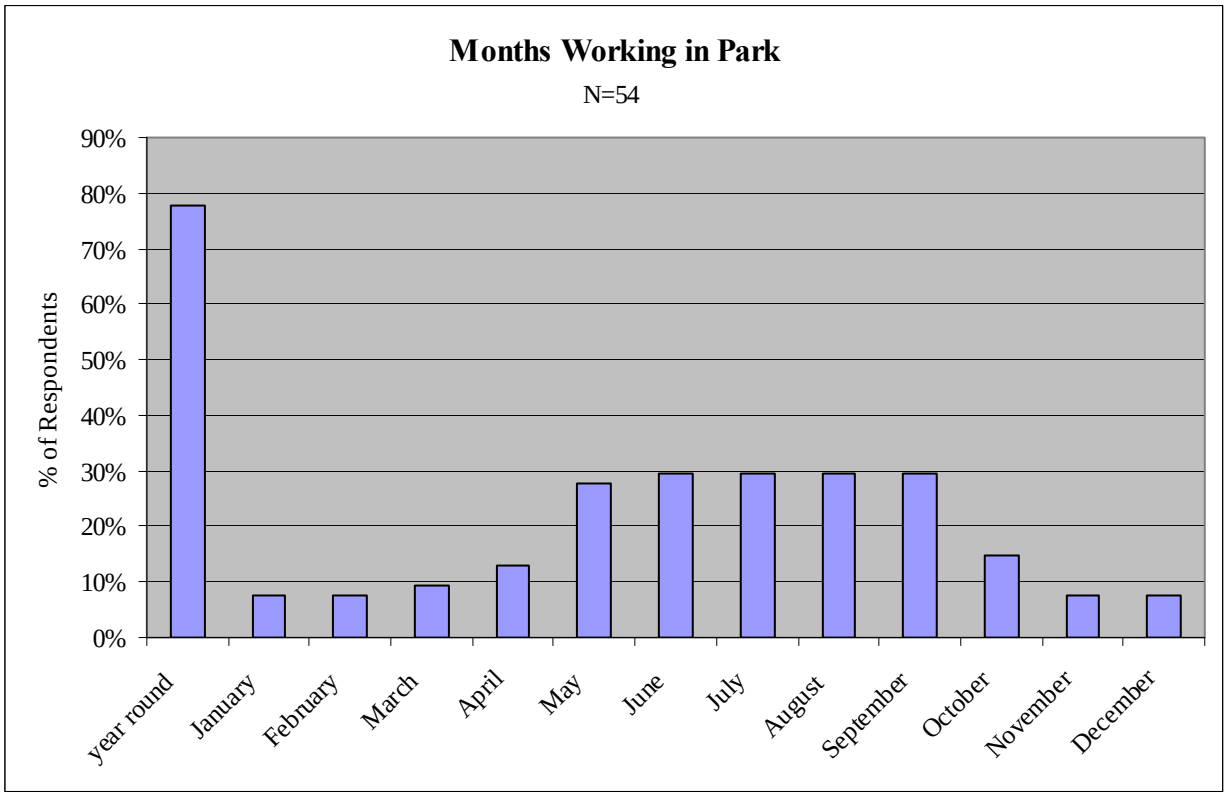
11. How do you typically travel during the day for your work?



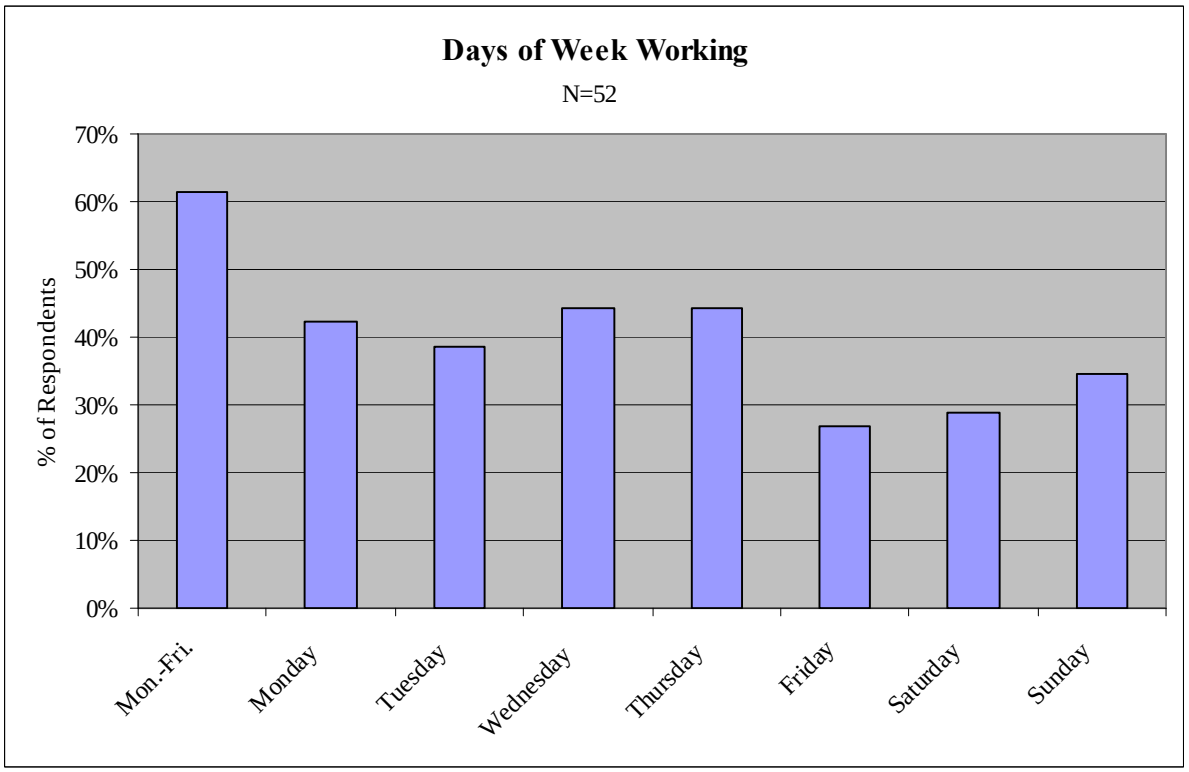
12. Are you a seasonal or permanent seasonal employee (subject to furlough) in Grand Teton National Park?



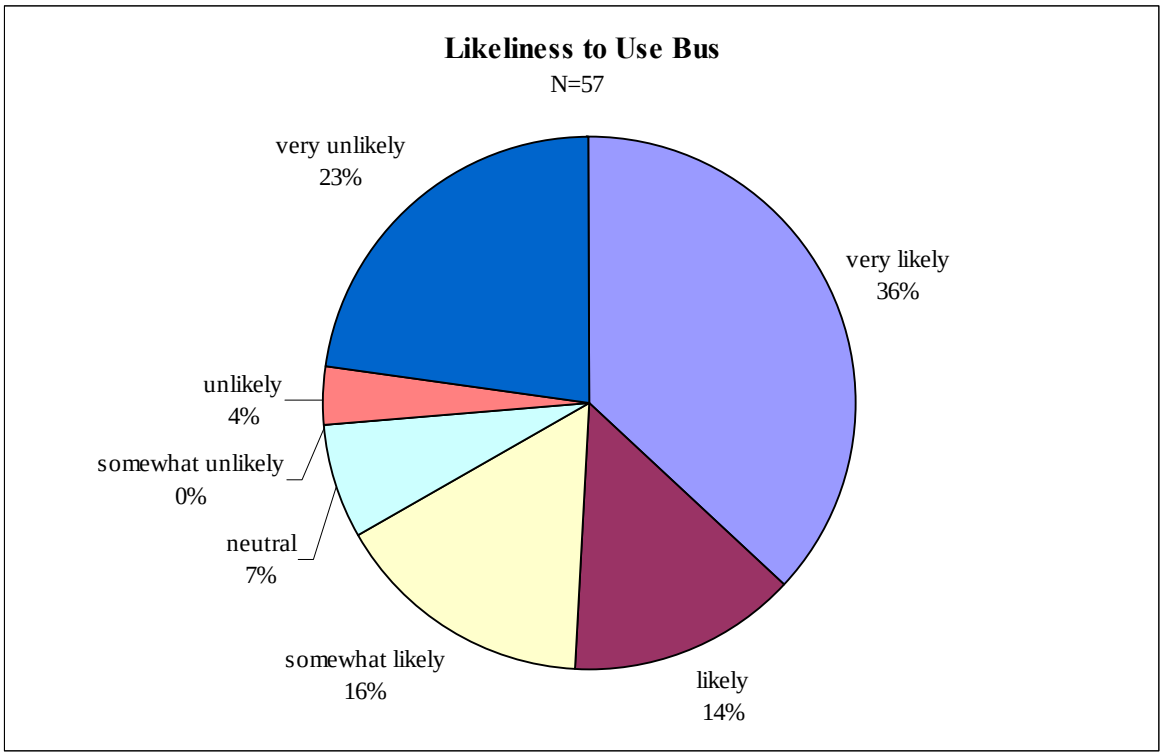
13. What months do you normally work in Grand Teton National Park?



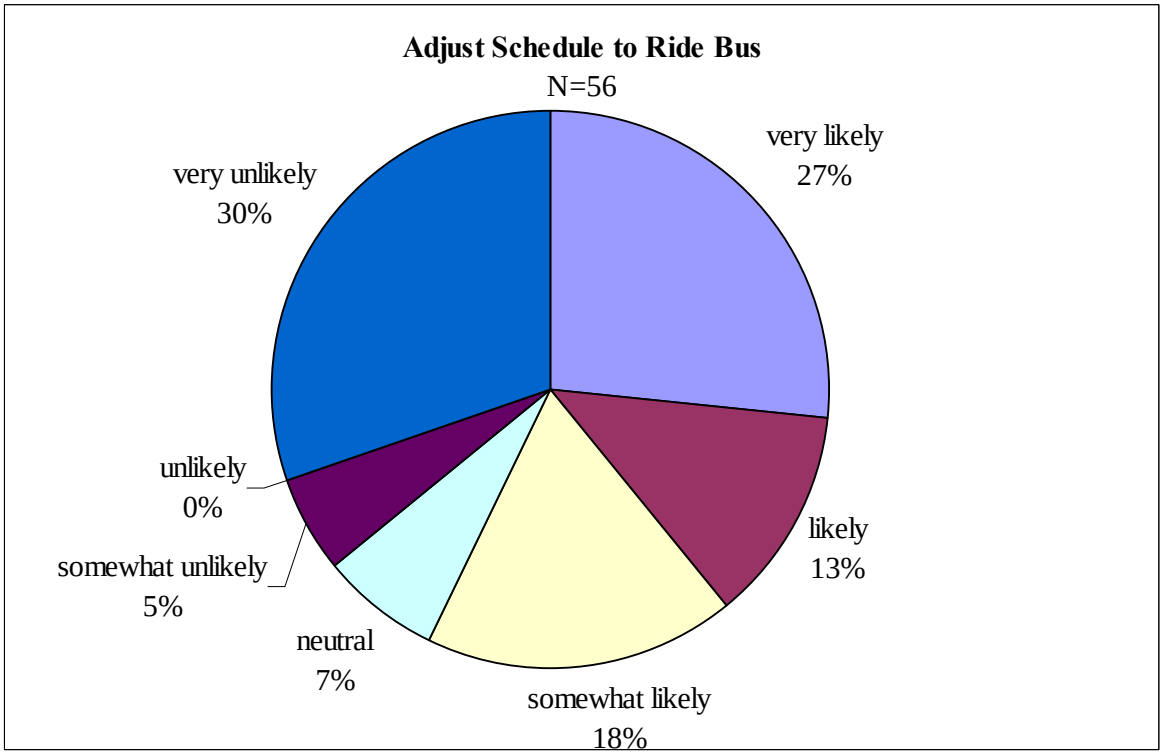
14. What days of the week do you typically work in Grand Teton National Park?



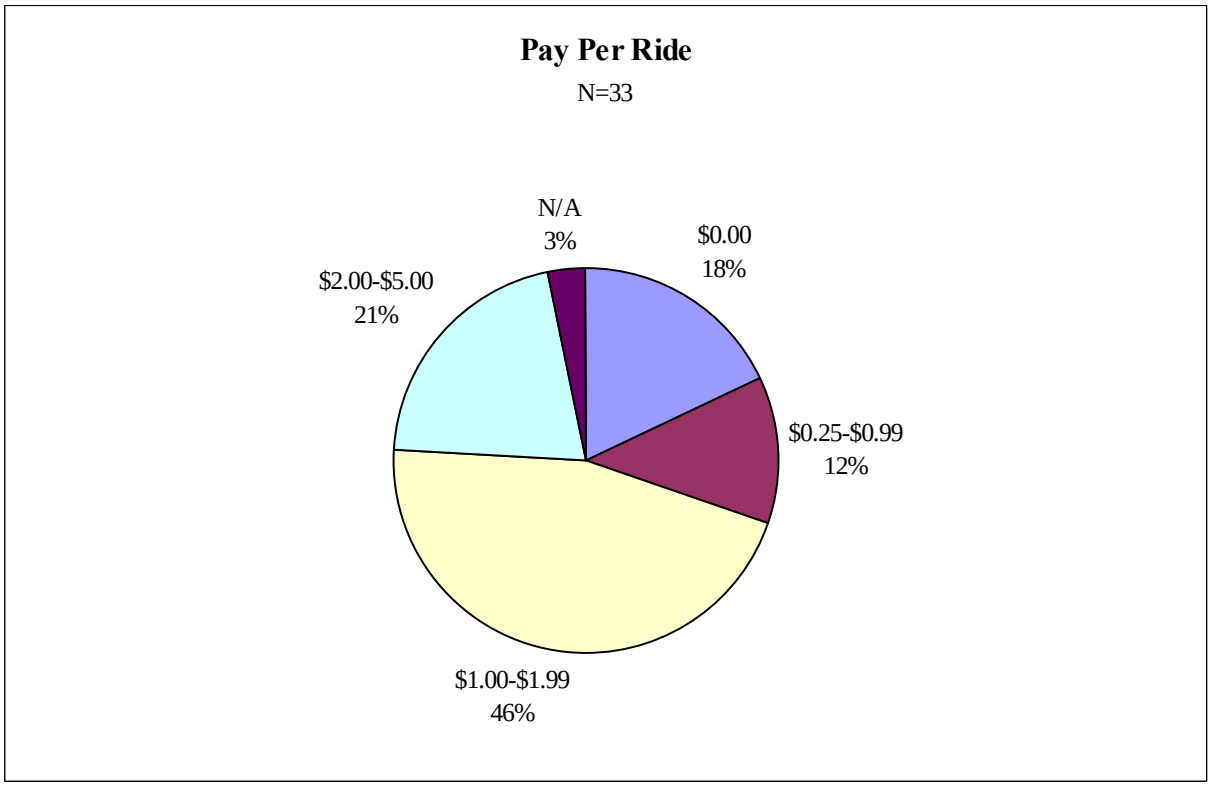
15. If a bus system existed, providing timely service between your home and work, how likely would you be to use such a service?

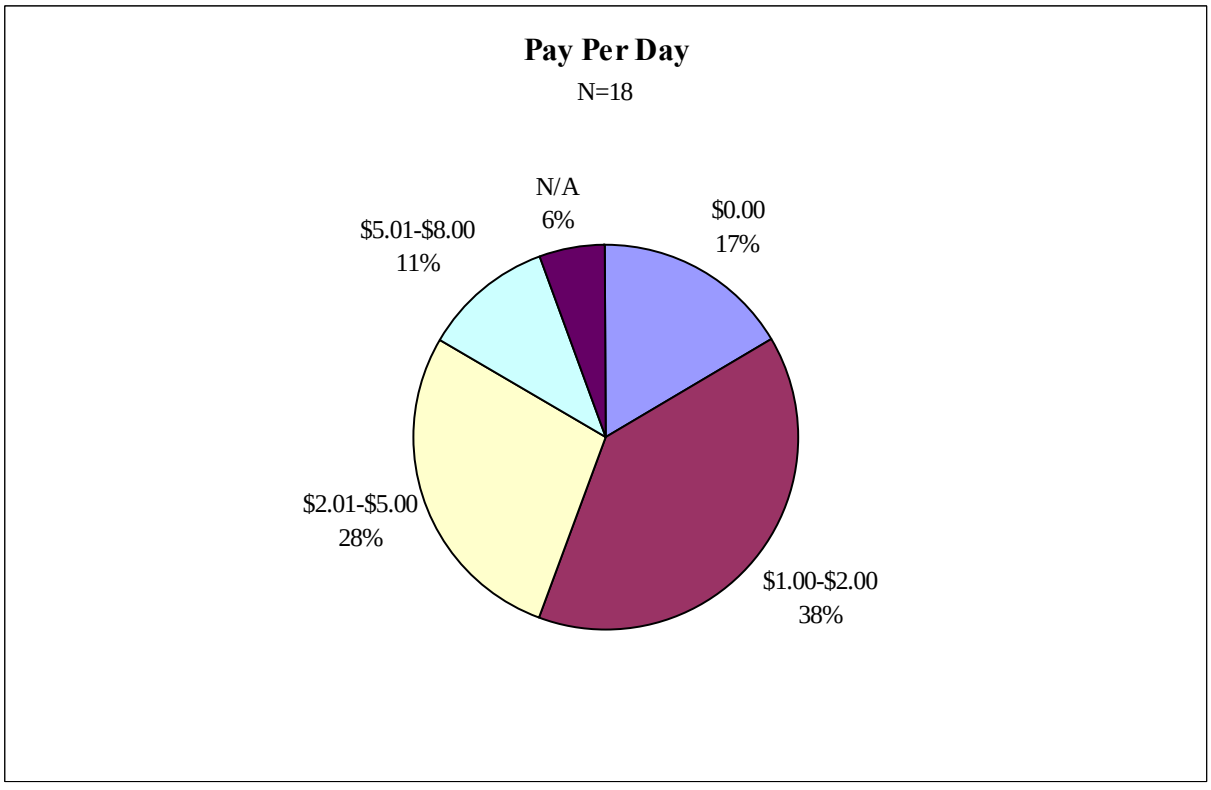


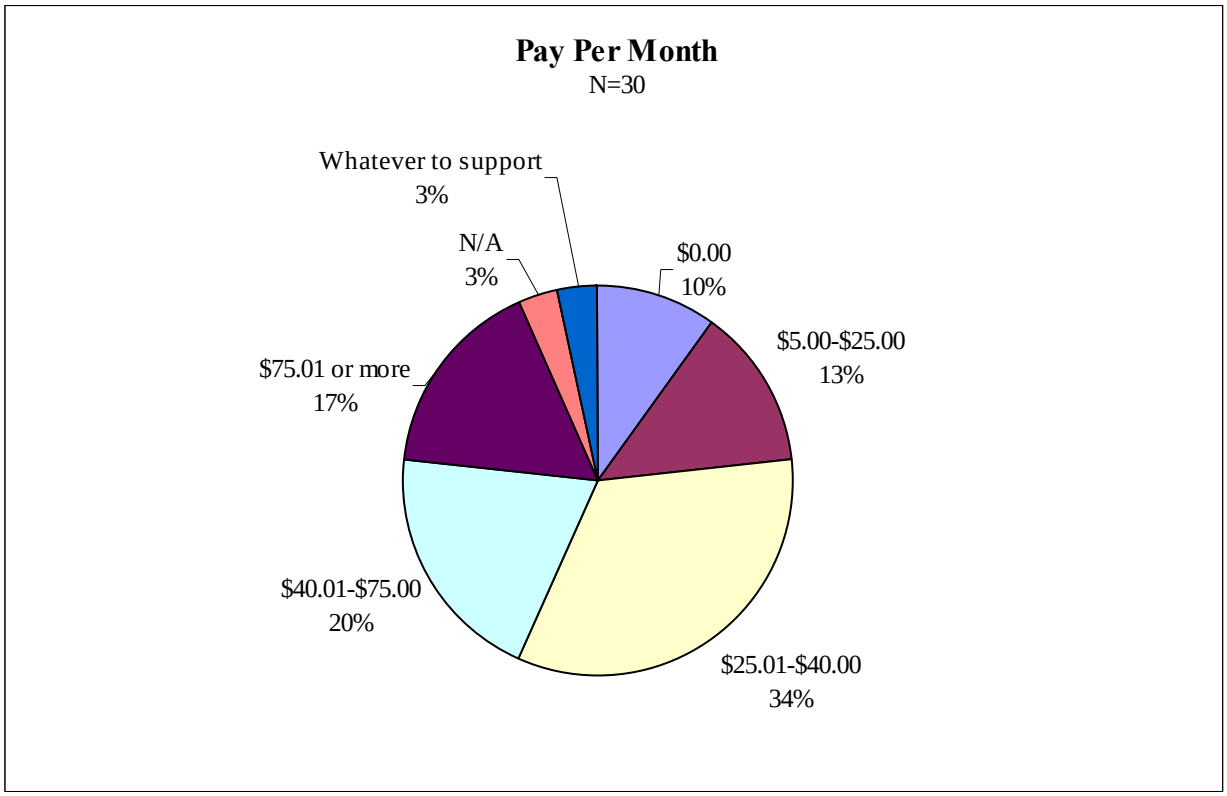
16. How likely would you be to adjust your work schedule to ride a bus to and from work?



17. How much would you be willing to pay to ride a bus to and from work?






Pay Per Month
N=30
Whatever to support
3%
N/A
3%
$0.00
10%
$5.00-$25.00
13%
$75.01 or more
17%
$40.01-$75.00
20%
$25.01-$40.00
34%

18. Please provide any comments you may have on transportation in Grand Teton National Park, including transportation from your home to work in the Park

1) Good idea, I am retiring in January so I probably won't be around if it ever happens.

2) Because I live north of Moose, there are many times that I have to travel from the north end of the park back to Moose to then drive back north to Moran area. This causes extra risk during my day however sometimes necessary due to child care in Moose area. Many occasions when a vehicle in Moran would be helpful in reducing driving times both in personal and govt. vehicles. More flexible scheduling would allow for more carpooling with my spouse.

3) The Federal Government has a reimbursement program for employees up to $110 per month to encourage mass transit.

4) Start work at home, with patrol vehicle. Work is about 1/4 mile away.

5) I am very much in support of a transportation system from Jackson to Moose (also supporting other areas of the Park). I live within feet of the START bus system which I use for transportation within the town of Jackson and out to Teton Village. Thank you for this survey!

6) As a seasonal ranger naturalist, my work schedule varies greatly and isn't flexible. I try to ride my bike to work 1 day per week as my schedule permits. I would also love to ride the bus, but again, as my schedule permits.

7) I strongly support the idea of mass transit between Moose and Jackson. Many permanent and seasonal employees live in Jackson and work in Moose. NPS employees have access to federal subsidies for mass transit (the same way Washington DC employees get reimbursed for their Metro fares.) This would take many cars off the road, reduce greenhouse gasses and go a long way toward the park demonstrating environmentally responsible practices to this community. Even if the park had to subsidize this to some extent, I think it would be worth it. We already own a bus, and could work out a volunteer driver of the week program or something. We should check with Yellowstone and figure out how they operate and manage their employee bus to Livingston.

8) I work in Interpretation and we have variable schedules. I would use a transit system whenever possible. P.S. I couldn't get this survey form to work correctly. The buttons would not click on the bubbles.

9) There needs to be transportation between GTNP and the town of Jackson for employees, park residents, and tourists!

10) IT would be a dream come true if it happened. I usually have early shifts during part of the summer, but when my shifts were more open to riding during normal hours I definitely would. Thanks.

11) I would gladly take mass transit if I needed to commute. HUGE proponent of mass transit. Very pleased with Zion NP's system as well as the Grand Canyon.

12) There is no parking location near my home for catching a bus and leaving my POV. There would need to be a developed parking area in which I could leave my vehicle, if I were to catch a bus. This causes limitations. Also, my job is such that I need to stay longer for emergencies that arise. I would need to rely on later bus runs, should that happen during my work day and require me to stay longer than a normal work day.

13) In the next 18 months I will be moving into a house we have purchased in town. The idea of driving to and from work every day is not real appealing to me. I do not want to purchase an additional automobile to use to commute to and from work. If there was an employee transportation alternative available to me I would make every effort to use it. But, looking at the bigger transportation picture, what about providing transit not only for employees but our visitors all over the Park. The Park could start out hitting high use areas first then expand during the summer season to other areas. Maybe the GTA and the GTPF could help fund a portion of the cost. I believe we can make a REAL difference by getting people out of their cars and campers to experience this Park. Enough said.

14) Survey would not allow me to enter prompts

15) I think that transportation solutions are great, but I would not be able to utilize them for work purposes due to having a patrol vehicle and the necessity for having that vehicle at my residence in preparation for emergency response throughout the park (LE, EMS, Fire, SAR). My answers above may skew your data.

16) I would primarily use bus service for private use. My son attends a private school in town and therefore has no access to the county school bus. This makes it problematic to provide transportation, as my work day starts and ends well beyond his school hours. At present he lives with his mother in Wilson during the school week and with me on weekends. Bus service would allow him to live with me during the week every other week. Additionally, I would like to use bus service once or twice a week to access town. I believe there would be considerable interest from the public to have bus service from town to the park, particularly if there were some way to transport bicycles.

17) The shuttle would have to originate fairly close to where I live to make it worth while. I live at Blair Apartments (near the Middle School). If I drive to the Grassy Top VC or somewhere in that vicinity, I am already driving 1/2 way. With the number of us who live at the Blair Apartments, I like the idea of a van that leaves from there. I would definitely pay for that monthly.

18) It would be great to have a few bus departure times to accommodate different or flexible schedules. This would also allow those who need to work a little early or late the option of catching an earlier/ later bus. Many of us work a 5, 4, 9 schedule and have a short day when our schedule is different. At least a couple of bus times would be good to accommodate 8 vs. 9 hour days. Without options like this, I would be more likely to drive myself on days when I even think I will have to work late or leave early. I live at Blair Place Apartments where there is a free shuttle bus stop. I would likely use this service to get to a central pick-up location, such as the home ranch lot, for the shuttle to Moose. The home ranch lot (Cache & Gill) seems like the most logical spot for a shuttle stop but I am concerned about taking up the limited spaces available in the summer. I am concerned that a stop like Albertsons while convenient to the south/west sides of town would be too far out of the way for use by those on the east side of Jackson. Perhaps the new parking garage would be a good terminus. A location at the north end of town would be a good terminus because everyone would be going that way anyway. I think it would be good to allow the public to take advantage of the employee shuttle. At least as a trial.

19) This survey format is not working properly, it will not allow selection of any choices. Also parking of private vehicles conveniently in town could be problematic.

20) Buses running from the housing area to work are not essential to me, but a bus running from Moose to Jackson, Smiths, Albertsons, Kmart, etc, would be a great asset.

21) There is a program for reimbursing Government employees for using mass transit systems. My wife and I probably have the most experience with commuting by bus since we travel the longest miles and have been commuting the furtherest distance. We are both 20 plus year Government veterans and highly support the bus system. At this time we need a bus connection between Jackson Wyoming and Moose Wyoming.

22) I am one of very few people who live within walking distance of work. But, if I needed transportation, I would be happy to use public transportation - given the ease of logistics. I worked in Zion National Park and sporadically used their transit system to town (and always into the canyon as was dictated by the park) with great results. It was a wonderful alternative and fundamentally responsible toward the park employees, park visitors and the environment.

23) I support public transportation and would use it when I could. My work sometimes demands extra hours so I might not use it every day.

24) I live near my station but need a patrol vehicle or raft to accomplish my duties as an LE Ranger.

25) Transportation between work and home is with a GOV for patrol duties, However if a shuttle were provided between home (inside GRTE) and town or Jackson, or elsewhere in GRTE I would utilize it daily.

26) Need park shuttles for visitors most as other parks have at no cost to the visitor.

27) A transportation system in Grand Teton would possibly allow employees to branch out and live in other areas of the Park or surrounding communities with less congestion and a more sustainable mode of travel.

28) I would not ride transit to and from work, but I would ride it to and from town for personal business and for recreational purposes.

29) Bus transportation for me is highly unlikely. Bus transportation from Jackson to Moose to the Jenny Lake area, targeting park visitors, would be the most likely success story.

30) In my division the work hours may range from 7 am to 11 pm and the schedule is different week to week. It would be difficult to ride from home to work with these hours. I do, however, support the idea of public transportation. I would especially like to see service from Jackson to Moose every day and service within the park

31) Since my work schedule varies greatly in the course of a week, and extended/late hours are virtually guaranteed in the summer, I prefer to depend on my own transportation. Especially living only 2 miles from work, a bus ride would not be worthwhile. However, if there was a safe lane to ride a bicycle to Moose from Beaver Creek, I would gladly ride my bike to work several days each week. 32) But the traffic on Teton Park Road is a great concern, as visitors are enjoying the scenery more often than focusing on the roadway.

33) I work in TIDC. My schedule varies too much to be able to ride a bus or give any typical times that I arrive/leave work. It's different every day!

34) I believe a shuttle system is a good idea and if my work schedule would allow me to take advantage of a shuttle, I would. However, I never work the same shift in a row and rarely leave work on time and am quite often called into work early.

35) My coworkers who live in the same area of Jackson have always commented that if a shuttle was available for a reasonable price, we would use it. Especially in the winter on foul weather days. I would use it if it cost less than gas and the schedule was reasonable.

36) I think that employee transport within the park should be free. I would also be happy to see public transport from the park into town. i would definitely consider using public transport to do chores in town as long as buses ran until at least 9pm.

37) I know from living at Colter Bay and working at Moose that there are at least 3-6 of us that make a daily commute year round. I would love to have a shuttle. I do feel that seasonal employees would not use it as much if the price is to high for them to afford.

38) The buttons are not working on this survey

39) As an essential employee whose hours vary daily and whose schedule is very unpredictable, I guess it would depend on the hours of the service. There are days when I don't leave work until midnight or later and times when I leave work at 6:00 am. I'm not sure it would be the most convenient service for people who work shifts.

40) Although I live in Moose and don't need transportation to work, I believe many of my employees would benefit from a system; however, variable schedules would make it challenging to get some of them to commit.

41) Carpooling seems almost non-existent here-even from far away places like Alpine. How can we encourage that. A bus from town to here would seem like an excellent idea, so how can we get people to use it consistently. CAVE had an employee shuttle, does GRCA too?

42) If a bus service existed to take my family to Moose, and to town (Jx) they would use it if the schedule worked. My family travels to Moose, Jackson or Trailheads in South District 4-5 times per week.

43) A bus service would be great for hikers and employees.

44) Not going to happen for me. I think our transportation options should primarily focus on visitors and let the START system focus on the tax payers of this area.

45) I would be more interested in transportation options between Jackson into the park.

46) This does not really apply considering emergency response needs as a law enforcement ranger.

47) Visitors constantly ask for bus service - it would be greatly utilized. My concern is the least impact on wildlife if this involved road construction for some reason. Any form of better resource, less pollution, less impact is extremely necessary. The demand is definitely there. More regular service from north to south.

48) Assuming nothing changes for me. I will not be using a bus. However, availability for visitors would be great, especially for backpackers and boaters. (Of course, it might put Holly Frank & others who do shuttle service out of business in the park). I think that more & more visitors took advantage of the GTLC bus service this summer. It was free for any of their guests.

If bus rates are affordable, I think that visitors would use it. It would be a money saver for them & save wear & tear on their personal vehicle.

49) My hours are set due to transfer station hours. Winter I start to work at 0400 get off at 1230. M-F, drive snow plow.

50) I like riding my bike to work, but the outside highway is scary when there is a lot of traffic. A bike path from Jackson to Moose would be nice and encourage more people to bike to work. A bus from Jackson to Moose twice a day (or more) would be a great way for employees to get to work and reduce the number of cars on the road. Many of our concessioners have greener business practices than the Park Service (e.g., Jenny Lake Boat employee shuttle). We should try to practice what we preach (and make many of our concessioners do) and provide safe bike and carpooling/public transportation options for employees.

9. APPENDIX D: STAKEHOLDER INTERVIEW SYNOPSIS

In collaboration with Grand Teton National Park staff, a total of fifteen key individuals were identified for interviews about the possibility of implementing a public transportation system in the Park. These interviews took place on July 19 and 20, and September 5, 2007. Follow-up information was gathered as necessary.

David Kack from WTI conducted the interviews. All initial interviews, except one, were done face to face. Following is a list of the individuals who were interviewed.

START (Southern Teton Area Rapid Transit) - Michael Wackerly, Director; Reed Armijo, Board Chair

Town of Jackson - Mark Barron, Mayor; Bob McLaurin, Administrator; Mark Obringer, Councilmember

Teton County - Andy Schwartz, Commission Chairman; Paula Stevens, Transportation Specialist; Brian Schilling, Pathways

Wyoming DOT – John Black

Jackson Hole Airport - Ray Bishop, Airport Director

Jackson Hole Mountain Resort/Teton Village – Jerry Blann

Jackson Hole Chamber of Commerce - Tim O'Donaghue, Executive Director

Grand Teton Lodge Company - John Rutter, COO

Signal Mountain Lodge Company - Jason Ryan, General Manager

Jenny Lake Boating Company - Doug Colonel, Owner

Although the interviews were "free-flowing," a total of ten questions were prepared to try and insure all pertinent information was gathered. The remainder of this appendix highlights the questions and summarizes the responses.

1) Please provide any comments you may have about the concept of potential partnerships to provide a transit system within Grand Teton National Park.

All of the respondents believed that the time was right to further investigate the possibility of transit within the Park. While most asked about specific details, the overall response was positive. Some commented on connecting other modes such as biking and walking, while others commented on partnerships and collaboration efforts. Connections to Jackson, Teton Village and the airport were mentioned.

2) What is your opinion regarding public transportation in and to National Parks?

Most indicated that it was a good idea, although it should be voluntary to use any transit system and not mandatory requirement. Most focused on making public transportation a positive experience so people want to get out of their car. Some commented on funding sources, and others noted other parks where public transportation works.

3) If a transit system were to be established in partnership with Grand Teton National Park, what service factors, such as routes, schedules, etc., do you think would be important?

Many commented on specific destinations, although the majority discussed a high level of frequency, and that to increase ridership the service should probably be free. Most said that the drivers should provide some level of "interpretation" or comment on the Park. Most commented that the experience on the bus needed to be "better" than the experience someone would get in their car.

4) Are there any other factors you believe would be vital to the success of a transit system that provided service within or to Grand Teton National Park?

Many said that a significant marketing effort would probably be needed, and the Town of Jackson would need to embrace the effort. Some also noted that the buses should be viewed as "green" or environmentally friendly. A couple discussed the need for both a "carrot" and a "stick," or incentives and disincentives that would make people more likely to ride the bus. Bike racks and the ability to carry climbing or other gear was also mentioned by some of the respondents.

5) Do your employees or guests have transportation needs that could be met by an enhanced transportation system within or to Grand Teton National Park?

The Grand Teton Lodge Company provides some transportation within the Park for its guests and employees. Of those interviewed who have operations within the Park, most felt that there was a need for some transportation for both employees and visitors.

6) Given that the National Park Service may have very limited funding resources, what funding sources within your organization, or potentially available to your organization, can you identify that could assist in the creation of a partnership for public transportation in the park? Are there any other assets (equipment, drivers, etc.) that your organization could contribute to this effort?

Potential funding sources included federal funding (FTA Section 5311 and CMAQ) as well as the potential for an increase in sales tax, a lodging tax, or a surcharge on entrance fees into the Park. Respondents from the City of Jackson and Teton County were reluctant to pledge any additional funds to transit above what they are already providing to START. A discussion with the Grand Teton Lodge Company focused on its existing service, and ended with the possibility that the Lodge Company would provide funding into a transit system if it provided a level of service that was equal to or better than what the Lodge Company was currently providing. Exact details would need to be worked out, however.

7) Beside your organization, what other organizations do you believe may have an interest in partnering with Grand Teton National Park to possibly create a public transit system within and to the park?

Responses to this question included the guest/dude ranches, the Grand Teton National Park Foundation, and other foundations or organizations that have an interest in National Park and/or environmental concerns.

8) Do you have any comments related to travel (or traffic/traffic congestion) within Grand Teton National Park?

The majority of the respondents indicated that the Park does not necessarily have any traffic problems, but that there are some locations that are of concern, including Teton Village to Moose Junction and parking at South Jenny Lake. Many noted the traffic issues within Jackson. The general comment was, "It is not like Yellowstone. Except for the occasional wildlife jam, the traffic on the roads isn't too bad."

Some commented that with the new Visitor Center, and the number of float trips at Moose, parking at Moose may become an issue.

9) What is your opinion on how likely it is that visitors to Grand Teton National Park would use a transit system in the park instead of private vehicles?

Many of the respondents talked about using incentives and disincentives to get the people to choose to go on the bus. There had to be a "hook" to get them to get out of their cars, because the car is such a convenient mode. Others discussed improving wayfinding in the area, which may attract more people to the bus, and others talked about a significant investment in marketing to let people know the bus service existed.

A majority believed that locals (employees and "local visitors") may be the most likely to begin to use the system, while out-of-state and international visitors may be slower to take advantage of any system.

10) Are there any other comments you have about transit service within or to Grand Teton National Park?

While most were pleased that an effort to investigate the potential for transit in the Park was occurring, they said that there should be more community input before anything was to move forward. Most felt that a connection to the airport made sense. One respondent commented that this plan will hopefully provide the technical/practical information that is needed to move forward into the political arena so that input from the community can be gathered and a decision made.

In conclusion, the majority of those interviewed were positive about the possibility of implementing a transit system within the Park. While general support was offered on the concept, most of the stakeholders interviewed said that they would need to see more detailed information before they would offer any specific support, such as funding, or political support.

This Page Intentionally Left Blank

10. APPENDIX E: FINANCIAL RESOURCES

This chapter presents information about financial resources that may be available for a transit service and other modes of transportation in national parks. Funding is a very crucial part of transit services. The National Park Service is eligible to receive grants from specialized sources such as the FTA ATPPL program, as well as more standard FTA and Federal Highway Administration (FHWA) grants. Other than the regular programs at FTA and FHWA, the Federal Lands Highway Program (FLHP), including the Park Roads and Parkways (PRP), and Public Lands Highways–Discretionary (PLH–D), also provide flexible program funding for Alternative Transportation Services (ATS). In general, there are five possible sources for the Park to obtain revenue to invest in a transit system:

- Federal Transit Administration;
- Federal Highway Administration;
- Self-sustained funds (entrance fees, etc.);
- State, County, Local & Private Funds; and
- Partnerships (a combination of the above).

Detailed information on each of these sources is discussed in the remainder of this chapter.

10.1 Federal Transit Administration (FTA)

The FTA administers the following sections of the SAFETEA-LU grant program for transit. The authorization of these funds is from FY 04 through FY 09.

10.1.1 Alternative Transportation in Parks and Public Lands (ATPPL) (SAFETEA-LU, Section 3021)

The Alternative Transportation in Parks and Public Lands (ATPPL) fund was established under SAFETEA-LU in 2005 by the FTA in partnership with the Department of the Interior (DOI) and the U.S. Department of Agriculture Forest Service. The goal of this program is to preserve natural resources by promoting alternative transportation. Federal land management agencies and state, local and tribal governments are eligible to receive 100 percent funding for capital and planning expenses for alternative transportation systems [23].

10.1.2 Clean Fuels Grant Program (Section 5308)

This program provides funding for purchasing or leasing clean-fuel buses; constructing or leasing clean-fuel bus or electrical recharging facilities; and constructing new or improving existing public transportation facilities to accommodate clean-fuel buses. Recipients may spend up to 25 percent of the funds on clean diesel buses as well.

10.1.3 Major Capital Improvement Program (Section 5309)

This program provides the capital funds for transit vehicles, transit-related facilities such as intermodal centers, park-and-ride facilities, new and renovated operations and maintenance facilities, etc.

10.1.4 Special Needs for Elderly Individuals and Individuals with Disabilities (Section 5310)

This program provides funds through a formula to increase mobility for the elderly and persons with disabilities. Private agencies and non-profit organizations that provide elderly services are also eligible for this fund. Recipients may use 10 percent of the funding for administrative and planning expenses.

10.1.5 Non-Urbanized Area Formula Program (Section 5311)

This program provides funds for transportation projects that are included in a state program of mass transportation service projects for non-urbanized areas. The eligible activities under this program are planning and marketing for intercity bus systems, capital funds for intercity bus stop facilities, bus depots, operating grants through purchase-of-service agreements, user-side subsidies and demonstration projects.

10.1.6 Job Access and Reverse Commute Program (Section 5316)

This program is for transportation services designed to transport and eligible low-income individuals to and from jobs and activities related to their employment.

10.1.7 New Freedom Program (Section 5317)

This program fund is for providing and improving facilities for persons with disabilities. It provides funds for capital and operating costs

10.2 Federal Highway Administration

The FHWA oversees the following funds which may be used for the capital expenses of transit systems and their related facilities for the National Park Service.

10.2.1 Surface Transportation Program (Highway "Flex" Funds); (SAFETEA-LU Section(s): 1101(a) (4), 1103(f), 1113, 1602, 1960, 6006)

Under this program, state and local government may use FHWA funds for transit projects. A transit project under this fund should be included in Transportation Improvement Programs (TIPs) through a local metropolitan planning process. A potential use of this fund is for operations and maintenance facilities.

10.2.2 Congestion Mitigation and Air Quality Improvement Program

This funding is available for areas that do not meet current National Ambient Air Quality Standards, and it is extended to former nonattainment areas that did not meet the standards. To distribute this fund, an area's population by county and the severity of its ozone and carbon monoxide within the nonattainment or maintenance area are considered [24].

The CMAQ program is jointly administered by the FHWA and FTA. The eligible activities under CMAQ require 20 percent state or local match. Under certain conditions, the state/local match requirements may be adjusted. Projects such as traffic-control signalization, commuter carpooling and vanpooling, and transit (section 120 (c) of title 23) may be funded up to 100 percent. For a transit service, this fund can be used for operating costs and for capital expenses for vehicles and transit-oriented facilities. An example of this is the Acadia National Park transit system, the Island Explorer [25].

10.2.3 Transportation, Community, and System Preservation Program (SAFETEA-LU, Section 1117)

The Transportation, Community and System Preservation Program (TCSP) is a grant to plan and implement strategies for improving the efficiency of transportation system, reducing environmental impacts of transportation, providing access to jobs, services and centers of trade, and reducing the need for costly future public infrastructure investment. States, MPOs, local and tribal governments are eligible for the grant with a local match requirement of 20 percent. The federal share is 80 percent by the FHWA, which administers this program. For transit service, this grant may be used for operating and capital expenses. Examples of systems using this grant are the Shelby Intermodal Hub, Montana ($861,300), and the Washington State Transit Car-Sharing Job-Access Project ($ 430,650) [26].

10.2.4 Public Lands Highways Discretionary (PLHD) (SAFETEA-LU, Section 1101(a)(9)(D))

The Federal Lands Highway's the PLH-D program is a part of the PHL (Public Highway Lands) program. States that contain at least 3 percent of the total public lands in the nation are given preference for the grant. The FHWA administers the program and state DOTs submit the proposals for the projects. The PLH funds are available for transportation planning, research, engineering and construction of the highways, roads and parkways, and the transit facilities within the federal public lands system. For transit service, the PHL-D fund is available for operation and maintenance of transit facilities within federal public lands. This fund covers 100 percent of the cost of the project [27].

10.2.5 Transportation Enhancement Fund (SAFETEA-LU Sections: 1113, 1122, 6003)

The purpose of this fund is to create non-traditional transportation activities for strengthening cultural, aesthetic and environmental aspects of the nation's intermodal transportation systems. It is apportioned through state transportation departments from their own annual Surface Transportation Program (STP). Federal land management agencies such as the National Park Service, U.S. Forest Service, U.S. Fish & Wildlife Service, Bureau of Indian Affairs, and Bureau of Land Management may apply through the states for Transportation Enhancement (TE) funds.

There are 13 categories of projects available under Transportation Enhancement funds:

1. Pedestrian and bicycle facilities.
2. Pedestrian and bicycle safety and education activities.
3. Acquisition of scenic or historic easements and sites, including historic battlefields.
4. Scenic or historic highway programs including tourist and welcome centers.
5. Landscaping and scenic beautification.
6. Historic preservation.
7. Rehabilitation and operation of historic transportation building, structures or facilities.
8. Preservation of abandoned railway corridors (rail-trails).
9. Inventory, control and removal of outdoor advertising.

10. Archaeological planning and research
11. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity ("Critter Crossings").
12. Establishment of transportation museum.
13. Non-motorized transportation pilot programs.

It short, the program funds are to be used for completing transportation networks that connect trails, bicycle lanes, sidewalks and mass transit [28].

In most cases, the FHWA pays 80 percent of the TE project cost, and the project sponsor is responsible for the remaining 20 percent match. This matching amount may vary from state to state. If a state requires the National Park Service to provide a local match on federal lands, then parks may use or consider any one of the following sources for local match, or can utilize a combination of them:

- Federal Lands Highway Parks Roads and Parkways (PRP) Program Funds
- Value of their services as part of the non-federal match contribution, which can include costs associated with planning, design, and project management of a TE activity; or,
- Contributions by outside parties such as local governments, foundations, businesses, and other sources.

Any NPS TE project must be included by a state in their STIPs.

10.2.6 Park Roads and Parkways (PRP) Program (SAFETEA-LU: Sections 1101(a)(c); 1119(a))

The purpose of Park Roads and Parkways (PRP) is to provide funding for the transportation network serving the National Park System under the Federal Land Highways Program (FLHP). The PRP program funds may be used to fund transportation planning, research, engineering, and construction or reconstruction projects. These include, but are not limited to, roadway, bridge, transit, ITS, and pedestrian and bicycle facilities. This program's funds may be used as the non-federal share for other programs [29].

For the National Park Service, the most favorable choices for securing transportation funding will come from working closely with state and local governments, MPOs, and public and private organizations through statewide transportation planning processes.

10.3 Self-Sustained Funds

Self-sustained funds may be generated by the park by either imposing new user facility fees or selling advertising rights, or receiving support from private donors. There are four possible ways to create self-sustained funding: a transit fee (user fee); private sponsorships; advertisement and business contributions; and the Public Transit Subsidy Program.

10.3.1 Transit fee (User Fee)

This kind of fee is charged to the rider/user of a transit facility. The purpose of charging fees is to cover operating costs and sometimes also capital costs. A transit fee is usually either embedded in the park entrance fees, charged as parking fees for private vehicles, or collected separately if the transit is an only option to access park destinations. Table 16 shows transit fees as charged in

the parks studied. The impact of this kind of fee should be evaluated because it may have adversely affect park visitation.

Table 16: Park Entrance Fee and Transit Fees

Park Name	Entrance Fee	Transit Fee	System of charging fees
Acadia National Park	1. $20/vehicle 2. $5/person	$10	An additional transit fee is charged only when the transit system is in operation.
Denali National Park	1. $20/vehicle 2.$10/(Pedestrian/Bicycle/Motorcycle)	$11.50 to $65.95	Transit fee is charged separately, based on the route and tour.
Glacier National Park	1. $15/vehicle 2.$10/(Pedestrian/Bicycle/Motorcycle) *3. 1-6 passengers vehicle – $25 plus $12 per person *4. 7-15 passengers vehicle: $75 *5. 16-25 passengers vehicle: $100 *6. 26+ passengers: $200	$7.50	First $7.50 is set aside as a transit fee on the payment of $ 25 or more, and charged year-round (when the park is open).
Rocky Mountain National Park	1. $20/vehicle 2.$10/(Pedestrian/Bicycle/Motorcycle)	$7.00	First $7 is set aside as a transit fee on the payment of $20. Fee charged year-round.
Santa Monica Mountains National Recreation Area	N/A	N/A	Funding was received through a three-year pilot project grant.
Zion National Park	1. $25/vehicle 2.$12/(Pedestrian/Bicycle/Motorcycle) *3. 1-6 passenger vehicle – $35 plus $12 per person *4. 7-15 passenger vehicle – $70 *5. 16-25 passenger vehicle – $80 *6. 26+ passenger vehicle – $190	$19	First $19 is set aside as a transit fee (bike/ped/motorcycle don't pay). Fee charged year-round.

Note: * considered as a commercial vehicle.

10.3.2 Private sponsorship

Private sponsorship is a means of raising funds for public recreation facilities, and can range from individual sponsorships to large corporate donations. It can be attached to specific facilities

such as a pavilion or visitor center, or to a specific purpose such as education or transit. By giving donations or sponsorships, the corporations or individuals have the opportunity to increase their visibility and may receive tax benefits. Acadia National Park's transit system, the Island Explorer, receives $250,000 each year in private sponsorship from L.L.Bean.

10.3.3 Advertising revenue and business contributions

Advertisements on transit vehicles, bus stops and transit websites can raise significant revenue. Interest in this kind of purchase may be highest among local business owners. Covering transit vehicle windows with advertising film may diminish the visitor's view of the scenery. This can lead to dissatisfaction with transit and park services. Opposition to commercialization in the National Park and the benefits of ad revenue are important considerations that need to be balanced. Sometimes, park concessioners contribute to transit fund by receiving transit service up to their businesses.

10.3.4 Public Transit Subsidy Program (PTPS)

The Public Transit Subsidy Program (PTPS) is designed to encourage Department of Interior employees to use public transportation for commuting to and from work by providing financial incentives through the agency's budget. All National Park Service employees, including part-time employees, are eligible to receive this subsidy, which can be up to $115 a month toward their transit expenses. This program was initiated under the Federal Employees Clean Air Incentive Act of 1993 to improve air quality, reduced traffic congestion, and conserve energy by reducing the number of single occupancy vehicles on the road through the use of mass transit. The program may be an alternative for the National Park Service to set a side a transit fund from its own budget [30].

10.4 State, County, Local and Private Funds

States, counties and local jurisdictions may generate tax revenues through general sales taxes that can be used to support park transit systems. Surcharges or targeted taxes on tourism-related expenditures are another option. The sales tax opportunity may work well for urban parks, but it is difficult to implement a sales-tax-based transit financing formula for parks located in rural settings due to limited resources of the smaller gateway communities. For example, Acadia National Park's gateway communities dedicate a portion of their sales tax revenue to the park's transit service due to strong link between park tourism and local businesses. However, for the more rural and smaller gateway communities, taxes on tourist-related expenditures are a more viable and politically attractive option. Local taxes for transit may be more possible when a park provides transit service to local communities and creates economic benefits through new jobs and spending at local businesses by tourists.

Private funds can be provided by the corporations, private donors, foundations and friends groups. Donors provide these kinds of funds for a number of reasons, including:

- Increasing visibility and projecting a positive image of the donor;
- Income tax credits or other tax benefits;
- To advertise by the positive meaning;
- Demonstrating support for the goals and objectives of the recipient organization.

Acadia National Park receives funds from L.L. Bean, Friends of Acadia, and from individual donors and local businesses [31]. Foundations such as Colonial Williamsburg and the Nature Conservancy are also important options for federal land management agencies to consider for a transit fund.

10.5 Partnerships

A partnership may be established among public-public or public-private entities for the purpose of sharing transit resources. There is a wide variety of models that con be considered when designing such a partnership.

In public to public entities, the park may partner with other local public agencies such as gateway communities, tribal governments, universities, etc. One of the agencies may take responsibility for purchasing capital facilities for a transit system and another may take on its operation and maintenance. Another option might be that the agencies form a joint venture. For example, Glacier National Park's eastern route transit service buses are operated by the park while its maintenance is assisted by the Blackfeet Nation tribal community.

In a public-private partnership, a park would enter into agreement with a private entity to reduce or eliminate direct costs, such as the cost to build a maintenance facility. Private investments may range from small amounts to help fund operations, to large investments such as providing Intelligent Transportation System (ITS) equipment to financing maintenance or other facilities. These partnerships generally are the result of a park granting a private agency the right or contract for number of years to provide a specific service under specific business conditions. For example, Zion National Park owns the buses and McDonald Transit Inc. operates and maintains them [24]. If the Park were to contract transit services to START, the Park would not have to invest in facilities to house or maintain the buses.

10.6 Summary

There are a variety of funding sources that a National Park can use to implement a transit system. The peer review information indicates that most parks add a "transit fee" to their entrance fee to help fund transit services, and some parks may set aside a significant portion of the entrance fee to fund public transportation services within the park. While there are a variety of federal funding programs available, one of the most promising is the Federal Transit Administration's Section 5311 program, which provides operational and capital funds for rural, general public transportation programs.

No matter what federal funds are used, there is typically the requirement for "local match" or local funding, as well. Local funds may come from a variety of sources, as noted herein, these could include a lodging or "bed" tax; private donations (including funds from the Grand Teton National Park Foundation); a sales tax, or a combination of these sources.

A major issue on whether or not to implement a transit system in the Park will be whether sufficient funding can be obtained. While this chapter provided a list of potential sources, the Park will need to determine which sources it would want to pursue, and decide if adequate funding is available.

This Page Intentionally Left Blank

11. APPENDIX F: SERVICE ALTERNATIVES/ANALYSIS

This chapter presents additional information about potential transit services for the Park, based on information from the previous chapters. This chapter is divided into three sections: Additional Peer Group Information, which highlights factors from other systems that are important when designing a system for the Park; Service Factors, which looks at issues such as a fare-free versus fare based system, and voluntary versus mandatory transit services; and Preferred Service, in which the route design for the proposed service and its capital, marketing and financial requirements for the proposed system in the Park are discussed.

11.1 Additional Peer Group Information

One of the National Park Service's core missions is to preserve the natural landscape and wildlife for public appreciation, education and research by ensuring accessibility to and within national parks. Alternative Transportation Systems (ATS) allows parks to provide access to and within parks, while hopefully reducing the visitors' impacts on the parks, and even perhaps enhancing the visitors' experience. The Transportation Equity Act for the 21st Century (TEA-21) enables NPS units to study and implement ATS. Each NPS site has distinct geographic, cultural and political characteristics, and one site's ATS successes cannot be easily replicated for use elsewhere. Factors affecting the decisions surrounding the development of park transit systems are unique because the park sites are influenced by diverse sets of stakeholders. Those stakeholders might be park officials, visitors, gateway communities, private property holders within the parks, park concessioners, local businesses, local and state government agencies, etc. Cooperation or partnerships among these stakeholders can increase the likelihood of success.

The transit systems reviewed in Appendix A highlighted the importance of planning, management and outcomes of implemented service. These areas are discussed in further detail below, with a focus on stakeholder cooperation.

11.1.1 Planning

Planning and implementation of a public transit system within a national park may take several years. For example, Zion's transit system planning was initiated in 1994 and the operation was started in 2000. Planning for the Acadia transit system was started in 1993, and full-scale service was launched in 1999. A detailed timeline of Acadia transit development is shown in Table 7, Appendix A.

Partnerships play an important role in the planning, operation and procurement of capital for transit systems in national parks. Even though transit services in Denali, SMMNRA, and Glacier serve only the park, partnerships with local providers, park foundations, and local businesses were established. Implementing a transit service in Grand Teton National Park would likely require partnerships as well, as the proposed transit service would probably include reliance on the START transit system, which is funded by both Teton County and the Town of Jackson. A partnership with START Bus would alleviate some of the burdens of launching a new service. Our review indicated that in the cases cited above, the parks acted as leader in the planning, partnering, and implementation efforts that led to the new park transit services.

11.1.2 Management

Acadia, Zion and SMMNRA own their buses and bus facilities, while management is handed over either to other private/local transit management companies, a local transit authority or park

concessioners. Denali's transit system is operated and owned by park concessioners, and the park monitors the transit system's performance.

The studied transit systems receive funding for capital expenditures from the federal government through various funds such as ATPPL, CMAQ, or FTA Section 5311 funds. Partnering efforts are important as they can bring in a diverse source of local funds.

The following characteristics were noted among the transit systems reviewed for this plan:

- Systems operated from early morning (around 6:30 a.m.) to late evening (around 11:00 p.m.). This allowed visitors to spend a maximum amount of time in the park.
- Park transit services were generally fare-free, which attracted visitors to the system.
- Transit systems operated during peak visitation periods (summer season).
- Bus frequency was generally scheduled for 15 to 30 minute intervals.
- The operational cost of the systems was between $48 and $59 per hour.
- Alternate fuel such as propane, Compact Natural Gas (CNG), and ultra-low-sulfur diesel were used.

11.1.3 Outcomes of implement service

Success, as measured by ridership, was attained six to seven years after the service was initiated. At Acadia, transit ridership increased from 6.2 percent to 18.4 percent of total visitors after seven years. Zion ridership nearly doubled in the six years from 2000 to 2006. The transit service was able to relieve congestion in the park and surrounding areas. At Acadia, in its first year of operation, the Island Explorer replaced the equivalent of nearly 43,000 cars from the park and gateway communities [27].

The transit systems often provide services to the local community, gaining ridership from local businesses, park concessioners, gateway communities, and local airports. Providing service outside the park proved to be important, as support from local businesses, park foundations, corporations, and other government departments was often obtained three to four years after the transit system was implemented (and viewed as successful).

The transit systems were typically found to enhanced visitors' experiences, and provided a new resource to access sites within the park. Furthermore, the systems allowed the Parks to provide an extra benefit to park employees. They also allowed low income groups to access the park. In addition, the transit systems helped improve environmental quality by removing personal vehicles from the parks.

11.2 Service Factors

Transit services within the Park could be mandatory or voluntary, fare-free or fare-based, and could operate either within the park boundaries, or provide connections outside of the park. These service factors are analyzed further in this section.

11.2.1 Mandatory versus Voluntary

The review of other park and federal land transit systems indicated that there are both mandatory systems (Denali and Zion) and voluntary systems (Acadia, Glacier and SMMNRA). The decision on whether to implement a mandatory or voluntary system is based on alternative routes and resource impact. The Denali and Zion systems are better suited to a mandatory system due to the fact that visitors enter and leave the serviced area on the same road. Based on observed traffic conditions within the Park, visitor and employee survey data, and stakeholder interviews, researchers recommend a voluntary system, if a system is implemented.

If the Park ever decided it would want to limit access to inner destinations, such as South Jenny Lake by closing Teton Park Road (the "inner" road in the park), to private vehicles, a mandatory transit service between points such as the Moose intersection and South Jenny Lake would make sense. However, since it is very unlikely that the Park will close Teton Park Road in the future, a voluntary transit system is preferable at this time.

11.2.2 Fare-Based versus Fare-Free

Only the Denali system is both mandatory and fare-based. While the Zion system is mandatory, everyone who enters the park pays for the service whether they use it or not, so the fee for using the bus is hidden. In addition, there is an incentive to ride the bus to be able to view the Zion Canyon area in the park. While Grand Teton National Park visitors and employees indicated a willingness to pay to ride on a transit system, the majority of the local Jackson-area stakeholders indicated that any transit service in the Park should be fare-free. The success of a transit system may depend at least partially on whether people need to pay to ride the system. The failure of the SMMNRA transit system may have been due in part to charging a fee in its first two years of service. It is recommended that if a transit system in the Park is implemented, it should be fare-free.

11.2.3 Servicing the Park only versus servicing a wider area

The Glacier system is the only one of the five reviewed systems that does not operate outside the park boundaries. All of the other systems either provide service to gateway communities or make connections to systems that carry riders to more distant points or communities. Given the relative proximity of Jackson, Teton Village, and other major destinations such as the Craig Thomas Discovery and Visitor Center, Laurance S. Rockefeller Preserve and South Jenny Lake, a connected or "regional" system would make sense. A connected system would likely have an impact on traffic in Jackson, which may lead to opportunities for partnering with the Town of Jackson and Teton County, as well as the state of Wyoming. Therefore, we recommend that if a transit system is implemented in the Park, the system provide connections to Jackson and Teton Village.

The following section provides more detail on specific the financial resources necessary to implement a transit system in the Park, based on the phases/routes that have been developed herein.

11.2.4 Capital Requirements

Three main capital components are required for a typical park transit system: transit vehicles, bus stops and shelters, and operations and maintenance facilities. These three components are discussed in detail below.

11.2.4.1 Transit Vehicles

Vehicle selection plays an important role in visitor experience, ridership capacity, aesthetic values, cost, system reliability and fuel efficiency. While it may be necessary to purchase or lease some vehicles, particularly for the Teton Village to Moose service, it is proposed that any service implemented within the Park leverage the existing vehicles available through the START transit system in Jackson. Initial discussions with START manager Michael Wackerly indicated the potential for a partnership with the Park, and that two types of vehicles may be available for service in the Park. START would have approximately 12 buses with a 35- to 40-passenger capacity and two vans with 19-passenger capacity available during the proposed timeframe (June though August). A typical START bus is shown in Figure 39. The majority of START buses have a "bus wrap" or "advertisement film" on them. While the wrap enhances the appearance of the bus, it can limit the view of passengers, especially those who desire to take pictures from within the vehicle. It is possible that the wrap could be removed from the widows in order to enhance visibility.

If initial transit services are successful, and based on input from riders, it may be necessary to purchase slightly different vehicles for the Park's transit system as per riders' expectations and road conditions. Potential vehicles may include open air vehicles, or "shuttles" such as in Zion. However, the START vehicles should be more than adequate to implement a transit system within the Park.

Source: www.startbus.com/

Figure 39: Start Bus, Teton County Public Bus Service, Jackson, Wyoming

Larger buses should be used for Route 1 (Jackson to Moose); Route 2 (Moose to South Jenny Lake); and Route 4 (Moose to Colter Bay). Due to the narrow width of the Moose-Wilson Road, a smaller (narrower) vehicle of 12-15 passengers would be needed for Route 3 (Moose to LSR).

Figure 40: Dodge Sprinter Van at Glacier National Park

Glacier National Park faced similar vehicle width restrictions on the Going-To-The-Sun Road, and selected a Dodge Sprinter with capacity of 12-15 passengers (including accessibility lift) to operate on the narrower roadway (Figure 40). A passenger capacity can be increased by three more passengers upon lift removal. This is a vehicle that could be considered for use on the Moose-Wilson road.

11.2.4.2 Bus Stops and Shelters

Bus stops are important as they provide visibility to a bus system, and can provide information to those using the system. Bus stops and shelters typically provide useful information to riders such as schedules, route maps, and other transit system information. In recent trends, bus stops are often equipped with "next bus signs," which display in real time when the next bus will arrive. There are several different types of bus stops, including designated, identification and flag stops.

- *Designated Stop:* This kind of stop has an assigned space that serves as a rider's access point to the transit system. Designated stops typically include street furniture (a bench), a shelter, and information about the transit system (routes and schedules). An example of a designated stop from a federal land transit system is shown in Figure 41.

Source: Christopher MacKechnie, SMMNRA

Figure 41: Bus Stop, Santa Monica Mountains NRA

- *Identified Stop:* At this kind of stop, riders would typically see a "bus stop" sign but usually no street furniture. This is considered a "minimum" stop.
- *Flag Stops:* In this case, a transit bus would stop upon a signal request (a wave or flag) by a rider. This type of stop is used in areas with infrequent ridership, or that lack suitable locations for an identified or designated stop.

Initially, it is proposed that the Park utilize existing facilities as much as possible to serve as bus stops. The Craig Thomas Discovery and Visitor Center and facilities at South Jenny Lake and Colter Bay should suffice until a decision is made on the permanence of the bus system. Information such as route maps, schedules and contact information should be available at all the bus stops. Decisions about additional stops or flag stops would be based on operational data once a system was implemented.

11.2.4.3 Operational and Maintenance Facilities

Operational facilities include bus terminal/transfer facilities and facilities for the operational (and management) personnel of the system. For the proposed system, the Craig Thomas Discovery and Visitor Center is considered to be the main transfer point or origin/destination of the transit routes. If a transit system were implemented, and proved to be successful, a separate facility specifically for the bus service may be constructed. However, it is likely that the decision to build a new facility would likely not be necessary for at least three years after implementation, as the initial service in the Park would start as a pilot project.

As has been discussed in this document, a partnership with the START transit system would allow immediate access to its vehicles and facilities. If service were contracted to START, vehicle maintenance would be included in the contract. Unless the Park chose a different service model rather than partnering with START, it is likely that no operational or maintenance facilities would need to be constructed.

11.2.5 Marketing

A broad, community-based marketing approach would be necessary to help ensure the success of a transit system in the Park. Marketing efforts should also emphasize partnerships between the Park and the broader community, such as those that might exist with hotels/motels in Jackson and Teton Village, and other business in the area. Even the stakeholders emphasized essential marketing for transit in their interviews, and in addition to that the visitor surveys indicated the about half of the respondents never used transit before.

Transit information should be easily understood by visitors, and should be presented to visitors early in their trip-planning activities, as well as emphasized while they are in the greater Grand Teton area. Information should be provided on the Park's website, and links should be included from local hotels/motels, the Chamber of Commerce, Town of Jackson, Teton County, and all concessioners. Furthermore, employees and volunteers of local business, concessioners, and the park should be knowledgeable about the system, and guide visitors to use the system. A media campaign may be initiated to brand the image of the Park's transit system.

11.2.6 Financing

As noted in herein, there are various sources of funds available for National Park transit services. However, as noted in this document, the Park does not intend to use existing funds to pay for a transit service, due to the Park's deferred maintenance and component renewal needs. The

funding sources noted are used to provide the monies necessary for capital (vehicles and infrastructure) and operating expenses. While many of these programs pay 80 to 100 percent of the cost of capital needs, and operating expenses may be funded at 60 percent, there is still the need for local match.

By partnering with START and other local stakeholders, it is likely the Park can minimize the need for capital expenses (vehicles and infrastructure). Potential (likely) sources of funding to operate a transit system in the Park include:

Capital expenses for vehicles

- FTA Alternative Public Transportation on Public and Private Lands (ATPPL)
- FTA Major Capital Improvement Program *(*Section 5309)
- FTA Non-Urbanized Area Formula Program (Section 5311)

Capital expenses for infrastructure

- FTA Alternative Public Transportation on Public and Private Lands (ATPPL)
- FTA Major Capital Improvement Program *(*Section 5309)
- FTA Non-Urbanized Area Formula Program (Section 5311)
- Transportation Enhancement Fund (SAFETEA-LU Sections: 1113, 1122, 6003)

Operating Expenses

- Non-Urbanized Area Formula Program (Section 5311)
- Job Access and Reverse Commute Program-JARC (Section 5316)

Again, it is important to note that the Park has nearly $147 million in deferred maintenance and component renewal spending that is needed in the next ten years. Therefore, the Park will need to determine which sources of funding it would want to pursue, in conjunction with stakeholders, if the potential transit system were to be implemented.

Table 17 provides information on the estimated operating expenses for Phases 1-4 of the potential transit system. This service level is based on data from the visitor and employee surveys, stakeholder interviews, and the peer group reviews. The recommended dates of service span 92 days (June-August) for twelve hours of service per day. Table 18 shows expenses for the same level of service extended to 122 days of operation.

Table 17: Transit Service: Phases 1-4 (92 days)

Route	Frequency	Annual Hours	Annual Cost	# of vehicles
Jackson to Moose	30 min	2,208	$154,560	2
Moose to South Jenny Lake	15 min	3,312	$231,840	3
Moose to LSR	30 min	2,208	$154,560	2
Moose to Colter Bay	2 hours	1,104	$77,280	1
Total			*$618,240*	*8*

Table 18: Transit Service: Phases 1-4 (122 days)

Route	Frequency	Annual Hours	Annual Cost	# of vehicles
Jackson to Moose	30 min	2,928	$204,960	2
Moose to South Jenny Lake	15 min	4,392	$307,440	3
Moose to LSR	30 min	2,928	$204,960	2
Moose to Colter Bay	2 hours	1,464	$102,480	1
Total			*$819,840*	*8*

As previously discussed, there are several sources of federal funds to assist in providing the capital and operating expenses associated with a transit system. Most of the federal programs require some level of "local match." Potential sources of local match/revenue include fares, a bed tax, a local sales tax, advertising revenue, and donations. Each of these sources is discussed further below.

11.2.6.1 Fares

While the visitor and employee surveys indicated a willingness to pay for a transit service, the peer review and stakeholder interviews showed that there were strong reasons for keeping a system free from fares. Therefore it is anticipated that any system implemented in the Park would be fare-free, and fares would not be a source of local match/revenue.

11.2.6.2 Bed Tax

One potential source of local revenue that was brought up during stakeholder interviews was a bed tax. While the legal issues behind implementing a bed tax is not analyzed in this plan, the potential revenue from a bed tax was analyzed. It is estimated that in 2007, a total of 76,000 "room nights" were sold in the Park at the following locations/lodges: Colter Bay Cabins and Tent Village, Jackson Lake Lodge, Jenny Lake Lodge and the Signal Mountain Lodge. Adding a $1 fee or tax to the cost of each of these rooms would raise $76,000 to support transit. A $2 fee would, of course, double that revenue to over $150,000 a year.

Campgrounds and RV sites could also be included in a bed or site fee/tax. Nearly 28,000 site nights were occupied in 2007 at Colter Bay, Jenny Lake and Signal Mountain. A fee could be charged on these sites to raise additional revenue. This source of revenue would require further investigation as to its full potential.

11.2.6.3 Local Sales Tax

Another potential source of local funds that was identified through interviews with stakeholders was a local option sales tax. Implementing this sales and use tax would require the approval of Teton County voters. It is estimated that if voters approved a one-cent tax, it could raise over $5,000,000. The Park would need to discuss this potential source with local officials, who may be interested in asking voters to approve a portion of the tax to support not only transit within the Park, but also to support the operations of START. The decision to implement a tax is a complex political question. The purpose of the information herein is not to highlight all the issues surrounding a sales tax, put to note that it is a potential source of local revenue.

11.2.6.4 Advertising Revenue

Some transit systems obtain revenue by selling advertising space on the interior and/or exterior of their vehicles. If the Park utilized START vehicles for most or all of the service, it is likely that only a small portion, if any, of revenue from this source would be available to support any service within the Park. Nonetheless, it is important to keep this potential source of funds in mind.

11.2.6.5 Donations

Acadia National Park receives support in the form of donations from local businesses, including L.L. Bean. It is possible that the Park could receive donations from local businesses or individuals, and may also explore the possibility of receiving funds from the Grand Teton National Park Foundation. These donations may be in addition to any other local funds, or may be received in lieu of other sources, such as a bed tax.

11.3 Summary

The analysis herein was not intended to provide detailed information about potential routes and timing, nor evaluate the political/legal issues surrounding potential sources of local revenue. The purpose of this chapter was to further define capital, operating, and funding issues surrounding a potential transit system in Grand Teton National Park, so that an informed discussion can take place about whether or not to continue a process that may lead to a transit system being implemented within the Park.