

REST AREA USER SURVEY

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1 INTRODUCTION

The inception of roadside rest areas came in the form of a provision of the Federal-aid Highway Act of 1938, which stated that “the States, with the aid of Federal funds, may include...such sanitary and other facilities as may be deemed necessary to provide for the suitable accommodations of the public.” While this act marked the birth of roadside rest areas in the U.S., rest area growth did not really begin until passage of the Interstate Highway Act of 1956 and did not gain momentum until the passage of the Highway Beautification Act of 1965, together with the establishment of the Highway Trust Fund (1).

Today’s rest area user has come to expect much more than just a place to rest. Rest areas have been known to offer a variety of services including pay telephones; vending machines offering snacks, soft drinks, newspapers and maps; free coffee provided by various charitable organizations; displays describing historical and geological places of interest; and up-to-date traveler information.

1.1 PURPOSE

The Montana Department of Transportation, Planning Division is undertaking a three-phase effort to determine (1) current rest area conditions and services, (2) the needs and expectations of rest area users, and (3) appropriate planning guidelines to better direct rest area improvements and resources. This report documents the results of the second of these three phases (i.e., determining the needs and expectations of rest area users in Montana).

To date, the Montana Department of Transportation has never performed a public opinion survey that comprehensively addresses rest area issues such as condition, location and amenities. Previous survey efforts have included questions about overall satisfaction with rest areas. However, other than indicating a potential need for improvement (i.e., if satisfaction ratings were low), this information provides little information to support planning efforts.

1.1.1 Goals and Objectives

The overall goal of this effort was twofold: (1) to obtain information related to the needs and expectations of rest area users in Montana that may later be directly incorporated into rest area planning efforts, and (2) to support the MDT, Planning Division mission “to provide ways for interested citizens and stakeholders to obtain information and provide input into transportation planning and decision-making...”

The following objectives were accomplished as part of this effort:

- obtain opinion-based ratings related to rest area condition, the relative importance of various amenities, the need for additional amenities and rest area locations; and
- obtain rest area usage, travel-related and demographic information to support the development of customer segmentation models to distinguish different groups and their rest area needs and expectations.

1.1.2 Benefits

In accomplishing the above objectives, this effort served to:

- gauge the overall level of public satisfaction with respect to rest areas, as well as target specific areas (e.g., condition of signing, cleanliness) in need of improvement;
- segment rest area users on the basis of their opinion-based responses to allow for better targeting of marketing efforts, informational campaigns, etc.;
- support the development of the updated Long-range Rest Area Plan; and
- fulfill the MDT, Planning Division mission of including public input into transportation planning and decision-making.

In the long-term, information obtained from the user survey, in combination with other information, will aid MDT planners and policy makers in establishing priorities and allocating resources for future rest area improvements in Montana.

1.2 BACKGROUND

The Montana Department of Transportation's *Long-range Rest Area Plan* was developed in 1985 by the Planning Division. This document was intended to guide MDT's rest area location, rehabilitation and abandonment decisions. Although the *Long-range Rest Area Plan* has been modified in past years to reflect changing conditions and priorities, it no longer adequately supports decisions related to long-range policy issues. A comprehensive effort is needed to update the *Long-range Rest Area Plan* that also includes input from MDT's partners and customers.

MDT envisioned a three-phase approach in developing the updated *Long-range Rest Area Plan*.

- Phase 1. A field inventory of rest area facilities was conducted to determine substandard conditions, necessary improvements, and required maintenance. This effort was performed by MDT, Maintenance Division personnel.
- Phase 2. A survey of rest area users was conducted to determine their opinions, needs and expectations related to rest areas in Montana. The user survey was the first element of public involvement for the *Long-range Rest Area Plan* update.
- Phase 3. In updating the *Long-range Rest Area Plan*, efforts will consider new rest area designs and standards, additional amenities, improvement priorities and required resource allocation. The intent of the newly updated document is to aid MDT in establishing future priorities, allocating resources, and guiding essential long-range policy issues for the next 20 years. Information obtained in Phases 1 and 2 will be directly incorporated into the updated *Long-range Rest Area Plan*.

1.3 LITERATURE REVIEW

A review of previous rest area user survey results was conducted to (1) evaluate general rest area issues for inclusion in the current effort's survey instrument and (2) become familiar with typical survey responses for later qualitative comparison with the current effort's survey results. The survey review assisted in designing the survey instrument and ensuring all data elements potentially affecting rest area user needs and expectations were captured. Unfortunately, the dated nature of many of the studies related to rest area usage and user issues (most being completed in the late 1960's and early 1970's when rest area design held much more interest) limited the amount of material available for reference. Nevertheless, the limited material

available provided valuable insight into major rest area usage and user issues. Recent documented survey experiences are summarized in Table 1 and are described further in this section.

1.3.1 Travel and Demographic Characteristics

Most previous rest area user surveys attempted to describe patterns of rest area usage or opinion-based responses on the basis of demographic and personal travel characteristics.

In general, the average age of a rest area user ranged from 43 to 54 years old and most were male (typically, the male/female proportions were two to one). The percentage of out-of-state and in-state rest area users varied significantly depending on the location of the rest area (i.e., whether it was on a major travel route such as the Interstate or a less traveled state highway). Commonly, the majority of motorists reported their trip as recreation or vacation. A lesser proportion usually reported the trip purpose as business. One previous survey noted that these results mirror the demographics of long trip taking highway users (2, 3, 4).

One commonly asked question related to travel characteristics is the type of vehicle driven by rest area users. Knowing the percentage of cars, recreational vehicles (RVs), trucks, and other vehicles allows for better design of parking facilities so that adequate numbers of correctly sized parking spaces would be available for each type of vehicle. Previous findings related to vehicle type ranged from 75 to 80 percent automobiles or pick-ups, 10 to 14 percent RVs, 10 to 20 percent trucks, and 0 to 1 percent other vehicles, including motorcycles and bicycles (2, 3).

Table 1. Previous Rest Area Survey Experience

DATE	SPONSOR	SURVEY METHOD	SAMPLE SIZE	SURVEY INTENT
1986-87	Virginia Department of Transportation	Mail-back survey, distributed at 7 rest areas and 4 welcome centers on three occasions for each site.	1,945	Created a user profile with special focus on vending machines.
1989	Utah Department of Transportation	Conducted at 15 rest areas and 5 welcome centers.	544	Focused on desired user services and spacing preference.
1989	National Cooperative Highway Research Program	Conducted at 13 rest areas in 5 states, supplemented with nationwide telephone survey.	1,317	Created a user profile of general use patterns and attributes.

1.3.2 Rest Area Usage

Each of the previous surveys asked respondents to report their primary reason for stopping at the rest area. Not surprisingly, the majority of rest area users (50 to 80 percent) listed using the restrooms as their primary reason for stopping. The next most reported reason for stopping was to take a break from driving and rest or stretch (7 to 33 percent). Other frequently reported reasons for stopping at rest areas were to use the telephone, drink from the water fountain, eat, obtain travel information, and empty trash (2 to 5 percent) (2, 3, 4).

To more directly investigate the facilities deemed most important by rest area users, survey respondents were asked to specify which facilities they used most often. Restrooms were clearly the most commonly used rest area facility. Eighty-five to 97 percent of survey respondents reported using restrooms during their visits. Water fountains were also typically a high-use facility as reported by 13 to 43 percent of survey respondents. Other highly used facilities reported in the surveys were travel information (20 percent), parking lot (16 percent), trashcans (15 percent), telephone (7.2 to 12 percent), picnic tables (9 percent), paths and grounds (7 percent), pet rest area (4 percent), benches (3.8 percent), and cooking grills (0.3 percent) (3, 4).

To aid in determining how many facilities must be provided at rest areas, such as the size of the parking lot or the number of picnic tables, phones, or toilets available, survey respondents were either asked to report their length of stay at the rest area or field observations were made to determine length of stay. The average time spent in survey sites typically ranged from 5 to 15 minutes and was significantly higher for trucks and RVs (2, 3). Most rest areas included in the survey were found to provide adequate numbers of parking spaces and other facilities to meet their demands (2, 3, 4). The only significant problem noted in other surveys were delays in using women's restroom facilities, indicating many rest areas may not have adequate numbers of toilets to account for increased usage time by women (4).

1.3.3 Rest Area Conditions

In previous surveys, respondents were asked to rate rest area conditions. Most survey respondents reported good to excellent ratings for all rest area amenities and services. Typically, the only negativity expressed by survey respondents related to restroom cleanliness or the

aforementioned delays in using the women's restrooms, but these were usually only sporadic complaints (3, 4). Many of the respondents did express concern over the nighttime safety at rest areas. Despite the fact nearly all survey respondents felt safe and secure during daytime visits to rest areas, over one-third admitted to feeling less secure in rest areas at night (3).

1.3.4 Rest Area Amenities

With respect to amenities, rest area users were frequently asked what new amenities they would like to see at the rest areas. Responses to this question of course varied depending on the existing amenities offered at the rest area. The most frequently reported desired amenities included commercial information, snack bars, vending machines, RV dump stations, emergency telephones and free coffee (2, 3, 4).

When inquiries were made into funding new rest areas and amenities to determine user preferences, results were varied and usually fairly evenly split. A slight majority of motorists were against paying rest area user fees to maintain rest areas and prevent closings. There was, however, significant support for an RV dumpsite licensing fee by RV users, as noted by a majority of respondents in Utah who felt the service was worth a slight cost (2). The topic of commercial involvement in rest area development and maintenance was, in general, poorly received. For example, two-thirds of survey respondents were against commercial involvement in Virginia's rest areas (4). However, attitudes did shift in favor of limited commercial involvement in the form of vending machines and phone-ahead reservation systems (2, 3).

1.3.5 Rest Area Locations

Previous survey questions regarding rest area location generally had the twofold purpose of (1) determining rest area user satisfaction with current rest area frequency and spacing and (2) determining the average amount of time motorists preferred to travel between breaks. The majority of rest area users (50 to 71 percent) felt current rest area spacing was convenient or adequate. A significant portion of rest area users (15 to 40 percent) felt many rest areas were spaced too far apart. Few survey respondents (less than 1 percent) felt rest areas were too close together (2, 3). With respect to travel time between breaks, the average amount of time between breaks was between 2 and 3 hours (2, 3, 4).

1.3.6 Implications for this Effort

A high degree of similarity existed among the surveys reviewed. Most of the surveys solicited information related to the travel and background characteristics of respondents. Some of the most often asked questions dealt with age, place of residence, purpose of travel and vehicle type. Rest area facility usage questions were also regularly included in the surveys. These generally included primary and auxiliary reasons for stopping. Other important and frequently asked questions dealt with respondent's opinions about rest area conditions, amenities, locations, safety and security and commercial services. The frequent inclusion of questions regarding these issues in surveys around the country gave a clear picture of the most important facets of rest area design, operation and maintenance and served as a valuable reference in creation of the current survey instrument.

In addition to covering many of the same topics, the reviewed survey's responses revealed a high level of homogeneity throughout the country. This high degree of similarity allows for the comparison of Montana's results to a standard of nationwide results, possibly indicating the strengths or deficiencies of Montana's rest areas. Results varying from the national standard could also prove to be, due to the time difference between Montana's survey and the other reviewed surveys, a shift in the expectations and desires of rest area users in general, lending credence to the possible nationwide significance of Montana's rest area user survey results.

2 SURVEY METHODOLOGY

The survey methodology is described below. Several steps were taken in the design of this methodology to ensure that efforts were completed in a quality and timely manner. Certainly, the high number of pre-determined survey sites (i.e., 16) and their large geographic spread challenged the efficiency with which the survey was administered. Careful scheduling and a dedicated survey staff helped to ensure the timely administration of the survey.

The methodology for this project consisted of the following three tasks:

- designing the survey instrument and methodology,
- administering the survey at select locations and
- analyzing the survey results.

Each of these tasks is described more fully below.

2.1 INSTRUMENT DESIGN

Using MDT's draft *State of Montana Rest Area Survey* as the basis, the final survey instrument contained four sections:

- rest area usage questions that included reason for stopping and rest area familiarity in Montana or other states;
- opinion-based questions that related to rest area condition, amenities and locations;
- travel-related questions that included length of trip, type of vehicle, size of party, purpose of trip, etc. and
- demographic questions that included gender, age, marital status, residence, education and income range (see Appendix)

In addition, the surveys were coded to indicate the specific rest area location where the survey was administered and the date on which it was administered.

Forethought related to later survey analysis was given in the original survey design to ensure that all data elements potentially affecting rest area user needs and expectations were captured in the survey. In addition, the design of the individual survey questions were such to facilitate the conclusion of meaningful statistical findings and the development of various customer segmentation models.

Because of the compressed timeline of the project, a formal beta test of the survey instrument was not possible. However, informal beta testing was done in-house to ensure that the survey questions were clear. In addition, approval of the survey instrument prior to printing was obtained from the MDT Planning Division.

The survey was designed as a mail-back survey. Survey participants were provided with a questionnaire and a self-addressed, postage-paid envelope. Survey respondents were given a definitive date by which to respond (September 15, 1998) although the majority of surveys were received well in advance of this date.

Although the survey was designed as a mail-back survey, respondents were given the option of completing the survey on-site. Often if people are traveling for recreation, it is easier for them to complete the survey on-site than to locate a mailbox. Also, mail-back surveys typically experience a very high non-response rate (often as high as 70 percent). Because survey respondents were given the option of completing the survey on-site, response rates were likely higher.

As an additional incentive to encourage response, survey administrators provided the survey respondent with a free pencil. A limited number of state maps were also provided to survey respondents.

2.2 ADMINISTRATION

Sixteen pre-determined rest area locations served as survey sites (see Figure 1). Target survey distribution among the 16 sites was weighted depending on vicinity traffic volumes (facility usage rates were not readily available). Had usage or participation fallen significantly short of the estimated survey distribution (i.e., if it was anticipated to pass out 45 surveys and only 17

Figure 1. Rest Area Survey Sites

people agreed to participate), researchers would have opted to extend the survey period at that site. Fortunately, this was not necessary. Surveys were administered at each site on two consecutive days for up to an eight-hour period each day. Survey administration periods were reduced if the target survey distribution goal was attained the first day or early in the second day. All surveys were administered between August 9th and August 29th, 1998 using a total survey crew of eight sent in pairs to the various rest areas. The survey dates and target survey distributions are provided in Table 2.

Table 2. Survey Locations, Dates and Target Distributions

SURVEY LOCATION	SURVEY DATE	TARGET SURVEY DISTRIBUTION
Armington	8/28 and 8/29	75
Bad Route	8/16 and 8/17	93
Bearmouth	8/11 and 8/12	264
Bridger	8/13 and 8/14	109
Culbertson	8/17 and 8/18	111
Dearborn	8/24 and 8/25	123
Emigrant	8/9 and 8/10	67
Flowing Wells	8/21 and 22	18
Greycliff	8/11 and 8/12	244
Homestake	8/9 and 8/10	233
Hysham	8/19 and 8/20	126
Quartz Flats	8/13 and 8/14	213
Red Rock	8/13 and 8/14	85
Sweetgrass	8/26 and 8/27	70
Troy	8/10 and 8/11	119
Vandalia	8/19 and 8/20	50
Statewide	8/9 through 8/29	2000

Choice-based sampling methods were used to target the opinions of current rest area users. In a true choice-based sample, survey respondents would be chosen at random from the set of all rest area users. However, given project time constraints and potentially low frequencies of rest area users at some of the survey sites, all rest area users were approached and asked to fill out a survey in order to obtain a sufficient sample size.

Omitted from this sample were those persons that do not currently use rest areas but may begin to use rest areas if improvements were made to conditions, different locations were established, or additional amenities were provided. In addition, the surveys were administered only during the daytime (in the interest of survey personnel safety), excluding the opinions of nighttime rest area users. Rather than jeopardizing the safety of survey personnel or risking low response rates due to low nighttime rest areas usage, questions related to nighttime usage and concerns were included in the survey instrument. Every effort was made to solicit opinions from a wide range of rest area user groups including recreational travelers, commercial vehicle operators, business travelers and others to ensure that MDT has the opportunity to address the needs and expectations of all of its customers rather than just a portion.

2.3 SURVEY ANALYSIS

After the administration of the survey, surveys that were completed on-site were returned to WTI for initial coding and data entry into an Excel spreadsheet. Data entry continued for two weeks as mail-back surveys filtered in. After the final return date (specified as September 15th, 1998 on the survey instrument), data analysis began.

Descriptive statistics were produced and summarized in both graphical and tabular form. In all cases, summary statistics were reported as a statewide average and for each of the individual rest area sites. By maintaining summary statistics for each of the individual rest areas, the variability in opinion-based responses (i.e., level of satisfaction) can better be explored.

Advanced statistical modeling techniques were used to determine significant relationships between general travel-related and demographic characteristic data and various rest area usage and opinion-based responses related to rest area conditions, amenities and locations.

Specifically, statistically significant relationships were determined using ordered probability regression models and logistic regression models.

Before performing the modeling exercises, minor data transformations were necessary. Data that had multiple non-numeric choices (i.e., motorcycle/passenger car/pickup truck, van or sport utility vehicle/tractor trailer/bus/other) were transformed into singular indicator variables. Data that had multiple choices with a range of numerical values were transformed one of two ways: (1) average values for each range were determined and assigned so that a single variable resulted for all values or (2) an indicator variable was created for each range of values so that multiple variables resulted. For example, a single new variable, *avinc*, was created by determining the average values for each of the income ranges specified. Interpretation of this variable led to conclusions about how increasing or decreasing income levels likely affect the usage or opinion-based response. Nothing definitive could be said about any particular income group using this variable. Alternatively, six indicator variables (*povinc*, *lowinc*, ... *highinc*) were created for each income range. This specification allowed conclusions to be drawn specifically about certain income groups.

2.3.1 Ordered Probit Model

Ordered data assumes a countable number of values and describes a choice of alternatives. The data can be numeric in integer form or can be translated into numerical form. The difference that distinguishes ordered data is that it assumes a ranking. For example, ordered data would result if a respondent were asked to indicate the frequency of an occurrence by choosing *never*, *sometimes* and *frequently*. An occurrence that takes place *frequently* happens more often than one that occurs *sometimes*, and one that happens *sometimes*, obviously occurs more often than one said to *never* occur. Thus, by the property of transitivity, a *frequent* occurrence takes place more often than one reported to *never* occur. Ordered data also results when a respondent is asked to rank an item on a scale (i.e., from 1 to 10) (5).

Ordered probit models are widely accepted as a suitable model form for analyzing ordered data. Ordered probit models define an unobserved variable, z , such that:

$$z = \beta\mathbf{X} + \varepsilon$$

where

β is a vector of estimable regression parameters

\mathbf{X} is a vector of measurable characteristics (e.g., demographics, travel characteristics) that define ranking and

ε is a random error or disturbance term.

In the ordered probit model, the disturbance term is assumed to be normally distributed (if assumed to have a standard logistic distribution, an ordered logit model would result). Using this equation, various threshold values can be determined to reflect the discrete nature of the data:

$$y = 0 \quad \text{if } z \leq \mu_0$$

$$y = 1 \quad \text{if } \mu_0 < z \leq \mu_1$$

$$y = 2 \quad \text{if } \mu_1 < z \leq \mu_2$$

:

$$y = j \quad \text{if } z \geq \mu_{j-1}$$

where

y is the actual or observed ranking and

μ is an estimable parameter that defines y .

In the Rest Area User Survey, several of the rank order questions lent themselves well to ordered probit analysis, particularly when asking the following:

- level of satisfaction (i.e., Not at all, Somewhat, Very);
- comparative ratings (i.e., poor, fair, good, Very good, excellent); and
- level of importance (i.e., Not at all, Somewhat, Very important);

In each case, a resulting positive model coefficient increases z , which in turn increases the likely rank value selected by a respondent (i.e., a positive coefficient indicates a propensity to respond with a higher rank value). Conversely, a negative coefficient indicates a propensity to respond with lower rank values.

2.3.2 *Logit Model*

To explore an individual's support of private rest area development (yes/no) or their willingness to pay a fee to finance rest area improvements (yes/no), a model suitable for application to discrete data was needed. Discrete data assumes a countable number of values, but unlike ordered data, possesses no inherent ranking. Discrete data can be binary or can describe a choice of alternatives. Logit models are widely accepted as a suitable model form for analyzing discrete data (5). Logit models are derived from economic utility theory which assumes that individuals choose the response (or alternative, for multinomial data) that provides them the greatest utility or benefit. Considering the likelihood of supporting private development in rest areas as an example, the probability of responding *yes*, P_y , is

$$P_y = \Pr[V_y + \epsilon_y > V_n + \epsilon_n]$$

where

V_y is the observable portion of the utility derived from showing support

ϵ_y is the unobservable or random portion of the utility derived from showing support

V_n is the observable portion of the utility derived from not showing support

ϵ_n is the unobservable or random portion of the utility derived from not showing support

In other words, the probability of supporting private development is equal to the probability that the summation of observable and random utility components showing support exceed those from not showing support. This equation can be rearranged as follows:

$$P_y = \Pr[V_y - V_n > \epsilon_n - \epsilon_y]$$

In this form, it is evident that the *difference* in utilities is important rather than the cardinal values of the utilities (5).

If we assume at this point that the random terms follow a generalized extreme value (GEV) distribution, the standard logit model results:

$$P_y = \frac{1}{1 + e^{V_n - V_y}}$$

Because the model computes probabilities on the basis of the differences in yes/no utilities, V_n can be set to zero without loss of generality (6).

To derive estimable parameters from this model form, let

$$V_y = \beta \mathbf{X} + \varepsilon_y$$

where

β is a vector of regression parameters estimable by maximum likelihood methods

\mathbf{X} is a vector of measurable characteristics (i.e., travel-related characteristics, demographic characteristics, etc.)

ε_y is a random error or disturbance term.

The probability of an individual not showing support of private development is simply

$$P_n = 1 - P_y$$

When interpreting the model, a resulting positive model coefficient increases V_y , which in turn increases the likelihood that an individual will show support of private development.

Conversely, a negative coefficient decreases the likelihood of support.

Generalizing from the binary case to the multinomial case, the model form becomes

$$P_A = \frac{e^{\beta \mathbf{X} + \varepsilon}}{\sum e^{\beta \mathbf{X} + \varepsilon}}$$

where P_A is the probability of selecting a specified alternative from a set of alternatives and all other variables are as previously defined.

When analyzing the survey results, care will be taken to extrapolate the findings only to rest area users. The findings from this survey will not reflect the opinions of the general public as a whole or people that currently do not use rest areas but may in the future if certain improvements in condition were made, new locations were established or additional amenities were provided. In addition, some sample bias may result because of seasonal effects. The proportion of recreational travelers, commercial vehicle operators, business travelers and other travelers in July or August is likely different than at other times of the year. Implications of this bias were noted in the results.

3 SURVEY RESULTS

Results from the Rest Area User Survey address such questions as:

- How satisfied are current rest area users with the condition of rest areas in Montana?
- What are rest area user priorities with respect to rest area improvements?
- Where should other rest areas be located, according to rest area users?
- How do the responses to these questions differ given various rest area usage, travel-related and demographic characteristics?

Table 3 summarizes the survey locations, dates, target distributions and approximate response rates. Recall that the target survey distribution among the 16 sites was weighted depending on vicinity traffic volumes because facility usage rates were not readily available. Approximate response rates are reported because the target distribution was, in some cases, not met and in other cases, exceeded. Note the variation in survey response rate, ranging from 15 percent at Quartz Flats to 100 percent at Flowing Wells. On average, the statewide survey response rate was 53 percent resulting in a survey sample of 1,067. Descriptive statistics and customer segmentation model results are described in detail below.

3.1 DESCRIPTIVE STATISTICS

Descriptive statistics are provided for each survey question. Descriptive statistics most simply characterize rest area users and their various needs and expectations. This section describes the survey sample travel and demographic characteristics, as well as opinion-based responses related to rest area conditions, amenities, location, accessibility and safety.

3.1.1 Travel and Demographic Characteristics

As summarized in Tables 4 and 5, the majority of survey respondents were male (53.55 percent statewide) although Flowing Wells, Troy, and Red Rock posed as exceptions. Flowing Wells was the most marked exception although it should be noted that only 18 surveys were returned

Table 3. Survey Locations, Dates, Target Distributions and Response Rates

SURVEY LOCATION	SURVEY DATE	TARGET SURVEY DISTRIBUTION	SURVEY RESPONSE	APPROXIMATE RESPONSE RATE
Armington	8/28 and 8/29	75	66	88%
Bad Route	8/16 and 8/17	93	81	87%
Bearmouth	8/11 and 8/12	264	100	38%
Bridger	8/13 and 8/14	109	82	75%
Culbertson	8/17 and 8/18	111	23	21%
Dearborn	8/24 and 8/25	123	92	75%
Emigrant	8/9 and 8/10	67	53	79%
Flowing Wells	8/21 and 22	18	18	100%
Greycliff	8/11 and 8/12	244	142	58%
Homestake	8/9 and 8/10	233	117	50%
Hysham	8/19 and 8/20	126	101	80%
Quartz Flats	8/13 and 8/14	213	33	15%
Red Rock	8/13 and 8/14	85	44	52%
Sweetgrass	8/26 and 8/27	70	57	81%
Troy	8/10 and 8/11	119	23	19%
Vandalia	8/19 and 8/20	50	35	70%
Statewide	8/9 through 8/29	2000	1067	53%

Table 4. Demographic Characteristics

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide	
GENDER (%)																		
Female	34.85	39.51	37.00	46.34	34.78	36.96	39.62	77.78	41.55	41.88	37.62	39.39	47.73	19.30	56.52	40.00	41.93	
Male	60.61	56.79	54.00	50.00	65.22	60.87	56.60	16.67	55.63	54.70	57.43	60.61	47.73	73.68	34.78	51.43	53.55	
No Response	4.55	3.70	9.00	3.66	0.00	2.17	3.77	5.56	2.82	3.42	4.95	0.00	4.55	7.02	8.70	8.57	4.53	
MARITAL STATUS (%)																		
Married	74.24	75.31	68.00	73.17	69.57	59.78	84.91	94.44	79.58	67.52	65.35	75.76	65.91	78.95	78.26	65.71	73.53	
Single	22.73	23.46	29.00	23.17	26.09	32.61	15.09	0.00	18.31	29.06	33.66	21.21	29.55	12.28	13.04	31.43	22.54	
No Response	3.03	1.23	3.00	3.66	4.35	7.61	0.00	5.56	2.11	3.42	0.99	3.03	4.55	8.77	8.70	2.86	3.93	
RESIDENCY (%)																		
In-state (Montana)	50.00	8.64	12.00	23.17	26.09	36.96	18.87	50.00	17.61	13.68	20.79	18.18	9.09	14.04	17.39	20.00	22.28	
Out-of-state	33.33	72.84	78.00	64.63	60.87	34.78	56.60	38.89	69.72	75.21	69.31	75.76	70.45	42.11	73.91	62.86	61.20	
Out-of-country	4.55	4.94	5.00	2.44	8.70	13.04	7.55	0.00	1.41	4.27	1.98	0.00	13.64	26.32	0.00	14.29	6.76	
No Response	12.12	13.58	5.00	9.76	4.35	15.22	16.98	11.11	11.27	6.84	7.92	6.06	6.82	17.54	8.70	2.86	9.76	
HOUSEHOLD INCOME (%)																		
Under \$10,000	4.55	2.47	5.00	3.66	4.35	6.52	7.55	11.11	2.82	3.42	5.94	0.00	4.55	1.75	4.35	2.86	4.43	
\$10,000 to \$30,000	18.18	23.46	18.00	24.39	26.09	22.83	15.09	22.22	16.90	15.38	24.75	27.27	9.09	15.79	26.09	20.00	20.35	
\$30,001 to \$50,000	28.79	24.69	26.00	25.61	30.43	22.83	28.30	22.22	24.65	29.06	21.78	30.30	34.09	24.56	17.39	28.57	26.20	
\$50,001 to \$70,000	12.12	22.22	18.00	20.73	21.74	15.22	11.32	11.11	19.01	11.11	21.78	12.12	18.18	19.30	26.09	20.00	17.50	
\$70,001 to \$90,000	4.55	2.47	8.00	7.32	0.00	4.35	9.43	11.11	7.75	14.53	3.96	18.18	9.09	8.77	4.35	2.86	7.30	
Over \$90,000	9.09	7.41	13.00	4.88	8.70	6.52	13.21	0.00	11.97	11.97	9.90	9.09	13.64	7.02	0.00	2.86	8.08	
No Response	22.73	17.28	12.00	13.41	8.70	21.74	15.09	22.22	16.90	14.53	11.88	3.03	11.36	22.81	21.74	22.86	16.14	

Table 4. Demographic Characteristics (Continued)

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
AGE (%)																	
Under 16	0.00	0.00	1.00	0.00	0.00	0.00	1.89	0.00	0.00	0.85	0.00	0.00	2.27	0.00	0.00	0.00	0.38
16 to 25	1.52	8.64	3.00	8.54	0.00	8.70	9.43	0.00	6.34	7.69	9.90	3.03	13.64	3.51	4.35	5.71	5.88
26 to 45	27.27	24.69	22.00	18.29	21.74	31.52	22.64	27.78	21.13	34.19	23.76	27.27	31.82	21.05	13.04	17.14	24.08
46 to 65	45.45	40.74	51.00	42.68	47.83	39.13	43.40	50.00	45.77	45.30	34.65	42.42	36.36	35.09	47.83	40.00	42.98
Over 65	24.24	23.46	21.00	28.05	30.43	19.57	22.64	22.22	26.06	9.40	30.69	27.27	15.91	36.84	34.78	31.43	25.25
No Response	1.52	2.47	2.00	2.44	0.00	1.09	0.00	0.00	0.70	2.56	0.99	0.00	0.00	3.51	0.00	5.71	1.44
EDUCATION (%)																	
Did not finish high school	1.52	3.70	5.00	4.88	4.35	2.17	5.66	0.00	5.63	1.71	1.98	0.00	2.27	7.02	0.00	0.00	2.87
High school	30.30	22.22	17.00	29.27	30.43	27.17	22.64	38.89	16.20	23.93	21.78	15.15	22.73	22.81	30.43	20.00	24.43
Community/technical college	16.67	20.99	14.00	15.85	17.39	17.39	18.87	33.33	15.49	15.38	19.80	21.21	18.18	19.30	26.09	14.29	19.01
College/university	28.79	37.04	32.00	28.05	34.78	39.13	37.74	16.67	31.69	25.64	39.60	30.30	29.55	31.58	30.43	28.57	31.35
Post-graduate college/university	12.12	11.11	27.00	17.07	8.70	7.61	11.32	5.56	26.76	28.21	14.85	33.33	27.27	15.79	13.04	20.00	17.48
No Response	10.61	4.94	5.00	4.88	4.35	6.52	3.77	5.56	4.23	5.13	1.98	0.00	0.00	3.51	0.00	17.14	4.85

Table 5. Travel Characteristics

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
TRIP PURPOSE (%)																	
Business/work	24.24	11.11	21.00	21.95	17.39	26.09	7.55	5.56	21.13	14.53	22.77	6.06	9.09	19.30	13.04	14.29	15.94
Vacation/recreation	54.55	79.01	69.00	36.59	73.91	58.70	83.02	83.33	63.38	70.94	60.40	75.76	81.82	70.18	82.61	65.71	69.31
Shopping	6.06	0.00	1.00	24.39	0.00	3.26	0.00	0.00	1.41	0.00	1.98	3.03	0.00	1.75	4.35	5.71	3.31
Moving	6.06	6.17	1.00	2.44	0.00	4.35	3.77	0.00	7.04	9.40	3.96	3.03	0.00	5.26	0.00	2.86	3.46
Other	4.55	2.47	6.00	10.98	8.70	3.26	5.66	11.11	6.34	4.27	9.90	12.12	6.82	1.75	0.00	5.71	6.23
No Response	4.55	1.23	2.00	3.66	0.00	4.35	0.00	0.00	0.70	0.85	0.99	0.00	2.27	1.75	0.00	5.71	1.75
TRIP LENGTH (%)																	
Less than 25 miles	0.00	0.00	0.00	2.44	0.00	1.09	3.77	0.00	0.00	0.00	0.99	0.00	0.00	3.51	0.00	2.86	0.92
26 to 100 miles	4.55	0.00	0.00	2.44	4.35	4.35	0.00	0.00	0.00	1.71	0.00	3.03	0.00	0.00	4.35	5.71	1.91
101 to 250 miles	22.73	0.00	6.00	28.05	8.70	13.04	9.43	22.22	2.11	0.00	5.94	6.06	0.00	3.51	13.04	2.86	8.98
251 to 500 miles	15.15	2.47	5.00	30.49	13.04	14.13	9.43	11.11	7.75	4.27	11.88	9.09	4.55	5.26	17.39	0.00	10.06
501 to 750 miles	12.12	4.94	2.00	7.32	4.35	13.04	3.77	11.11	7.04	5.13	4.95	3.03	13.64	7.02	13.04	2.86	7.21
751 to 1000 miles	10.61	7.41	8.00	3.66	4.35	1.09	1.89	11.11	5.63	7.69	7.92	6.06	15.91	5.26	4.35	5.71	6.67
More than 1000 miles	33.33	82.72	79.00	24.39	65.22	52.17	71.70	44.44	76.76	80.34	68.32	72.73	65.91	71.93	47.83	80.00	63.55
No Response	1.52	2.47	0.00	1.22	0.00	1.09	0.00	0.00	0.70	0.85	0.00	0.00	0.00	3.51	0.00	0.00	0.71
TRIP LENGTH SO FAR (%)																	
Less than 25 miles	4.55	0.00	0.00	2.44	0.00	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	1.75	0.00	2.86	0.84
26 to 100 miles	28.79	0.00	5.00	26.83	21.74	15.22	15.09	16.67	7.75	2.56	7.92	9.09	0.00	3.51	8.70	5.71	10.91
101 to 250 miles	18.18	6.17	9.00	32.93	0.00	18.48	7.55	16.67	8.45	5.13	10.89	21.21	18.18	7.02	21.74	5.71	12.96
251 to 500 miles	12.12	3.70	5.00	7.32	8.70	8.70	3.77	22.22	8.45	8.55	13.86	6.06	15.91	12.28	17.39	5.71	9.98
501 to 750 miles	7.58	16.05	7.00	2.44	0.00	11.96	7.55	5.56	8.45	16.24	7.92	0.00	4.55	5.26	4.35	11.43	7.27
751 to 1000 miles	3.03	17.28	6.00	6.10	21.74	8.70	13.21	0.00	11.97	11.97	9.90	12.12	13.64	7.02	8.70	8.57	10.00
More than 1000 miles	21.21	55.56	65.00	19.51	47.83	35.87	49.06	38.89	53.52	52.14	46.53	51.52	47.73	61.40	30.43	57.14	45.83
No Response	4.55	1.23	3.00	2.44	0.00	1.09	1.89	0.00	1.41	3.42	2.97	0.00	0.00	1.75	8.70	2.86	2.21

Table 5. Travel Characteristics (Continued)

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide	
MILES DRIVEN PER YEAR																		
Average in 1000 miles	38.80	23.12	29.82	22.26	23.64	32.32	18.44	15.17	31.04	28.20	29.18	21.12	25.76	28.80	17.06	24.67	25.59	
TRIPS >100 MILES PER YEAR																		
Average	24.54	22.88	21.23	38.06	12.65	34.71	18.38	14.72	25.56	25.13	23.33	10.31	16.58	19.88	15.88	16.30	21.26	
VEHICLE TYPE (%)																		
Motorcycle	0.00	4.94	3.00	0.00	4.35	0.00	7.55	0.00	2.82	4.27	0.99	0.00	0.00	0.00	0.00	0.00	1.75	
Passenger car	39.39	41.98	48.00	37.80	47.83	45.65	54.72	38.89	40.85	39.32	42.57	39.39	59.09	45.61	30.43	28.57	42.51	
Pickup truck, van, sport utility	46.97	41.98	32.00	53.66	39.13	28.26	28.30	50.00	31.69	40.17	40.59	45.45	25.00	31.58	34.78	37.14	37.92	
Tractor trailer	6.06	2.47	7.00	1.22	4.35	10.87	0.00	0.00	9.86	7.69	9.90	3.03	4.55	7.02	0.00	8.57	5.16	
Bus	1.52	0.00	0.00	3.66	0.00	6.52	0.00	0.00	3.52	2.56	0.00	0.00	2.27	0.00	0.00	11.43	1.97	
Other	4.55	8.64	6.00	1.22	4.35	7.61	9.43	11.11	9.15	4.27	4.95	9.09	9.09	14.04	34.78	11.43	9.36	
No Response	1.52	0.00	4.00	2.44	0.00	1.09	0.00	0.00	2.11	1.71	0.99	3.03	0.00	1.75	0.00	2.86	1.34	
PARTY SIZE																		
Average	2.14	2.49	2.43	2.25	2.22	4.63	3.09	2.72	4.09	2.58	2.34	2.79	3.42	2.02	2.52	1.97	2.73	
PARTY SIZE <12 YEARS OLD																		
Average	0.29	0.32	0.22	0.18	0.18	0.22	0.34	0.39	0.13	0.35	0.27	0.31	0.84	0.07	0.00	0.06	0.26	

from this rest area location. Consistent statewide, the majority of survey respondents were married (73.53 percent statewide) and were between the ages of 46 and 65 (42.98 percent statewide). Most survey respondents were out-of-state visitors to Montana (61.20 percent statewide). Armington, Dearborn and Flowing Wells had a higher percentage of in-state residents completing surveys. Most survey respondents reported completing some college or university education (31.35 percent statewide) although there was sizeable variability by rest area location. Most survey respondents reported earning between \$30,001 and \$50,000 per household (26.20 percent statewide) with the second highest reported income bracket being between \$10,000 and \$30,000 per household (20.35 percent statewide).

Consistently statewide, the majority of respondents cited their trip purpose as vacation or recreation (69.31 percent statewide). Nearly 16 percent of respondents cited their trip purpose as business or work-related (15.94 percent statewide). With the exception of rest area visitors at Bridger, most were traveling on a trip in excess of 1000 miles (63.55 percent statewide) and most, with the exception of Armington and Bridger, were well into their trip (i.e., had traveled more than 1000 miles before stopping at this rest area) (45.83 percent statewide). The majority of survey respondents were traveling in passenger cars (42.51 percent statewide) although a sizeable number were traveling in pickup trucks, vans and sport utility vehicles (37.92 percent statewide). The average size of the traveling party was 2.73 with few people traveling with children under 12 years of age. Survey respondents reported driving, on average, 25,590 miles per year and taking, on average, 21.26 trips over 100 miles in length each year. These travel and demographic characteristics are consistent with the previous national survey findings.

3.1.2 Rest Area Usage

Not surprisingly, when asked about their primary reason for stopping at rest areas, the majority of respondents indicated “use toilet/change diaper” (50.61 percent statewide). Secondary activities while stopped at the rest area included stretching and walking (52.86 percent statewide), using the toilet or changing a diaper (34.11 percent statewide), disposing of trash (27.74 percent statewide) and using the drinking fountain (24.65 percent statewide). Specific survey results are summarized in Tables 6 and 7.

Table 6. Primary Purpose for Stopping

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
Allow children to play (%)	0.00	3.70	0.00	0.00	0.00	1.09	0.00	0.00	1.41	0.00	2.97	0.00	0.00	0.00	0.00	0.00	0.84
Change drivers (%)	1.52	3.70	3.00	0.00	4.35	3.26	0.00	0.00	2.82	0.00	3.96	0.00	4.55	1.75	0.00	0.00	2.06
Check/repair vehicle (%)	0.00	1.23	0.00	0.00	13.04	0.00	1.89	0.00	0.00	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.66
Dispose of trash (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Get travel information (%)	0.00	1.23	0.00	0.00	4.35	1.09	1.89	0.00	0.00	3.42	0.99	0.00	0.00	0.00	0.00	0.00	0.84
Rest/sleep (%)	7.58	4.94	5.00	0.00	0.00	4.35	1.89	0.00	4.23	1.71	2.97	0.00	0.00	7.02	0.00	0.00	3.19
Stretch/walk (%)	10.61	11.11	6.00	7.32	8.70	11.96	15.09	5.56	9.15	8.55	15.84	3.03	13.64	3.51	4.35	2.86	9.37
Use drinking fountain (%)	0.00	0.00	0.00	1.22	0.00	1.09	0.00	0.00	0.70	0.00	1.98	0.00	2.27	0.00	0.00	2.86	0.66
Use picnic area (%)	4.55	6.17	3.00	4.88	4.35	1.09	9.43	5.56	4.23	10.26	1.98	12.12	0.00	3.51	4.35	5.71	4.87
Use telephone (%)	0.00	2.47	2.00	0.00	0.00	2.17	0.00	5.56	0.00	0.85	0.99	3.03	2.27	1.75	4.35	0.00	1.22
Use toilet/change diaper (%)	63.64	41.98	56.00	58.54	30.43	57.61	50.94	33.33	51.41	42.74	47.52	36.36	52.27	49.12	56.52	57.14	50.61
Use vending machines (%)	1.52	1.23	0.00	0.00	0.00	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
Walk/water pets (%)	0.00	2.47	1.00	0.00	0.00	2.17	0.00	0.00	2.11	3.42	1.98	0.00	0.00	7.02	0.00	0.00	1.69
Other (%)	1.52	0.00	2.00	2.44	0.00	1.09	0.00	0.00	0.00	2.56	0.99	3.03	0.00	7.02	4.35	2.86	1.59
No Response (%)	9.09	19.75	22.00	25.61	34.78	10.87	18.87	50.00	23.94	26.50	15.84	42.42	25.00	19.30	26.09	28.57	21.93

Table 7. Secondary Activities While Stopped

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
Allow children to play (%)	6.06	12.35	11.00	12.20	21.74	4.35	9.43	22.22	12.68	16.24	10.89	18.18	13.64	12.28	0.00	2.86	11.34
Change drivers (%)	15.15	22.22	10.00	20.73	43.48	7.61	7.55	11.11	16.20	16.24	15.84	18.18	11.36	17.54	8.70	2.86	15.00
Check/repair vehicle (%)	7.58	18.52	15.00	9.76	17.39	11.96	9.43	22.22	14.08	17.09	15.84	3.03	15.91	17.54	17.39	5.71	13.78
Dispose of trash (%)	22.73	35.80	39.00	24.39	34.78	17.39	13.21	33.33	24.65	32.48	32.67	36.36	25.00	24.56	13.04	28.57	27.74
Get travel information (%)	9.09	14.81	13.00	7.32	26.09	3.26	9.43	11.11	15.49	17.09	10.89	15.15	4.55	12.28	13.04	5.71	11.72
Rest/sleep (%)	9.09	16.05	22.00	14.63	21.74	7.61	11.32	16.67	17.61	21.37	19.80	15.15	6.82	14.04	8.70	5.71	15.37
Stretch/walk (%)	60.61	61.73	62.00	43.90	56.52	35.87	54.72	66.67	61.97	56.41	49.50	63.64	36.36	31.58	56.52	48.57	52.86
Use drinking fountain (%)	27.27	25.93	29.00	26.83	26.09	15.22	26.42	33.33	30.28	23.08	24.75	39.39	18.18	8.77	13.04	25.71	24.65
Use picnic area (%)	6.06	11.11	13.00	12.20	26.09	2.17	7.55	16.67	16.20	14.53	4.95	18.18	4.55	8.77	17.39	5.71	10.78
Use telephone (%)	4.55	13.58	15.00	12.20	21.74	4.35	11.32	22.22	11.97	9.40	7.92	9.09	2.27	7.02	0.00	0.00	9.56
Use toilet/change diaper (%)	30.30	43.21	34.00	29.27	52.17	26.09	33.96	61.11	33.80	36.75	34.65	33.33	27.27	35.09	26.09	31.43	34.11
Use vending machines (%)	3.03	7.41	8.00	8.54	17.39	1.09	3.77	5.56	10.56	6.84	1.98	3.03	2.27	7.02	0.00	2.86	5.90
Walk/water pets (%)	16.67	16.05	10.00	9.76	21.74	5.43	9.43	22.22	11.97	11.97	8.91	15.15	11.36	15.79	8.70	5.71	11.62
Other (%)	0.00	0.00	0.00	9.76	4.35	0.00	0.00	0.00	3.52	0.00	0.00	9.09	2.27	7.02	8.70	5.71	2.44

3.1.3 Rest Area Conditions

Overall, most respondents felt that rest areas in Montana were “very good” (31.73 percent statewide). This overall satisfaction rating varied greatly, however, depending on location (see Figure 2). When asked to compare Montana’s rest areas to other rest areas outside of Montana, overall satisfaction ratings dropped from 31.73 to 27.06 percent rating them as “very good.” The proportion of respondents giving “poor” and “fair” ratings increased when asked to compare to what other states are providing (see Figure 3).

When asked about the level of satisfaction with the specific rest area facilities used, most respondents were “very” satisfied although the measure of this rating varied depending on both the facility or service in question and the location of the rest area. The average satisfaction ranking for each facility or service was determined using the following weighting scheme: “not at all” = 1, “somewhat” = 2 and “very” = 3. The rank order of rest area facilities on the basis of average satisfaction is provided below and in Table 8.

- change drivers (2.80)
- stretch/walk (2.76)
- check/repair vehicle (2.73)
- use picnic area (2.66)
- dispose of trash (2.66)
- use drinking fountain (2.66)
- rest/sleep (2.63)
- walk/water pets (2.60)
- use toilet/change diaper (2.58)
- get travel information (2.54)
- use telephone (2.53)
- allow children to play (2.49)
- other (2.46)
- use vending machines (1.80)

Tables 9 and 10 summarize the various satisfaction ratings for each rest area facility or service by site. According to this information, the following site improvements should be considered:

- improved facilities that allow children to play at Dearborn and Greycliff;
- improved travel information at Dearborn, Flowing Wells and Vandalia;
- improved resting/sleeping facilities at Culbertson;

Figure 2. Overall Rest Area Rating

Figure 3. Comparative Rest Area Rating

Table 8. Level of Satisfaction with Facilities Ranking

		Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
Allow children to play	Rank	11	6	10	10	8	14	1	7	7	13	10	12	12	13	13	11	12
	Avg.	2.75	2.75	2.55	2.30	2.20	1.75	3.00	2.50	2.39	2.32	2.52	2.33	2.33	2.00	0.00	2.00	2.49
Change drivers	Rank	7	1	4	5	4	5	7	8	1	2	5	6	7	1	1	1	1
	Avg.	2.85	2.89	2.78	2.65	2.75	2.86	2.75	2.50	2.70	2.79	2.81	2.83	2.75	2.90	3.00	3.00	2.80
Check/repair vehicle	Rank	9	13	7	6	6	3	5	9	6	3	6	1	1	5	2	10	3
	Avg.	2.80	2.27	2.67	2.63	2.50	2.91	2.80	2.50	2.40	2.65	2.78	3.00	3.00	2.40	3.00	2.50	2.73
Dispose of trash	Rank	5	10	6	7	7	9	8	10	5	6	8	7	2	3	3	7	5
	Avg.	2.87	2.66	2.69	2.60	2.38	2.63	2.71	2.33	2.46	2.61	2.73	2.83	3.00	2.57	3.00	2.90	2.66
Get travel information	Rank	8	9	12	11	9	11	13	12	10	8	9	13	11	9	4	12	10
	Avg.	2.83	2.71	2.54	2.17	2.17	2.50	2.30	1.50	2.18	2.58	2.59	2.20	2.50	2.29	3.00	2.00	2.54
Rest/sleep	Rank	2	11	5	12	10	6	3	4	3	7	11	14	9	2	5	2	7
	Avg.	2.92	2.52	2.77	2.08	2.00	2.73	2.92	2.67	2.49	2.59	2.47	1.80	2.67	2.63	3.00	3.00	2.63
Stretch/walk	Rank	4	4	2	3	1	7	2	1	2	4	4	4	6	6	6	6	2
	Avg.	2.89	2.82	2.87	2.75	2.96	2.73	2.92	2.92	2.50	2.64	2.87	2.98	2.79	2.39	3.00	2.94	2.76
Use drinking fountain	Rank	12	8	9	2	5	13	9	2	4	9	12	9	8	12	7	5	6
	Avg.	2.72	2.71	2.55	2.77	2.67	2.46	2.71	2.83	2.49	2.48	2.22	2.62	2.75	2.20	3.00	2.94	2.66
Use picnic area	Rank	1	7	8	1	2	1	11	5	8	5	1	5	13	8	8	3	4
	Avg.	3.00	2.72	2.64	2.80	2.83	3.00	2.65	2.67	2.29	2.63	2.90	2.92	2.00	2.35	3.00	3.00	2.66
Use telephone	Rank	10	3	13	13	12	4	10	6	12	11	3	8	14	7	9	14	11
	Avg.	2.80	2.86	2.52	2.00	1.80	2.88	2.67	2.63	2.00	2.45	2.88	2.67	2.00	2.38	3.00	0.00	2.53
Use toilet/change diaper	Rank	6	5	11	4	3	8	4	3	9	12	7	11	10	10	11	9	9
	Avg.	2.86	2.77	2.54	2.66	2.75	2.64	2.82	2.73	2.28	2.37	2.78	2.52	2.51	2.28	2.80	2.61	2.58
Use vending machines	Rank	13	12	14	14	13	12	12	13	14	14	13	2	3	14	14	13	14
	Avg.	2.00	2.50	2.00	1.43	1.50	2.50	2.50	1.00	1.73	1.88	1.00	3.00	3.00	1.50	0.00	2.00	1.80
Walk/water pets	Rank	3	2	3	8	11	10	6	11	11	10	2	10	4	4	10	4	8
	Avg.	2.91	2.88	2.85	2.38	2.00	2.55	2.80	2.25	2.17	2.46	2.89	2.60	3.00	2.49	3.00	3.00	2.60
Other	Rank	14	14	1	9	14	2	14	14	13	1	14	3	5	11	12	8	13
	Avg.	0.00	0.00	3.00	2.38	1.00	3.00	0.00	0.00	2.00	3.00	1.00	3.00	3.00	2.25	2.50	2.75	2.46

Table 9. Level of Satisfaction with Primary Use Facility

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
ALLOW CHILDREN TO PLAY (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11
Somewhat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	11.11
Very	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	77.78
CHANGE DRIVERS (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somewhat	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	9.09
Very	100.00	100.00	66.67	0.00	100.00	100.00	0.00	0.00	100.00	0.00	100.00	0.00	50.00	100.00	0.00	0.00	90.91
CHECK/REPAIR VEHICLE (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somewhat	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.28
Very	0.00	0.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	85.72
DISPOSE OF TRASH (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somewhat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Very	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GET TRAVEL INFORMATION (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somewhat	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00
Very	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	75.00	100.00	0.00	0.00	0.00	0.00	0.00	75.00
REST/SLEEP (%)																	
Not at all	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.94
Somewhat	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	50.00	50.00	66.67	0.00	0.00	0.00	0.00	0.00	20.59
Very	100.00	75.00	100.00	0.00	0.00	75.00	100.00	0.00	50.00	50.00	33.33	0.00	0.00	100.00	0.00	0.00	76.47
STRETCH/WALK (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	50.00	0.00	0.00	2.00
Somewhat	0.00	22.22	0.00	16.67	0.00	36.36	12.50	0.00	46.15	30.00	12.50	0.00	16.67	0.00	0.00	0.00	20.00
Very	100.00	77.78	100.00	83.33	100.00	63.64	87.50	100.00	46.15	70.00	87.50	100.00	83.33	50.00	100.00	100.00	78.00

Table 9. Level of Satisfaction with Primary Use Facility (Continued)

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
USE DRINKING FOUNTAIN (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00
Somewhat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.28
Very	0.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00	100.00	0.00	50.00	0.00	100.00	0.00	0.00	100.00	85.72
USE PICNIC AREA (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.85
Somewhat	0.00	0.00	33.33	0.00	0.00	0.00	20.00	0.00	16.67	8.33	0.00	0.00	0.00	50.00	0.00	0.00	7.69
Very	100.00	100.00	66.67	100.00	100.00	100.00	80.00	100.00	66.67	91.67	100.00	100.00	0.00	50.00	100.00	100.00	88.46
USE TELEPHONE (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69
Somewhat	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69
Very	0.00	100.00	50.00	0.00	0.00	100.00	0.00	100.00	0.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	84.62
USE TOILET/CHANGE DIAPER (%)																	
Not at all	0.00	2.94	8.93	2.17	0.00	5.66	0.00	0.00	19.18	10.00	2.08	16.67	17.39	10.71	0.00	15.00	7.81
Somewhat	7.14	14.71	41.07	26.09	0.00	22.64	7.41	16.67	41.10	44.00	29.17	16.67	39.13	42.86	23.08	30.00	29.00
Very	92.86	82.35	50.00	71.74	100.00	71.70	92.59	83.33	39.73	46.00	68.75	66.66	43.48	46.43	76.92	55.00	63.20
USE VENDING MACHINES (%)																	
Not at all	100.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Somewhat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00
Very	0.00	100.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00
WALK/WATER PETS (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somewhat	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	66.67	50.00	0.00	0.00	0.00	25.00	0.00	0.00	33.33
Very	0.00	100.00	100.00	0.00	0.00	50.00	0.00	0.00	33.33	50.00	0.00	0.00	0.00	75.00	0.00	0.00	66.67
OTHER (%)																	
Not at all	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	5.88
Somewhat	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	23.53
Very	0.00	0.00	100.00	50.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	100.00	0.00	25.00	100.00	100.00	70.59

Table 10. Level of Satisfaction with Secondary Use Facilities

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
ALLOW CHILDREN TO PLAY (%)																	
Not at all	0.00	0.00	0.00	30.00	20.00	0.00	0.0	0.00	44.44	5.26	18.18	16.67	0.00	42.86	0.00	0.00	15.70
Somewhat	25.00	50.00	45.45	10.00	40.00	50.00	0.0	50.00	33.33	57.89	27.27	33.33	66.67	14.29	0.00	100.00	38.02
Very	75.00	50.00	54.55	60.00	40.00	50.00	100.0	50.00	22.22	36.84	54.55	50.00	33.33	42.86	0.00	0.00	46.28
CHANGE DRIVERS (%)																	
Not at all	10.00	0.00	0.00	5.88	10.00	0.00	0.00	0.00	17.39	0.00	6.25	0.00	0.00	10.00	0.00	0.00	5.63
Somewhat	10.00	22.22	10.00	23.53	30.00	28.57	25.00	50.00	26.09	21.05	25.00	16.67	0.00	0.00	0.00	0.00	20.00
Very	80.00	77.78	90.00	70.59	60.00	71.43	75.00	50.00	56.52	78.95	68.75	83.33	100.00	90.00	100.00	100.00	74.38
CHECK/REPAIR VEHICLE (%)																	
Not at all	0.00	0.00	6.67	12.50	25.00	0.00	0.00	0.00	20.00	0.00	6.25	0.00	0.00	20.00	0.00	0.00	6.80
Somewhat	20.00	46.67	20.00	12.50	50.00	9.09	40.00	50.00	20.00	35.00	31.25	0.00	0.00	20.00	0.00	50.00	25.85
Very	80.00	53.33	73.33	75.00	25.00	90.91	60.00	50.00	60.00	65.00	62.50	100.00	100.00	60.00	100.00	50.00	67.35
DISPOSE OF TRASH (%)																	
Not at all	0.00	3.45	2.56	5.00	25.00	6.25	0.00	0.00	8.57	2.63	6.06	0.00	0.00	7.14	0.00	0.00	4.39
Somewhat	13.33	27.59	25.64	30.00	12.50	25.00	28.57	66.67	37.14	34.21	15.15	16.67	0.00	28.57	0.00	10.00	25.34
Very	86.67	68.97	71.79	65.00	62.50	68.75	71.43	33.33	54.29	63.16	78.79	83.33	100.00	64.29	100.00	90.00	70.27
GET TRAVEL INFORMATION (%)																	
Not at all	0.00	0.00	15.38	16.67	16.67	33.33	0.00	50.00	22.73	5.00	18.18	20.00	0.00	14.29	0.00	50.00	13.60
Somewhat	16.67	58.33	15.38	50.00	50.00	33.33	40.00	50.00	36.36	50.00	45.45	40.00	50.00	42.86	0.00	0.00	39.20
Very	83.33	41.67	69.23	33.33	33.33	33.33	60.00	0.00	40.91	45.00	36.36	40.00	50.00	42.86	100.00	50.00	47.20
REST/SLEEP (%)																	
Not at all	0.00	0.00	4.55	16.67	40.00	0.00	0.00	0.00	12.00	0.00	5.00	20.00	0.00	25.00	0.00	0.00	7.32
Somewhat	16.67	46.15	36.36	58.33	20.00	28.57	16.67	33.33	28.00	32.00	30.00	80.00	33.33	25.00	0.00	0.00	33.54
Very	83.33	53.85	59.09	25.00	40.00	71.43	83.33	66.67	60.00	68.00	65.00	0.00	66.67	50.00	100.00	100.00	59.15
STRETCH/WALK (%)																	
Not at all	2.50	0.00	1.61	2.78	0.00	3.03	0.00	0.00	2.27	3.03	0.00	0.00	0.00	0.00	0.00	0.00	1.42
Somewhat	17.50	14.00	22.58	27.78	7.69	12.12	3.45	16.67	34.09	36.36	14.00	4.76	25.00	22.22	0.00	11.76	20.92
Very	80.00	86.00	75.81	69.44	92.31	84.85	96.55	83.33	63.64	60.61	86.00	95.24	75.00	77.78	100.00	88.24	77.66

Table 10. Level of Satisfaction with Secondary Use Facilities (Continued)

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
USE DRINKING FOUNTAIN (%)																	
Not at all	5.56	0.00	3.45	0.00	0.00	42.86	0.00	0.00	39.53	7.41	20.00	15.38	0.00	20.00	0.00	0.00	13.31
Somewhat	16.67	28.57	37.93	45.45	33.33	21.43	28.57	16.67	23.26	37.04	16.00	7.69	50.00	40.00	0.00	11.11	27.38
Very	77.78	71.43	58.62	54.55	66.67	35.71	71.43	83.33	37.21	55.56	64.00	76.92	50.00	40.00	100.00	88.89	59.32
USE PICNIC AREA (%)																	
Not at all	0.00	11.11	0.00	10.00	16.67	0.00	0.00	0.00	30.43	5.88	0.00	0.00	0.00	20.00	0.00	0.00	10.43
Somewhat	0.00	33.33	38.46	20.00	0.00	0.00	50.00	66.67	30.43	52.94	20.00	16.67	100.00	40.00	0.00	0.00	31.30
Very	100.00	55.56	61.54	70.00	83.33	100.00	50.00	33.33	39.13	41.18	80.00	83.33	0.00	40.00	100.00	100.00	58.26
USE TELEPHONE (%)																	
Not at all	5.00	0.00	0.00	30.00	60.00	0.00	0.00	25.00	29.41	36.36	12.50	33.33	100.00	50.00	0.00	0.00	20.59
Somewhat	10.00	27.27	46.67	40.00	0.00	25.00	33.33	25.00	41.18	36.36	0.00	0.00	0.00	25.00	0.00	0.00	29.41
Very	85.00	72.73	53.33	30.00	40.00	75.00	66.67	50.00	29.41	27.27	87.50	66.67	0.00	25.00	0.00	0.00	50.00
USE TOILET/CHANGE DIAPER (%)																	
Not at all	5.00	2.86	5.88	0.00	8.33	4.17	5.56	9.09	16.67	16.28	0.00	18.18	0.00	20.00	0.00	0.00	7.97
Somewhat	10.00	20.00	20.59	37.50	33.33	29.17	16.67	18.18	31.25	30.23	11.43	9.09	25.00	40.00	16.67	18.18	24.18
Very	85.00	77.14	73.53	62.50	58.33	66.67	77.78	72.73	52.08	53.49	88.57	72.73	75.00	40.00	83.33	81.82	67.86
USE VENDING MACHINES (%)																	
Not at all	0.00	16.67	25.00	57.14	75.00	0.00	0.00	100.00	46.67	37.50	100.00	0.00	0.00	50.00	0.00	0.00	39.68
Somewhat	0.00	66.67	50.00	42.86	0.00	0.00	50.00	0.00	33.33	37.50	0.00	0.00	0.00	50.00	0.00	100.00	36.51
Very	100.00	16.67	25.00	0.00	25.00	100.00	50.00	0.00	20.00	25.00	0.00	100.00	100.00	0.00	0.00	0.00	23.81
WALK/WATER PETS (%)																	
Not at all	0.00	0.00	0.00	25.00	40.00	0.00	0.00	25.00	35.29	0.00	0.00	20.00	0.00	22.22	0.00	0.00	11.29
Somewhat	9.09	23.08	30.00	12.50	20.00	40.00	20.00	25.00	29.41	57.14	11.11	0.00	0.00	33.33	0.00	0.00	24.19
Very	90.91	76.92	70.00	62.50	40.00	60.00	80.00	50.00	35.29	42.86	88.89	80.00	100.00	44.44	100.00	100.00	64.52
OTHER (%)																	
Not at all	0.00	0.00	0.00	25.00	100.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	25.00	50.00	0.00	26.92
Somewhat	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	25.00	0.00	50.00	19.23
Very	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	100.00	100.00	50.00	50.00	50.00	53.85

- improved stretching/walking areas at Sweetgrass;
- improved drinking fountain facilities at Dearborn, Greycliff and Hysham;
- improved telephone facilities at Culbertson, Homestake, Red Rock and Sweetgrass;
- available vending machines at Armington, Bridger, Culbertson, Dearborn, Flowing Wells, Greycliff, Homestake, Hysham and Sweetgrass and
- improved pet walking/watering facilities at Culbertson and Greycliff.

Although general satisfaction ratings were positive, many respondents cited specific criticisms related to (1) the cleanliness of the rest area facilities, (2) the operability of the rest area features and (3) the availability and limitations of rest area amenities. Table 11 summarizes the specific areas of improvement recommended by site.

Note that at 12 of the 16 rest area sites included in this survey, criticisms were expressed by rest area users related to the cleanliness of the restroom facilities. Further, at 13 of the 16 rest area sites, rest area users complained of some facility being inoperable. Typically, these facilities included the toilet or urinal, the sink, the drinking fountain or the telephone. Six of the 16 sites had more than one facility out of service. Rest area users at Emigrant reported inoperability of four facilities (i.e., toilet/urinal, sink, drinking fountain and telephone). Rest area users at Armington and Dearborn reported inoperability of three of the facilities (i.e., toilet/urinal, sink and drinking fountain). At 14 of the 16 rest area sites, criticisms were expressed related to a lack of supplies in the restroom. Supplies typically reported as missing included toilet paper, toilet seat covers, soap, and paper towels. These criticisms, related to cleanliness, inoperability and the availability of supplies, in combination, speak to the need to improve the routine maintenance of rest areas statewide.

With respect to rest area design and the amenities provided, rest area users provided other valuable comments. Many expressed a desire to have hot water available in the restrooms and cited an insufficient number of restroom stalls at Armington, Emigrant, Sweetgrass and Vandalia. Further, RV dump stations were specifically requested at Homestake and Troy.

Table 11. Specific Areas for Improvement

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia
CLEANLINESS																
Restroom Facilities	x		x	x		x	x	x	x	x	x	x		x		x
OPERABILITY																
Toilet/Urinal	x					x	x			x				x		
Sink	x		x			x	x				x	x				
Drinking Fountain	x		x	x		x	x		x							x
Telephone							x	x		x					x	x
AVAILABILITY																
Toilet Paper					x				x					x		
Toilet Seat Covers			x			x		x								
Soap		x	x			x	x	x		x	x	x	x	x	x	x
Paper Towels					x	x	x		x	x	x			x		
Hot Water			x					x		x				x		
Sufficient Restroom Stalls	x						x							x		x
RV Dump Stations										x					x	

When asked to recommend action to be taken at the respective rest areas, most respondents recommended either leaving the rest area as is or improving it (55.79 percent and 30.07 percent statewide, respectively) (see Figure 4). Surprisingly, more respondents did not select “repaired” although the majority of their comments related to inoperable facilities.

When asked whether or not they would be willing to pay a fee to finance rest area improvements, 36.26 percent statewide responded affirmatively. In some locations, such as Armington, the majority of responses were affirmative (51.52 percent). One would have expected an overwhelmingly majority of negative responses to this question (see Figure 5). When asked how much they would be willing to pay per rest area visit, most reported a willingness to pay somewhere between \$0.25 to \$1.00 (17.43 percent statewide) (see Figure 6). Many respondents chose not to respond to this question.

3.1.4 Rest Area Amenities

Similar to determining rest area facility and services satisfaction rankings, the average amenity importance ranking was determined using the following weighting scheme: “not at all” = 1, “somewhat” = 2 and “very” = 3. As summarized in Table 12, amenities in rank order of importance are as follows:

- trashcans (2.61)
- parking lot/pathway lighting (2.59)
- year-round access to restroom facilities (2.54)
- sufficient restroom stalls (2.54)
- year-round access to parking (2.51)
- drinking fountains (2.46)
- sufficient automobile parking (2.46)
- paper towels (2.39)
- weather, road condition, traffic condition information (2.35)
- sufficient telephones (2.33)
- building/shelter design (2.31)

Figure 4. Rest Area Recommendations

Figure 5. Rest Area Fee Endorsement

Figure 6. Rest Area Fee Outlay

Table 12. Amenity Importance Ranking

		Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
AESTHETICS																		
Building/Shelter Design	Rank	17	11	10	7	2	12	7	12	12	15	12	8	12	14	14	11	11
	Avg.	2.17	2.33	2.36	2.40	2.59	2.25	2.40	2.12	2.32	2.34	2.21	2.48	2.25	2.16	2.26	2.31	2.31
Grounds/Landscaping	Rank	14	18	8	9	4	10	5	17	14	14	13	12	9	13	13	15	12
	Avg.	2.23	2.13	2.42	2.36	2.50	2.28	2.42	2.00	2.28	2.35	2.21	2.36	2.34	2.18	2.30	2.20	2.29
Trashcans	Rank	2	1	1	1	1	1	3	2	1	5	1	7	2	1	1	3	1
	Avg.	2.68	2.60	2.69	2.66	2.91	2.60	2.43	2.71	2.57	2.62	2.55	2.55	2.68	2.53	2.78	2.54	2.61
CHILDREN'S FACILITIES																		
Playground Equipment	Rank	33	32	31	30	31	31	32	28	32	32	31	27	29	32	32	31	32
	Avg.	1.45	1.59	1.59	1.60	1.45	1.60	1.55	1.65	1.55	1.61	1.57	1.76	1.68	1.42	1.39	1.60	1.57
CONCESSIONS																		
Free Coffee Or Snacks Provided By Various Service Organizations	Rank	28	29	26	32	33	29	29	21	23	26	29	20	28	30	24	27	28
	Avg.	1.65	1.71	1.79	1.54	1.41	1.64	1.60	1.88	1.88	1.85	1.65	2.09	1.70	1.54	1.78	1.71	1.72
Vending Machines With Cigarettes And Toiletries	Rank	34	34	34	35	35	33	34	34	33	34	34	34	33	33	35	34	34
	Avg.	1.41	1.48	1.43	1.30	1.23	1.48	1.45	1.35	1.50	1.50	1.47	1.42	1.48	1.40	1.17	1.40	1.44
Vending Machines With Newspapers And Maps	Rank	30	25	29	31	26	30	26	23	28	29	27	31	22	25	27	29	30
	Avg.	1.59	1.85	1.72	1.56	1.64	1.61	1.60	1.82	1.77	1.79	1.73	1.67	1.86	1.77	1.61	1.69	1.71
Vending Machines With Snacks And Beverages	Rank	24	19	21	24	30	24	20	29	21	24	21	26	20	21	33	24	23
	Avg.	1.85	2.01	1.97	1.75	1.45	1.77	2.00	1.59	1.97	1.91	1.90	1.88	1.98	1.89	1.39	1.80	1.88
DINING AREAS/COOKING FACILITIES																		
Benches	Rank	18	12	18	13	18	18	13	11	18	16	16	17	13	18	15	22	18
	Avg.	2.05	2.31	2.20	2.19	1.95	2.05	2.23	2.18	2.14	2.31	2.10	2.24	2.25	2.05	2.26	1.94	2.17
Cooking Grills	Rank	31	30	32	28	29	32	27	24	31	31	33	32	32	31	30	32	31
	Avg.	1.56	1.64	1.51	1.66	1.50	1.53	1.60	1.76	1.62	1.63	1.54	1.55	1.57	1.53	1.48	1.51	1.58
Drinking Fountains	Rank	9	4	7	6	7	8	6	9	5	3	7	1	6	12	2	6	6
	Avg.	2.33	2.53	2.51	2.49	2.32	2.35	2.42	2.18	2.49	2.63	2.38	2.73	2.41	2.21	2.78	2.49	2.46
Open Picnic Areas	Rank	19	20	19	19	19	17	15	20	19	19	20	19	19	22	21	18	19
	Avg.	2.02	2.01	2.09	1.98	1.91	2.09	2.17	1.94	2.13	2.24	1.94	2.12	2.02	1.86	2.00	2.09	2.06
Sheltered Picnic Areas	Rank	15	13	13	15	8	15	11	7	11	10	15	9	15	15	7	10	13
	Avg.	2.18	2.31	2.30	2.14	2.27	2.21	2.32	2.24	2.35	2.49	2.15	2.48	2.20	2.14	2.57	2.37	2.29

Table 12. Amenity Importance Ranking (Continued)

		Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
PARKING																		
Bicycle Racks	Rank	35	35	35	34	34	35	33	35	35	35	35	33	34	35	34	35	35
	Avg.	1.30	1.26	1.36	1.35	1.41	1.27	1.53	1.06	1.33	1.41	1.31	1.52	1.36	1.21	1.30	1.31	1.34
Overnight Parking	Rank	20	26	23	25	20	20	21	22	25	22	22	24	25	23	19	20	22
	Avg.	1.98	1.80	1.89	1.73	1.91	1.93	1.94	1.82	1.85	1.94	1.87	1.94	1.82	1.86	2.09	1.97	1.88
Sufficient Automobile Parking	Rank	8	9	5	10	3	6	2	8	8	6	6	2	8	11	6	8	7
	Avg.	2.41	2.38	2.58	2.33	2.55	2.41	2.49	2.24	2.48	2.62	2.42	2.64	2.34	2.25	2.61	2.46	2.46
Sufficient Truck/RV Parking	Rank	10	16	16	18	10	13	12	18	15	12	9	14	18	19	4	14	14
	Avg.	2.32	2.19	2.24	2.00	2.23	2.22	2.25	1.94	2.24	2.43	2.32	2.33	2.07	2.04	2.65	2.23	2.24
Year-round Access	Rank	3	5	2	4	5	3	8	10	6	7	3	5	7	10	9	2	5
	Avg.	2.68	2.51	2.65	2.56	2.36	2.52	2.40	2.18	2.48	2.59	2.50	2.58	2.39	2.28	2.39	2.57	2.51
PET FACILITIES																		
Pet Exercise Area	Rank	21	27	22	21	22	21	24	25	26	20	23	21	21	20	23	21	21
	Avg.	1.98	1.80	1.95	1.80	1.82	1.90	1.68	1.76	1.85	2.06	1.84	2.06	1.89	1.97	1.96	1.94	1.90
Pet Watering Troughs	Rank	25	28	28	27	24	23	25	27	29	23	30	25	27	26	25	25	27
	Avg.	1.80	1.73	1.73	1.68	1.73	1.82	1.66	1.65	1.77	1.91	1.58	1.91	1.75	1.70	1.65	1.77	1.75
RESTROOM FACILITIES																		
Diaper Changing Table	Rank	22	31	24	23	23	26	28	30	27	27	25	22	24	29	31	28	25
	Avg.	1.92	1.61	1.85	1.78	1.77	1.73	1.60	1.59	1.84	1.85	1.75	2.00	1.82	1.63	1.43	1.69	1.77
Hot Water	Rank	13	14	17	17	14	19	18	13	16	13	18	18	16	8	16	12	17
	Avg.	2.27	2.26	2.23	2.11	2.14	2.01	2.15	2.12	2.19	2.37	2.05	2.21	2.20	2.32	2.26	2.26	2.20
Mirrors	Rank	11	17	14	11	16	16	19	15	17	17	17	15	11	9	18	13	16
	Avg.	2.30	2.14	2.29	2.31	2.05	2.11	2.15	2.06	2.17	2.28	2.09	2.27	2.25	2.30	2.13	2.26	2.21
Paper Towels	Rank	6	10	11	8	15	11	9	3	7	11	11	11	5	4	5	7	8
	Avg.	2.47	2.34	2.35	2.40	2.09	2.25	2.36	2.35	2.48	2.43	2.28	2.39	2.50	2.39	2.65	2.46	2.39
RV Dump Stations	Rank	26	24	30	29	27	25	30	19	30	30	28	29	31	28	20	23	29
	Avg.	1.76	1.86	1.71	1.64	1.64	1.75	1.58	1.94	1.70	1.71	1.67	1.70	1.61	1.65	2.04	1.91	1.72
Showers	Rank	32	33	33	33	32	34	35	32	34	33	32	35	35	34	26	33	33
	Avg.	1.52	1.59	1.47	1.41	1.45	1.47	1.45	1.41	1.43	1.60	1.55	1.42	1.34	1.28	1.65	1.49	1.48
Sufficient Restroom Stalls	Rank	4	3	6	5	13	5	4	4	3	1	5	4	3	3	3	5	4
	Avg.	2.59	2.58	2.56	2.51	2.18	2.48	2.43	2.35	2.55	2.73	2.47	2.61	2.55	2.44	2.70	2.49	2.54
Year-round Access	Rank	1	6	3	3	12	2	10	5	4	2	4	6	4	5	12	4	3
	Avg.	2.80	2.51	2.63	2.63	2.23	2.53	2.34	2.35	2.50	2.67	2.49	2.58	2.55	2.35	2.35	2.54	2.54

Table 12. Amenity Importance Ranking (Continued)

		Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide	
SAFETY/ASSISTANCE																			
Parking Lot/Pathway Lighting	Rank	5	2	4	2	6	4	1	1	2	4	2	3	1	2	8	1	2	
	Avg.	2.59	2.60	2.61	2.66	2.36	2.51	2.66	2.76	2.56	2.63	2.54	2.64	2.70	2.53	2.48	2.74	2.59	
Rest Area Attendant	Rank	27	22	25	22	28	27	31	31	24	25	24	28	26	24	29	26	24	
	Avg.	1.76	1.90	1.82	1.80	1.55	1.68	1.58	1.47	1.88	1.86	1.78	1.73	1.77	1.81	1.52	1.71	1.78	
Sufficient Telephones	Rank	7	7	15	12	17	9	14	6	9	9	10	13	14	7	17	17	10	
	Avg.	2.42	2.39	2.28	2.21	2.00	2.28	2.19	2.35	2.41	2.54	2.30	2.36	2.23	2.32	2.22	2.14	2.33	
TRAVEL/AREA INFORMATION																			
Historical, Interpretive, Points Of Interest Information	Rank	16	15	12	16	9	14	16	16	13	18	14	16	17	17	10	16	15	
	Avg.	2.18	2.25	2.33	2.14	2.27	2.21	2.17	2.06	2.29	2.26	2.20	2.27	2.09	2.09	2.35	2.20	2.22	
Service (Gas, Food, Hotel) Location Information	Rank	23	21	20	20	21	22	22	26	20	21	19	23	23	16	22	19	20	
	Avg.	1.88	2.00	2.00	1.84	1.82	1.89	1.92	1.76	2.08	2.05	1.99	1.97	1.84	2.12	1.96	2.03	1.97	
Visitor Center With Attendant	Rank	29	23	27	26	25	28	23	33	22	28	26	30	30	27	28	30	26	
	Avg.	1.61	1.89	1.78	1.73	1.68	1.68	1.72	1.35	1.91	1.82	1.75	1.70	1.68	1.70	1.57	1.66	1.75	
Weather, Road Condition, Traffic Condition Information	Rank	12	8	9	14	11	7	17	14	10	8	8	10	10	6	11	9	9	
	Avg.	2.29	2.39	2.39	2.16	2.23	2.37	2.17	2.12	2.38	2.54	2.33	2.48	2.30	2.35	2.35	2.43	2.35	

- grounds/landscaping (2.29)
- sheltered picnic areas (2.29)
- sufficient truck/RV parking (2.24)
- historical, interpretive, points of interest information (2.22)
- mirrors (2.21)
- hot water (2.20)
- benches (2.17)
- open picnic areas (2.06)
- service (gas, food, hotel) location information (1.97)
- pet exercise area (1.90)
- overnight parking (1.88)
- vending machines with snacks and beverages (1.88)
- rest area attendant (1.78)
- diaper changing table (1.77)
- visitor center with attendant (1.75)
- pet watering troughs (1.75)
- free coffee or snacks provided by various service organizations (1.72)
- RV dump stations (1.72)
- vending machines with newspapers and maps (1.71)
- cooking grills (1.58)
- playground equipment (1.57)
- showers (1.48)
- vending machines with cigarettes and toiletries (1.44)
- bicycle racks (1.34)

Variation in amenity importance rankings was noted from site to site although for the most part, the results were consistent. With respect to rest area aesthetics, trashcans were overwhelmingly rated with high importance at all sites. Building/shelter design and grounds/landscaping were rated as “very” and “somewhat important” at all sites although a significant proportion of respondents at Flowing Wells felt this to be “not at all” important (see Table 13).

Children’s facilities such as playground equipment were rated consistently as “not at all” important at all rest area sites (see Table 14).

Surprisingly, free coffee or snacks provided by various service organizations was rated as “not at all” important at nearly all sites; respondents at Quartz Flats and Vandalia viewed these concession as “somewhat” important. Vending machines offering cigarettes and toiletries were rated “not at all” important at all rest area sites. Vending machines offering other products such as newspapers and maps or snacks and beverages were also not rated with high importance. Respondents placed more importance on the availability of snacks and beverages, but support was still not overwhelming (see Table 15). In contrast, vending machines were specifically requested at 10 of the 16 rest area sites in comments made by survey respondents.

With respect to dining areas and cooking facilities, sheltered picnic areas are favored over open picnic areas. Drinking fountains are of the greatest importance consistently at all sites. Cooking grills were consistently ranked as “not at all” important at all sites (see Table 16).

The availability of bicycle racks and overnight parking were consistently ranked as “not at all” important across all sites with the exception of Culbertson and Troy. At these locations, respondents ranked the availability of overnight parking as “somewhat” important and “very” important, respectively. Sufficient automobile parking and sufficient truck and RV parking were consistently ranked as “very” important at all sites with the exception of Bridger and Flowing Wells. At Bridger, an equal number of respondents ranked the importance of sufficient truck and RV parking as “not at all” and “very.” At Flowing Wells, most respondents ranked sufficient truck and RV parking as “not at all” important. Year-round access to parking was unanimously ranked as “very” important across all sites (see Table 17).

Table 13. Importance of Rest Area Aesthetics

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
BUILDING/SHELTER DESIGN (%)																	
Not at all	21.21	13.75	11.00	15.00	0.00	16.30	13.21	29.41	12.77	7.76	20.00	6.06	9.09	21.05	17.39	11.43	13.96
Somewhat	40.91	40.00	42.00	30.00	40.91	42.39	33.96	29.41	42.55	50.00	39.00	39.39	56.82	42.11	39.13	45.71	41.51
Very	37.88	46.25	47.00	55.00	59.09	41.30	52.83	41.18	44.68	42.24	41.00	54.55	34.09	36.84	43.48	42.86	44.53
GROUNDS/LANDSCAPING (%)																	
Not at all	16.67	21.25	6.00	13.75	9.09	14.13	11.32	35.29	12.77	7.76	17.00	15.15	9.09	21.05	13.04	17.14	13.77
Somewhat	43.94	45.00	46.00	36.25	31.82	43.48	35.85	29.41	46.10	49.14	45.00	33.33	47.73	40.35	43.48	45.71	43.30
Very	39.39	33.75	48.00	50.00	59.09	42.39	52.83	35.29	41.13	43.10	38.00	51.52	43.18	38.60	43.48	37.14	42.83
TRASHCANS (%)																	
Not at all	7.58	8.75	5.00	7.50	0.00	11.96	11.32	11.76	8.51	5.98	11.00	15.15	2.27	14.04	4.35	8.57	8.49
Somewhat	16.67	22.50	21.00	18.75	9.09	16.30	33.96	5.88	26.24	23.08	23.00	15.15	27.27	19.30	13.04	28.57	21.60
Very	75.76	68.75	74.00	73.75	90.91	71.74	54.72	82.35	65.25	70.09	66.00	69.70	70.45	66.67	82.61	62.86	69.81

Table 14. Importance of Rest Area Children's Facilities

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
PLAYGROUND EQUIPMENT (%)																	
Not at all	59.09	50.00	52.00	51.25	63.64	52.17	58.49	47.06	56.74	50.00	53.00	42.42	45.45	66.67	65.22	54.29	53.82
Somewhat	36.36	41.25	37.00	37.50	27.27	35.87	28.30	41.18	31.21	38.79	37.00	39.39	40.91	24.56	30.43	31.43	35.32
Very	4.55	8.75	11.00	11.25	9.09	11.96	13.21	11.76	12.06	11.21	10.00	18.18	13.64	8.77	4.35	14.29	10.86

Table 15. Importance of Rest Area Concessions

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
FREE COFFEE OR SNACKS PROVIDED BY VARIOUS SERVICE ORGANIZATIONS (%)																	
Not at all	50.00	46.25	46.00	61.25	63.64	48.91	54.72	47.06	39.72	38.79	53.00	21.21	45.45	59.65	47.83	37.14	47.21
Somewhat	34.85	36.25	29.00	23.75	31.82	38.04	30.19	17.65	32.62	37.07	29.00	48.48	38.64	26.32	26.09	54.29	33.24
Very	15.15	17.50	25.00	15.00	4.55	13.04	15.09	35.29	27.66	24.14	18.00	30.30	15.91	14.04	26.09	8.57	19.55
VENDING MACHINES WITH CIGARETTES AND TOILETRIES (%)																	
Not at all	66.67	63.75	69.00	77.50	77.27	66.30	66.04	76.47	58.87	63.79	61.00	69.70	65.91	64.91	86.96	71.43	66.48
Somewhat	25.76	25.00	19.00	15.00	22.73	19.57	22.64	11.76	32.62	22.41	31.00	18.18	20.45	29.82	8.70	17.14	23.42
Very	7.58	11.25	12.00	7.50	0.00	14.13	11.32	11.76	8.51	13.79	8.00	12.12	13.64	5.26	4.35	11.43	10.10
VENDING MACHINES WITH NEWSPAPERS AND MAPS (%)																	
Not at all	51.52	40.00	46.00	52.50	45.45	51.09	50.94	52.94	36.17	40.52	42.00	54.55	34.09	43.86	47.83	45.71	44.57
Somewhat	33.33	35.00	36.00	38.75	45.45	36.96	37.74	11.76	50.35	39.66	40.00	24.24	45.45	35.09	43.48	40.00	38.90
Very	13.64	25.00	18.00	8.75	9.09	11.96	11.32	35.29	13.48	19.83	17.00	21.21	20.45	21.05	8.70	14.29	16.34
VENDING MACHINES WITH SNACKS AND BEVERAGES (%)																	
Not at all	36.36	30.00	33.00	43.75	59.09	44.57	28.30	58.82	31.91	35.34	35.00	42.42	29.55	29.82	60.87	34.29	36.54
Somewhat	42.42	38.75	37.00	37.50	36.36	33.70	43.40	23.53	39.01	37.93	40.00	27.27	43.18	50.88	39.13	51.43	39.19
Very	21.21	31.25	30.00	18.75	4.55	21.74	28.30	17.65	29.08	26.72	25.00	30.30	27.27	19.30	0.00	14.29	24.27

Table 16. Importance of Rest Area Dining Areas/Cooking Facilities

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide	
BENCHES (%)																		
Not at all	31.82	20.00	24.00	23.75	36.36	27.17	24.53	35.29	26.24	18.97	32.00	27.27	15.91	33.33	21.74	34.29	26.06	
Somewhat	31.82	28.75	29.00	33.75	31.82	40.22	28.30	11.76	33.33	31.03	26.00	21.21	43.18	28.07	30.43	37.14	31.35	
Very	36.36	51.25	46.00	42.50	31.82	32.61	47.17	52.94	40.43	50.00	42.00	51.52	40.91	38.60	47.83	28.57	42.59	
COOKING GRILLS (%)																		
Not at all	51.52	56.25	58.00	51.25	54.55	57.61	56.60	52.94	53.90	53.45	59.00	57.58	54.55	61.40	65.22	60.00	56.00	
Somewhat	36.36	23.75	30.00	31.25	40.91	31.52	26.42	17.65	30.50	30.17	28.00	30.30	34.09	24.56	21.74	28.57	29.56	
Very	10.61	20.00	11.00	17.50	4.55	10.87	16.98	29.41	15.60	16.38	13.00	12.12	11.36	14.04	13.04	11.43	14.16	
DRINKING FOUNTAINS (%)																		
Not at all	19.70	16.25	16.00	15.00	22.73	20.65	18.87	23.53	15.60	11.21	19.00	6.06	22.73	26.32	4.35	11.43	16.81	
Somewhat	27.27	15.00	17.00	21.25	22.73	23.91	20.75	35.29	19.86	14.66	24.00	15.15	13.64	26.32	13.04	28.57	20.40	
Very	53.03	68.75	67.00	63.75	54.55	55.43	60.38	41.18	64.54	74.14	57.00	78.79	63.64	47.37	82.61	60.00	62.80	
OPEN PICNIC AREAS (%)																		
Not at all	30.30	35.00	21.00	30.00	31.82	26.09	24.53	41.18	23.40	18.97	36.00	27.27	29.55	42.11	26.09	28.57	28.05	
Somewhat	37.88	28.75	46.00	42.50	45.45	39.13	33.96	23.53	40.43	37.93	34.00	33.33	38.64	29.82	47.83	34.29	37.68	
Very	31.82	36.25	32.00	27.50	22.73	34.78	41.51	35.29	36.17	43.10	30.00	39.39	31.82	28.07	26.09	37.14	34.18	
SHELTERED PICNIC AREAS (%)																		
Not at all	22.73	17.50	20.00	23.75	22.73	20.65	16.98	29.41	16.31	12.93	30.00	12.12	25.00	26.32	4.35	11.43	19.74	
Somewhat	36.36	26.25	30.00	38.75	27.27	38.04	33.96	17.65	32.62	25.00	25.00	27.27	29.55	33.33	34.78	40.00	31.26	
Very	40.91	53.75	50.00	37.50	50.00	41.30	49.06	52.94	51.06	62.07	45.00	60.61	45.45	40.35	60.87	48.57	48.82	

Table 17. Importance of Rest Area Parking

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
BICYCLE RACKS (%)																	
Not at all	75.76	80.00	72.00	71.25	63.64	76.09	58.49	94.12	71.63	70.69	74.00	60.61	72.73	82.46	78.26	80.00	73.28
Somewhat	18.18	13.75	20.00	22.50	31.82	20.65	30.19	5.88	23.40	18.10	21.00	27.27	18.18	14.04	13.04	8.57	19.83
Very	6.06	6.25	8.00	6.25	4.55	3.26	11.32	0.00	4.96	11.21	5.00	12.12	9.09	3.51	8.70	11.43	6.89
OVERNIGHT PARKING (%)																	
Not at all	37.88	45.00	40.00	51.25	27.27	36.96	37.74	41.18	44.68	41.38	40.00	42.42	43.18	43.86	34.78	40.00	41.55
Somewhat	25.76	26.25	28.00	25.00	40.91	32.61	30.19	35.29	25.53	23.28	33.00	21.21	31.82	26.32	21.74	22.86	27.57
Very	36.36	27.50	31.00	23.75	27.27	30.43	32.08	23.53	29.79	35.34	27.00	36.36	25.00	29.82	43.48	37.14	30.59
SUFFICIENT AUTOMOBILE PARKING (%)																	
Not at all	19.70	22.50	12.00	22.50	9.09	15.22	9.43	35.29	14.89	9.48	23.00	9.09	22.73	28.07	8.70	20.00	17.09
Somewhat	19.70	17.50	18.00	22.50	27.27	28.26	32.08	5.88	22.70	18.97	12.00	18.18	20.45	19.30	21.74	14.29	20.30
Very	60.61	60.00	70.00	55.00	63.64	56.52	58.49	58.82	62.41	71.55	65.00	72.73	56.82	52.63	69.57	65.71	62.61
SUFFICIENT TRUCK/RV PARKING (%)																	
Not at all	27.27	30.00	28.00	37.50	31.82	27.17	26.42	47.06	25.53	18.10	23.00	27.27	34.09	40.35	8.70	31.43	27.76
Somewhat	13.64	21.25	20.00	25.00	13.64	23.91	22.64	11.76	24.82	20.69	22.00	12.12	25.00	15.79	17.39	14.29	20.68
Very	59.09	48.75	52.00	37.50	54.55	48.91	50.94	41.18	49.65	61.21	55.00	60.61	40.91	43.86	73.91	54.29	51.56
YEAR-ROUND ACCESS (%)																	
Not at all	12.12	15.00	12.00	15.00	18.18	15.22	18.87	29.41	18.44	12.93	17.00	12.12	18.18	31.58	17.39	11.43	16.34
Somewhat	7.58	18.75	11.00	13.75	27.27	17.39	22.64	23.53	14.89	15.52	16.00	18.18	25.00	8.77	26.09	20.00	16.05
Very	80.30	66.25	77.00	71.25	54.55	67.39	58.49	47.06	66.67	71.55	67.00	69.70	56.82	59.65	56.52	68.57	67.61

Pet exercise areas and water troughs were consistently as “not at all” important at all sites except Culbertson, Homestake, and Quartz Flats. At Homestake and Quartz Flats, pet exercise areas were ranked as “very” and “somewhat” important, respectively. At Culbertson and Quartz Flats, pet watering troughs were ranked as “somewhat” important (see Table 18).

Considering restroom-related facilities, diaper changing tables, RV dump stations, and showers were consistently rated as “not at all” at all sites with the following exceptions. A sizeable proportion of respondents at Culbertson and Quartz Flats felt that diaper changing tables were “somewhat” and “very” important, respectively. Also at Culbertson, an equal number of respondents felt RV dump stations to be both “somewhat” and “not at all” important. Most respondents at Troy ranked RV dump stations as “very” important. With respect to the availability of hot water and mirrors, responses varied between “somewhat” and “very” important across all sites. Overwhelmingly, respondents reported that sufficient restroom stalls and year-round access to the restroom facilities was “very” important (see Table 19).

With respect to rest area safety and assistance, parking lot and pathway lighting was deemed “very” important by respondents at all sites. Sufficient telephones were deemed as either “somewhat” or “very” important at all sites. A rest area attendant was ranked “not at all” important at all sites with the exception of Bad Route, Greycliff, Homestake and Vandalia where a sizeable proportion of respondents ranked a rest area attendant as “somewhat” important (see Table 20).

Weather, road condition and traffic condition information was ranked as “very” important nearly consistently statewide (see Table 21). Exceptions were noted at Armington, Culbertson, Emigrant, Red Rock and Vandalia where a sizeable proportion of respondents reported weather, road condition and traffic condition information to be only “somewhat” important. Historical, interpretive and points of interest information was reported as being “somewhat” important nearly consistently at all sites. Exceptions were noted at Dearborn, Flowing Wells, and Troy where a sizeable proportion of respondents felt that this information was “very” important. Similar findings were reported for service (i.e., gas, food, hotel) location information. Most respondents felt that this information was “somewhat” important. Unlike with the previous information types, exceptions to this finding were bi-directional with some locations reporting

Table 18. Importance of Rest Area Pet Facilities

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
PET EXERCISE AREA (%)																	
Not at all	40.91	46.25	38.00	46.25	45.45	38.04	54.72	47.06	41.84	30.17	43.00	27.27	40.91	38.60	43.48	40.00	40.70
Somewhat	19.70	27.50	29.00	27.50	27.27	33.70	22.64	29.41	31.21	33.62	30.00	39.39	29.55	26.32	17.39	25.71	28.99
Very	39.39	26.25	33.00	26.25	27.27	28.26	22.64	23.53	26.95	36.21	27.00	33.33	29.55	35.09	39.13	34.29	30.31
PET WATERING TROUGHS (%)																	
Not at all	43.94	52.50	52.00	53.75	40.91	45.65	54.72	52.94	46.10	39.66	59.00	33.33	52.27	52.63	56.52	45.71	48.91
Somewhat	31.82	22.50	23.00	25.00	45.45	27.17	24.53	29.41	31.21	29.31	24.00	42.42	20.45	24.56	21.74	31.43	27.38
Very	24.24	25.00	25.00	21.25	13.64	27.17	20.75	17.65	22.70	31.03	17.00	24.24	27.27	22.81	21.74	22.86	23.70

Table 19. Importance of Rest Area Restroom Facilities

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide	
DIAPER CHANGING TABLE (%)																		
Not at all	45.45	60.00	45.00	50.00	40.91	53.26	56.60	58.82	46.10	48.28	53.00	42.42	52.27	57.89	69.57	54.29	50.90	
Somewhat	16.67	18.75	25.00	22.50	40.91	20.65	26.42	23.53	23.40	18.10	19.00	15.15	13.64	21.05	17.39	22.86	21.06	
Very	37.88	21.25	30.00	27.50	18.18	26.09	16.98	17.65	30.50	33.62	28.00	42.42	34.09	21.05	13.04	22.86	27.95	
HOT WATER (%)																		
Not at all	19.70	25.00	18.00	25.00	13.64	31.52	20.75	23.53	21.99	18.97	29.00	15.15	22.73	17.54	17.39	20.00	22.29	
Somewhat	33.33	23.75	41.00	38.75	59.09	35.87	43.40	41.18	36.88	25.00	37.00	48.48	34.09	33.33	39.13	34.29	35.69	
Very	46.97	51.25	41.00	36.25	27.27	32.61	35.85	35.29	41.13	56.03	34.00	36.36	43.18	49.12	43.48	45.71	42.02	
MIRRORS (%)																		
Not at all	18.18	27.50	17.00	20.00	18.18	29.35	22.64	23.53	22.70	19.83	25.00	15.15	22.73	22.81	21.74	11.43	21.81	
Somewhat	33.33	31.25	37.00	28.75	59.09	30.43	39.62	47.06	37.59	32.76	41.00	42.42	29.55	24.56	43.48	51.43	35.69	
Very	48.48	41.25	46.00	51.25	22.73	40.22	37.74	29.41	39.72	47.41	34.00	42.42	47.73	52.63	34.78	37.14	42.49	
PAPER TOWELS (%)																		
Not at all	15.15	25.00	19.00	18.75	27.27	25.00	20.75	23.53	12.77	14.66	22.00	15.15	13.64	22.81	8.70	14.29	18.51	
Somewhat	22.73	16.25	27.00	22.50	36.36	25.00	22.64	17.65	26.24	27.59	28.00	30.30	22.73	15.79	17.39	25.71	24.36	
Very	62.12	58.75	54.00	58.75	36.36	50.00	56.60	58.82	60.99	57.76	50.00	54.55	63.64	61.40	73.91	60.00	57.13	
RV DUMP STATIONS (%)																		
Not at all	50.00	40.00	50.00	57.50	45.45	50.00	60.38	47.06	53.90	54.31	52.00	51.52	56.82	52.63	34.78	40.00	51.18	
Somewhat	24.24	33.75	29.00	21.25	45.45	25.00	20.75	11.76	22.70	20.69	29.00	27.27	25.00	29.82	26.09	28.57	25.78	
Very	25.76	26.25	21.00	21.25	9.09	25.00	18.87	41.18	23.40	25.00	19.00	21.21	18.18	17.54	39.13	31.43	23.04	
SHOWERS (%)																		
Not at all	63.64	60.00	68.00	75.00	63.64	66.30	66.04	64.71	70.92	58.62	57.00	72.73	70.45	75.44	47.83	65.71	65.63	
Somewhat	21.21	21.25	17.00	8.75	27.27	20.65	22.64	29.41	15.60	22.41	31.00	12.12	18.18	21.05	39.13	20.00	20.40	
Very	15.15	18.75	15.00	16.25	9.09	13.04	11.32	5.88	13.48	18.97	12.00	15.15	9.09	3.51	13.04	14.29	13.88	
SUFFICIENT RESTROOM STALLS (%)																		
Not at all	12.12	13.75	11.00	15.00	18.18	16.30	15.09	23.53	11.35	5.17	15.00	12.12	9.09	21.05	8.70	14.29	13.03	
Somewhat	16.67	15.00	22.00	18.75	45.45	19.57	26.42	17.65	22.70	16.38	23.00	15.15	27.27	14.04	13.04	22.86	20.30	
Very	71.21	71.25	67.00	66.25	36.36	64.13	58.49	58.82	65.96	78.45	62.00	72.73	63.64	64.91	78.26	62.86	66.76	
YEAR-ROUND ACCESS (%)																		
Not at all	7.58	17.50	12.00	12.50	22.73	17.39	24.53	17.65	18.44	8.62	17.00	12.12	6.82	22.81	17.39	14.29	15.11	
Somewhat	4.55	13.75	13.00	12.50	31.82	11.96	16.98	29.41	13.48	15.52	17.00	18.18	31.82	19.30	30.43	17.14	15.77	
Very	87.88	68.75	75.00	75.00	45.45	70.65	58.49	52.94	68.09	75.86	66.00	69.70	61.36	57.89	52.17	68.57	69.12	

Table 20. Importance of Rest Area Safety/Assistance

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
PARKING LOT/PATHWAY LIGHTING (%)																	
Not at all	12.12	10.00	9.00	12.50	18.18	16.30	5.66	0.00	13.48	8.62	11.00	9.09	6.82	14.04	13.04	2.86	10.95
Somewhat	16.67	20.00	21.00	8.75	27.27	16.30	22.64	23.53	17.02	17.24	24.00	18.18	15.91	19.30	26.09	20.00	18.60
Very	71.21	70.00	70.00	78.75	54.55	67.39	71.70	76.47	69.50	73.28	65.00	72.73	77.27	66.67	60.87	77.14	70.44
REST AREA ATTENDANT (%)																	
Not at all	42.42	36.25	41.00	43.75	50.00	47.83	50.94	64.71	36.17	37.07	42.00	48.48	43.18	43.86	56.52	42.86	42.49
Somewhat	39.39	37.50	36.00	32.50	45.45	35.87	39.62	23.53	39.72	39.66	38.00	30.30	36.36	31.58	34.78	42.86	37.11
Very	18.18	26.25	23.00	23.75	4.55	16.30	9.43	11.76	24.11	23.28	20.00	21.21	20.45	24.56	8.70	14.29	20.40
SUFFICIENT TELEPHONES (%)																	
Not at all	12.12	17.50	13.00	25.00	22.73	19.57	18.87	17.65	11.35	8.62	18.00	15.15	22.73	14.04	17.39	20.00	15.96
Somewhat	33.33	26.25	46.00	28.75	54.55	32.61	43.40	29.41	36.17	28.45	34.00	33.33	31.82	40.35	43.48	45.71	35.32
Very	54.55	56.25	41.00	46.25	22.73	47.83	37.74	52.94	52.48	62.93	48.00	51.52	45.45	45.61	39.13	34.29	48.73

Table 21. Importance of Rest Area Travel/Area Information

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
HISTORICAL, INTERPRETIVE, POINTS OF INTEREST INFORMATION (%)																	
Not at all	18.18	16.25	11.00	18.75	13.64	19.57	18.87	29.41	12.77	14.66	15.00	12.12	18.18	24.56	13.04	5.71	15.86
Somewhat	45.45	42.50	45.00	48.75	45.45	40.22	45.28	35.29	45.39	44.83	50.00	48.48	54.55	42.11	39.13	68.57	46.08
Very	36.36	41.25	44.00	32.50	40.91	40.22	35.85	35.29	41.84	40.52	35.00	39.39	27.27	33.33	47.83	25.71	38.05
SERVICE (GAS, FOOD, HOTEL) LOCATION INFORMATION (%)																	
Not at all	30.30	30.00	30.00	38.75	31.82	36.96	32.08	52.94	28.37	31.03	31.00	36.36	34.09	24.56	30.43	25.71	31.73
Somewhat	51.52	40.00	40.00	38.75	54.55	36.96	43.40	17.65	35.46	32.76	39.00	30.30	47.73	38.60	43.48	45.71	39.19
Very	18.18	30.00	30.00	22.50	13.64	26.09	24.53	29.41	36.17	36.21	30.00	33.33	18.18	36.84	26.09	28.57	29.08
VISITOR CENTER WITH ATTENDANT (%)																	
Not at all	50.00	36.25	41.00	47.50	40.91	47.83	41.51	70.59	35.46	43.10	41.00	48.48	43.18	49.12	52.17	45.71	43.44
Somewhat	39.39	38.75	40.00	32.50	50.00	35.87	45.28	23.53	38.30	31.90	43.00	33.33	45.45	31.58	39.13	42.86	37.96
Very	10.61	25.00	19.00	20.00	9.09	16.30	13.21	5.88	26.24	25.00	16.00	18.18	11.36	19.30	8.70	11.43	18.60
WEATHER, ROAD CONDITION, TRAFFIC CONDITION INFORMATION (%)																	
Not at all	13.64	15.00	12.00	25.00	18.18	15.22	18.87	41.18	14.18	6.90	16.00	6.06	11.36	14.04	13.04	2.86	14.26
Somewhat	43.94	31.25	37.00	33.75	40.91	32.61	45.28	5.88	34.04	31.90	35.00	39.39	47.73	36.84	39.13	51.43	36.26
Very	42.42	53.75	51.00	41.25	40.91	52.17	35.85	52.94	51.77	61.21	49.00	54.55	40.91	49.12	47.83	45.71	49.48

low interest and others reporting high interest. Rest area sites at Bridger, Dearborn, Flowing Wells, and Quartz Flats had sizeable proportions of respondents who reported being “not at all” interested in this service locations information while rest area sites at Greycliff and Homestake had sizeable proportions of respondents who reported being “very” interested in this information. Low interest (i.e., “not at all” important) was expressed in having a visitor center with an attendant. Exceptions to this included Bad Route, Culbertson, Emigrant, Greycliff, Hysham, and Red Rock where moderate interest (i.e., “somewhat” interested) was expressed by a sizeable proportion of respondents.

When asked their preferred method for receiving travel information, most respondents reported preferring traditional means of obtaining information such as pamphlets and newspapers or bulletin boards (40.13 percent and 34.42 percent statewide, respectively). Computerized information centers or kiosks were not as popular. However, this may have more to do with a lack of exposure to this type of information medium rather than true stated preference. Respondents favoring pamphlets or newspapers cited the ability to take the information with them in the car as a benefit. Should kiosks be implemented in rest areas as an information source, printout capabilities should be considered on the basis of these comments (see Figure 7).

When asked whether private businesses should be allowed to develop at rest areas, surprisingly a majority of respondents at each site indicated “no” (66.31 percent statewide) (see Figure 8). Of those that did support private development at rest areas, most favored either gas and other automotive services (18.46 percent statewide) or fast food restaurants (17.99 percent statewide) (see Table 22).

Figure 7. Preferred Method for Receiving Travel Information

Figure 8. Private Development Endorsement

Table 22. Desirable Private Development

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia	Statewide
Advance hotel reservation services	6.06	8.64	8.00	0.00	8.70	9.78	1.89	5.56	11.27	9.40	6.93	9.09	6.82	5.26	0.00	11.43	7.40
Fast food restaurants	18.18	14.81	22.00	12.20	13.04	18.48	9.43	5.56	21.13	14.53	25.74	24.24	25.00	17.54	8.70	17.14	17.99
Gas and other automotive services	12.12	20.99	16.00	7.32	13.04	23.91	13.21	22.22	16.20	22.22	23.76	21.21	22.73	26.32	8.70	20.00	18.46
Sit down restaurants	3.03	9.88	4.00	2.44	0.00	8.70	1.89	5.56	7.04	10.26	6.93	6.06	6.82	10.53	0.00	11.43	6.56
Stores with local handicrafts and souvenirs	3.03	6.06	14.00	6.10	4.35	13.04	0.00	18.18	9.86	15.38	6.93	15.15	9.09	7.02	8.70	8.57	9.28
Stores with travel-related goods	15.15	13.58	9.00	7.32	8.70	15.22	1.89	11.11	13.38	17.09	15.84	21.21	11.36	10.53	8.70	8.57	12.46

3.1.5 Rest Area Location, Accessibility and Safety

When asked to rate the location of the rest area visited, most reported “good,” “very good” or “excellent” (29.46 percent, 35.11 percent and 25.15 percent statewide, respectively) (see Figure 9). As expressed in respondent comments, public consensus reflects an inadequate number of rest areas throughout the state. Most respondents would like to see rest areas every 50 miles although requests ranged from every 40 miles to every 100 miles. Many respondents recommended desirable rest area locations, typically expressed as a general location between two cities. Recommended rest area locations are depicted in Figure 10. In many instances, a single rest area exists between two locations but respondents requested additional rest areas between the two locations.

Accessibility, which included issues related to year-round access, parking, etc., was also rated “good,” “very good” or “excellent” (33.30 percent, 27.76 percent and 25.13 percent statewide, respectively) (see Figure 11). In comments made by survey respondents, increased automobile parking was requested at Armington, Bridger, Emigrant, Greycliff, and Hysham (note that both insufficient restroom stalls and insufficient parking were reported at Armington and Emigrant suggesting that traffic volumes in these areas have increased beyond the original design considerations for these facilities) (see Table 23). Insufficient truck and RV parking was reported at Armington, Bridger, Culbertson, Greycliff, Homestake, Red Rock and Vandalia. Improvements to handicapped access were requested at Armington, Bad Route, Homestake, Hysham and Sweetgrass. At nine of the 16 rest area sites, requests for year-round access were made. Many cited safety concerns surrounding the need for year-round access.

When asked to rate the general safety and security experienced at each rest area site, most respondents felt that it was either “good” or “very good” (35.97 percent and 25.96 percent statewide, respectively) (see Figure 12). When qualifying this question to reflect nighttime safety and security, a sizeable proportion of respondents (32.45 percent) speculated feeling only “somewhat” safe and secure at the various rest areas after dark (see Figure 13). Note that many rest area users did not respond to this question.

Figure 9. Rest Area Location Rating

Figure 10. Recommended Rest Area Locations

Figure 11. Rest Area Accessibility Rating

Table 23. Specific Accessibility Improvements

	Armington	Bad Route	Bearmouth	Bridger	Culbertson	Dearborn	Emigrant	Flowing Wells	Greycliff	Homestake	Hysham	Quartz Flats	Red Rock	Sweetgrass	Troy	Vandalia
Sufficient Automobile Parking	x			x			x		x		x					
Sufficient Truck/RV Parking	x			x	x				x	x			x			x
Handicapped Access	x	x								x	x			x		
Year-round Access			x	x		x	x		x	x	x		x			x

Figure 12. Rest Area Safety and Security Rating

Figure 13. Rest Area Safety and Security Rating After Dark

3.2 CUSTOMER SEGMENTATION MODELS

For key opinion-based questions related to rest area conditions, amenities, locations, accessibility and safety, customer segmentation models were developed using advanced statistical modeling methods appropriate for discrete data. The findings from these models characterize rest area user groups depending on their opinion-based survey responses. For example, shower facilities may be a high priority for commercial truck drivers that use rest area facilities mostly at night. On the basis of this finding, the MDT Planning Division may consider equipping rest areas along major trucking corridors with shower facilities. As another example, the MDT Planning Division may opt to equip rest areas en-route to major tourist attractions with RV dump stations or additional traveler information if noted as a high priority for recreational travelers.

3.2.1 *Rest Area Conditions*

As expected, overall rest area satisfaction is highly location dependent (see Table 24). Rest areas at the following locations are less likely to receive a favorable rating (i.e., “very good” or “excellent”) with respect to overall rest area user satisfaction:

- Bad Route,
- Bearmouth,
- Dearborn,
- Greycliff,
- Homestake,
- Hysham,
- Sweetgrass,
- Red Rock and
- Vandalia.

In agreement with the results reported previously in 3.1 Descriptive Statistics, each of these sites, with the exception of Bad Route, fell below the statewide average overall satisfaction rating.

Table 24. Overall Rest Area Rating

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	2.64959	30.55672
Rest area location indicator variable (1 if Bad Route, 0 otherwise)	-0.44921	-2.89335
Rest area location indicator variable (1 if Bearmouth, 0 otherwise)	-0.74537	-5.32086
Rest area location indicator variable (1 if Dearborn, 0 otherwise)	-0.89833	-5.97347
Rest area location indicator variable (1 if Greycliff, 0 otherwise)	-1.03926	-8.52342
Rest area location indicator variable (1 if Homestake, 0 otherwise)	-1.13631	-8.34660
Rest area location indicator variable (1 if Hysham, 0 otherwise)	-0.40136	-3.15900
Rest area location indicator variable (1 if Quartz Flats, 0 otherwise)	0.50578	2.55524
Rest area location indicator variable (1 if Sweetgrass, 0 otherwise)	-0.86613	-5.48937
Rest area location indicator variable (1 if Red Rock, 0 otherwise)	-0.92927	-5.31983
Rest area location indicator variable (1 if Vandalia, 0 otherwise)	-0.57827	-3.03162
Day of the week indicator variable (1 if Sunday, 0 otherwise)	0.42955	2.94291
Day of the week indicator variable (1 if Monday, 0 otherwise)	0.32981	2.57004
Day of the week indicator variable (1 if Tuesday, 0 otherwise)	0.31472	2.87913
Number of people traveling in party	-8.66874e-003	-3.64979
Residence indicator variable (1 if out-of-state, 0 otherwise)	-0.13972	-2.02219
Threshold 1	1.20639	28.22130
Threshold 2	2.13214	58.72035
Threshold 3	3.10442	69.06702
Threshold 4	4.38216	47.02050
Number of observations	1067	
Log likelihood – initial	-2327.57563	
Log likelihood - at convergence	-1508.41452	

While Bad Route was slightly above the statewide average as reported in 3.1 Descriptive Statistics, the negative coefficient in this model indicates that if this same survey were to be repeated at the same location, rest area users would exhibit a propensity to rank it less favorably overall. Quartz Flats, ranked second in overall satisfaction in 3.1 Descriptive Statistics, is more likely to receive a favorable rating according to these modeling results.

Temporal differences were noted in addition to locational differences. Rest area users on Sunday, Monday and Tuesday are more likely to give rest areas a higher overall satisfaction rating.

Larger travel parties are less likely to rate rest areas favorably. As the party size increases, the ability of rest areas to accommodate either the number or the diversity of party needs may be challenged.

Out-of-state residents are also less likely to rate rest areas favorably. Recall that there was a noted decline in satisfaction when asked to rate Montana's rest areas and to rate Montana's rest areas as compared to other states' rest areas (see 3.1 Descriptive Statistics). Out-of-state residents may have more exposure to other rest areas and hence, have higher expectations of what can be provided.

When considering this comparative rest area satisfaction rating, Dearborn, Greycliff, Homestake and Sweetgrass are less likely to receive a favorable rating (see Table 25). Conversely, Armington and Quartz Flats are more likely to receive a favorable rating. These results are in agreement with the results reported previously in 3.1. Descriptive Statistics; Dearborn, Greycliff, Homestake and Sweetgrass all ranked below the statewide average while Armington and Quartz Flats ranked above the statewide average for comparative satisfaction.

Again, rest area users on Sunday, Monday and Tuesday are more likely to favor Montana's rest areas when compared to other rest areas outside of Montana. Reasons for these temporal differences are not immediately intuitive.

Rest area users taking longer trips (i.e., as the average trip length increases) are less likely to rate Montana's rest areas favorably when compared to other states' rest areas. Again, rest area users

Table 25. Comparative Rest Area Rating

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	1.45729	9.58831
Rest area location indicator variable (1 if Armington, 0 otherwise)	0.57811	4.15050
Rest area location indicator variable (1 if Dearborn, 0 otherwise)	-0.44421	-3.44656
Rest area location indicator variable (1 if Greycliff, 0 otherwise)	-0.36803	-3.60071
Rest area location indicator variable (1 if Homestake, 0 otherwise)	-0.80891	-6.40163
Rest area location indicator variable (1 if Quartz Flats, 0 otherwise)	0.80236	4.22477
Rest area location indicator variable (1 if Sweetgrass, 0 otherwise)	-0.45173	-3.00673
Day of the week indicator variable (1 if Sunday, 0 otherwise)	0.81496	5.79437
Day of the week indicator variable (1 if Monday, 0 otherwise)	0.50681	4.55033
Day of the week indicator variable (1 if Tuesday, 0 otherwise)	0.25982	2.94942
Type of vehicle indicator variable (1 if pickup truck, van or sport utility vehicle, 0 otherwise)	0.13781	2.08447
Average length of roundtrip	-3.13450e-004	-2.91258
Gender indicator variable (1 if male, 0 otherwise)	-0.17452	-2.70297
Average age	6.06451e-003	2.80573
Threshold 1	0.99315	28.76295
Threshold 2	1.72782	54.43227
Threshold 3	2.54476	70.00695
Threshold 4	3.18330	60.22702
Number of observations	1067	
Log likelihood – initial	-2330.00251	
Log likelihood - at convergence	-1695.05507	

on longer trips may have more exposure to other rest areas and hence, have higher expectations of what can be provided. Males are also less likely to rate Montana's rest areas favorably. Drivers of pickup trucks, vans or sport utility vehicles are more likely to favor Montana's rest areas as compared to other states' rest areas as are older rest area users.

In addition to asking overall and comparative satisfaction ratings, respondents were asked to rate specific rest area facilities or services. Rest area user satisfaction with the most commonly used facilities or services is discussed below.

When asked their level of satisfaction related to toilet and diaper change facilities, respondents at each of the following locations are less likely to be satisfied:

- Bearmouth,
- Dearborn,
- Greycliff,
- Homestake,
- Red Rock,
- Vandalia and
- Sweetgrass (see Table 26).

With the exception of Dearborn, each of these sites ranked below statewide average satisfaction levels for toilet/diaper changes facilities. Specific improvements may be warranted at these sites. Although the Dearborn rest area ranked above the statewide average reported in 3.1 Descriptive Statistics, the negative coefficient in this model indicates that if this same survey were to be repeated at the same location, rest area users would exhibit a propensity to rank the toilet/diaper change facilities less favorably.

People who have been traveling for some time (i.e., are farther along into their trip) are also less likely to be satisfied with the toilet and diaper change facilities at rest areas. This finding likely supports earlier findings related to other rest area exposure and consequent high expectations.

Respondents traveling in “other” vehicles, which were largely reported to be recreational vehicles, are also less likely to rate the toilet and diaper changing facilities favorably. Conversely, rest area users traveling for recreation or vacation are more likely to be satisfied with the toilet and diaper changing facilities. People traveling for recreation or vacation, as infrequent or one-time users of the rest area, may be more tolerant of poor rest area conditions while people traveling in recreational vehicles may be more accustomed to their in-vehicle facilities and may be less tolerant of poor rest area conditions.

As the number of people under 12 in the travel party increases, the level of satisfaction with the facilities also increased. Children often require more frequent and immediate stops to use the restroom; people traveling with children are predictably more appreciative of the availability of the facilities. The level of satisfaction with toilet and diaper changing facilities was also higher for people possessing a high school education although the reasons for this are not immediately intuitive.

Considering predominate secondary activities while at the rest area, rest area users at Dearborn, Hysham, Red Rock, and Sweetgrass are more likely to be satisfied with facilities provided for stretching and walking (see Table 27). Rest area users stopping on Monday and Wednesday are less likely to be satisfied with related facilities.

When asked whether a particular rest area should be abandoned, improved, repaired, left as is or other, rest area users at Emigrant and Bad Route are less likely to favor improvements to the site (see Table 28). Recall that in 3.1. Descriptive Statistics, both Emigrant and Bad Route were rated above the statewide average in overall rest area ranking (see 3.1 Descriptive Statistics). At Greycliff however, rest area users are more likely to favor improvements over other rest area options. Greycliff was rated below the statewide average in overall rest area ranking (see 3.1 Descriptive Statistics).

Rest area users who travel on Saturdays and Thursdays are less likely to favor improvements to rest area sites while persons who are married and are traveling on longer trips favor improvements. Again, note the correlation between longer trips and higher rest area expectations. Rest area users who travel on Tuesdays, who are married, and who have performed post-graduate work are all more likely to favor rest area repairs.

Table 26. Level of Satisfaction with Most Common Primary Use Facility – Use Toilet/Change Diaper

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	2.04026	13.31178
Rest area location indicator variable (1 if Bearmouth, 0 otherwise)	-0.94272	-4.54246
Rest area location indicator variable (1 if Dearborn, 0 otherwise)	-0.45539	-2.20798
Rest area location indicator variable (1 if Greycliff, 0 otherwise)	-1.19198	-6.82690
Rest area location indicator variable (1 if Homestake, 0 otherwise)	-0.83972	-4.38995
Rest area location indicator variable (1 if Red Rock, 0 otherwise)	-1.08796	-4.23033
Rest area location indicator variable (1 if Sweetgrass, 0 otherwise)	-0.78450	-3.24121
Rest area location indicator variable (1 if Vandalia, 0 otherwise)	-0.81421	-2.87673
Day of the week indicator variable (1 if Tuesday, 0 otherwise)	0.30671	1.98954
Trip purpose indicator variable (1 if vacation/recreation, 0 otherwise)	0.30787	2.48811
Type of vehicle indicator variable (1 if other, 0 otherwise)	-0.58490	-2.57611
Average miles traveled since beginning of trip	-3.82923e-004	-2.40202
Number of people under age of 12 in party	1.02697e-002	2.11433
Highest level of education indicator variable (1 if high school, 0 otherwise)	0.32892	2.43174
Threshold 1	1.24336	14.05436
Threshold 2	4.68667	16.20333
Number of observations	540	
Log likelihood – initial	-417.41614	
Log likelihood - at convergence	-699.89979	

Table 27. Level of Satisfaction with Most Common Secondary Use Facility – Stretch/Walk

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	2.45199	34.76976
Rest area location indicator variable (1 if Dearborn, 0 otherwise)	0.61698	4.40344
Rest area location indicator variable (1 if Hysham, 0 otherwise)	0.28971	2.27627
Rest area location indicator variable (1 if Red Rock, 0 otherwise)	0.39240	2.08562
Rest area location indicator variable (1 if Sweetgrass, 0 otherwise)	0.75932	4.07043
Day of the week indicator variable (1 if Monday, 0 otherwise)	-0.33262	-3.22006
Day of the week indicator variable (1 if Wednesday, 0 otherwise)	-0.24089	-2.46821
Threshold 1	1.26477	21.64163
Threshold 2	2.55596	42.05281
Number of observations	1067	
Log likelihood – initial	-2005.75068	
Log likelihood - at convergence	-1042.88952	

Table 28. Rest Area Recommendations

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant 1	-1.83259	-3.40304
Constant 2	2.48245	10.53762
Constant 3	-0.34406	-1.05021
Constant 4	2.04186	6.80239
Recommend improved/rest area location indicator variable (1 if Emigrant, 0 otherwise)	-2.18945	-4.12417
Recommend improved/rest area location indicator variable (1 if Bad Route, 0 otherwise)	-1.26482	-3.82317
Recommend improved/day of week indicator variable (1 if Thursday, 0 otherwise)	-0.64653	-3.20543
Recommend improved/rest area location indicator variable (1 if Greycliff, 0 otherwise)	0.66429	3.23141
Recommend improved/day of week indicator variable (1 if Saturday, 0 otherwise)	-1.71523	-2.25024
Recommend left as is/day of week indicator variable (1 if Tuesday, 0 otherwise)	0.51563	2.97042
Recommend repaired/day of week indicator variable(1 if Tuesday, 0 otherwise)	0.94922	2.77896
Recommend left as is/trip purpose indicator variable (1 if vacation, 0 otherwise)	0.45550	3.10065
Recommend improved/average length of roundtrip	7.90563e-004	3.19500
Recommend left as is/marital status indicator variable (1 if married, 0 otherwise)	1.51117	2.04291
Recommend repaired/marital status indicator variable (1 if married, 0 otherwise)	2.44461	3.09184
Recommend improved/ marital status indicator variable (1 if married, 0 otherwise)	1.48845	2.00030
Recommend repaired/highest level of education indicator variable (1 if post-graduate college/university, 0 otherwise)	0.95095	2.87734
Number of observations	1004	
Log likelihood – initial	-1615.87566	
Log likelihood - at convergence	-896.89333	

Rest area users who travel on Tuesdays and who are married indicated a propensity to favor the rest area to be “left as is.” People traveling for recreation or vacation also favor leaving the rest area as is. This last finding is counterintuitive to the previously established relationship of longer trips leading to higher rest area expectations.

When asked whether or not they would be willing to pay a fee for rest area improvements, rest areas users at Bearmouth are more willing (see Table 29). Recall that Bearmouth fell below the statewide average in overall rest area satisfaction (see 3.1 Descriptive Statistics). No other rest area location variables were significant indicating weak correlation between either the propensity to pay a fee on the basis of poor conditions or the propensity to pay a fee based on good conditions. People who are traveling for work and traveling for longer distances are more willing to pay a fee for rest area improvements. This finding likely includes long-distance truck drivers and others who travel state- or region-wide for business. The potential for employer reimbursement may increase their willingness to pay a rest area user fee.

People who are male, did not finish high school or attended a college or university all exhibit a lower willingness to pay a fee for rest area improvements. Surprisingly, as average household incomes increase, the willingness to pay a fee for improvements decreases. One would expect a greater willingness to pay a fee from higher income households because of the increased flexibility in spending.

3.2.2 Rest Area Amenities

Recall from 3.1 Descriptive Statistics that the five most important rest area amenities included:

- trashcans,
- parking lot/pathway lighting,
- year-round access to restroom facilities,
- sufficient restroom stalls and
- year-round access for parking.

Rest area users at Culbertson are more likely to rate trashcans with high importance while rest area users stopping at Emigrant are less likely to rate trashcans as important (see Table 30). The existing aesthetics and cleanliness noted during the time of the survey at each of these sites likely influenced these responses.

Rest area users traveling on Saturdays are also likely to rate trashcans as important. However, as the size of the travel party increases, the importance of trashcans diminishes.

Both in-state and out-of-state residents are more likely to view parking lot and pathway lighting as important (see Table 31). As the number of people traveling in the party increases and as the average age of the rest area user increases, the likelihood of viewing parking lot and pathway lighting as an important amenity decreases. This is intuitive since people predictably feel safer when traveling in the company of others. Counterintuitively, single persons are less likely to view parking lot and pathway lighting as important. One would suspect single persons of frequently traveling alone and being concerned about personal safety. Persons traveling on motorcycles are also less likely to view parking lot and pathway lighting as important.

Users of the Armington rest area are more likely to rank year-round access to restroom facilities with importance (see Table 32). Recall in 3.1 Descriptive Statistics that Armington had the highest amenity importance ranking in this category. Both in-state and out-of-state residents, people traveling in passenger cars and people with a post graduate education at a college or university are also likely to rank year-round access to restroom facilities as important. The likelihood of ranking this amenity as important increases as average household income increases.

Conversely, persons traveling for recreation or vacation and traveling in larger parties are less likely to view this amenity as important. Also, older rest area users are less likely to view year-round access to restroom facilities as important. This latter finding is somewhat surprising. Elderly persons often require more frequent and immediate stops to use the restroom.

The availability of sufficient restroom stalls is more likely to be important to persons moving and persons residing outside of the state (see Table 33). Further, the availability of sufficient restroom stalls is more likely to be important to users of the Homestake rest area. Recall in 3.1 Descriptive Statistics that Homestake had the highest amenity importance ranking in this

Table 29. Rest Area Fee Endorsement

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	0.49408	2.80026
Rest area location indicator variable (1 if Bearmouth, 0 otherwise)	0.56590	2.32965
Trip purpose indicator variable (1 if work, 0 otherwise)	0.57929	3.15790
Average miles traveled on trip	5.34539e-004	2.94892
Gender indicator variable (1 if male, 0 otherwise)	-0.29592	-2.19356
Average household income	-5.14805e-006	-2.16088
Highest level of education indicator variable (1 if did not finish high school, 0 otherwise)	-0.89748	-2.53217
Highest level of education indicator variable (1 if college/university, 0 otherwise)	-0.33672	-2.37931
Number of observations	1025	
Log likelihood – initial	-710.47586	
Log likelihood - at convergence	-660.92089	

Table 30. Trashcan Importance

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	1.46438	24.74726
Rest area location indicator variable (1 if Culbertson, 0 otherwise)	0.81185	2.70434
Rest area location indicator variable (1 if Emigrant, 0 otherwise)	-0.37148	-2.26575
Day of the week indicator variable (1 if Saturday, 0 otherwise)	0.71531	2.25992
Number of people traveling in party	-1.28726e-002	-5.02580
Threshold 1	0.87704	16.84233
Threshold 2	3.92100	27.39106
Number of observations	1067	
Log likelihood – initial	-1319.79446	
Log likelihood - at convergence	-862.77665	

Table 31. Parking Lot/Pathway Lighting Importance

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	1.65149	9.07590
Day of the week indicator variable (1 if Saturday, 0 otherwise)	0.72766	2.29120
Type of vehicle indicator variable (1 if motorcycle, 0 otherwise)	-0.56761	-2.35555
Number of people traveling in party	-5.32148e-003	-2.01652
Marital status indicator variable (1 if single, 0 otherwise)	-0.21928	-2.35374
Residence indicator variable (1 if in-state, 0 otherwise)	0.29787	2.37930
Residence indicator variable (1 if out-of-state, 0 otherwise)	0.36929	3.57805
Average age	-1.16002e-002	-4.23905
Threshold 1	0.71858	15.50196
Threshold 2	3.7867	26.87091
Number of observations	1067	
Log likelihood – initial	-1278.76404	
Log likelihood - at convergence	-870.85826	

Table 32. Year-round Access to Restroom Facilities Importance

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	1.29951	7.00653
Rest area location indicator variable (1 if Armington, 0 otherwise)	0.51393	2.85557
Trip purpose indicator variable (1 if vacation/recreation, 0 otherwise)	-0.33567	-3.82315
Type of vehicle indicator variable (1 if passenger car, 0 otherwise)	0.19057	2.43052
Number of people traveling in party	-7.81562e-003	-2.89836
Residence indicator variable (1 if in-state, 0 otherwise)	0.38945	2.99221
Residence indicator variable (1 if out-of-state, 0 otherwise)	0.28406	2.73919
Average household income	3.17649e-006	2.26731
Average age	-9.40988e-003	-3.51057
Highest level of education indicator variable (1 if post-graduate college/ university, 0 otherwise)	0.22343	2.18581
Threshold 1	0.56506	14.13023
Threshold 2	3.66145	25.85348
Number of observations	1067	
Log likelihood – initial	-1233.95681	
Log likelihood - at convergence	-886.3432	

Table 33. Sufficient Restroom Stalls Importance

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	1.54623	9.50472
Rest area location indicator variable (1 if Homestake, 0 otherwise)	0.31410	2.46823
Trip purpose indicator variable (1 if moving, 0 otherwise)	0.38022	1.96139
Marital status indicator variable (1 if single, 0 otherwise)	-0.19629	-2.15692
Residence indicator variable (1 if out-of-state, 0 otherwise)	0.20949	2.71426
Average age	-9.86295e-003	-3.62727
Highest level of education indicator variable (1 if did not finish high school, 0 otherwise)	-0.47402	-2.39765
Threshold 1	0.71402	16.28899
Threshold 2	3.71530	25.43601
Number of observations	1067	
Log likelihood – initial	-1285.23891	
Log likelihood - at convergence	-931.4152	

Table 34. Year-round Access for Parking Importance

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	1.85956	12.49505
Trip purpose indicator variable (1 if vacation/recreation, 0 otherwise)	-0.33469	-3.98113
Number of people traveling in party	-7.74645e-003	-2.90824
Average age	-1.18398e-002	-4.51718
Highest level of education indicator variable (1 if did not finish high school, 0 otherwise)	-0.46056	-2.31046
Highest level of education indicator variable (1 if post-graduate college/university, 0 otherwise)	0.23420	2.37522
Threshold 1	0.54647	14.24888
Threshold 2	3.55297	25.51141
Number of observations	1067	
Log likelihood – initial	-1232.81525	
Log likelihood - at convergence	-920.88497	

category. Surprisingly, no gender differences were significant (i.e., females were not more likely to rate the availability of sufficient restroom stalls as important). Rest area users who are single and who did not finish high school rank this amenity with low importance. Also, the importance of this amenity diminishes as the average age of rest area users increases. In agreement with earlier findings related to year-round access to restroom facilities but still surprising, one would expect elderly persons to rank the availability of sufficient restroom stalls with greater importance than other age brackets.

Year-round access for parking is less important to people who are traveling for recreation or vacation (see Table 34). As the size of the travel party increases and for older rest area users, year-round parking access is also less important. Year-round access for parking is less important to rest area users who did not finish high school but more important to those who have post-graduate education at a college or university. Surprisingly, no vehicle type or trip purpose characteristics were found to be significant in affecting the importance ranking of year-round parking access.

With respect to travel information, persons whose primary purpose for travel is for shopping are more likely to prefer pamphlets and brochures (see Table 35). Since shoppers may not have an exact destination in mind or a strict time schedule to follow, information that they can take along with them and browse at their leisure is likely preferred.

Persons traveling on longer trips were less likely to prefer information provided on bulletin boards. This finding likely reflects that the information currently presented on bulletin boards is too localized to be of much interest to persons traveling longer distances. To best meet rest area information needs, bulletin boards should either be expanded to include both local and regional information or a supplemental form of travel information should be provided that provides more regional travel information. Females are more likely to prefer bulletin boards although the reasons for this are not immediately intuitive.

Not surprisingly, older rest area users are less likely to prefer computerized information centers or kiosks. This lack of support likely stems from a lack of exposure to and hence a lack of comfort with newer technologies. As average household income increased, kiosks were more

likely preferred. Higher income households likely allow for a home personal computer. Hence, the exposure to and comfort level with the technology is greater.

Recall in 3.1 Descriptive Statistics that private development at rest areas was not highly favored. Rest area users at Bridger and Emigrant are more likely to support private development despite the low percentage of respondents favoring private development in 3.1 Descriptive Statistics (see Table 36). Also, both in-state and out-of-state residents are likely to favor private development. As average age increases, the likelihood of supporting private development increases. As the number of people traveling in the party and the average household income increases, the likelihood to support private development decreases. Also, single persons are less likely to support private development.

3.2.3 Rest Area Location, Accessibility and Safety

Rest area users at Emigrant and Troy are likely to rate the location of these rest areas favorably while rest area users at Greycliff and Red Rock are less likely to favorably rate the location of these rest areas (see Table 37). These findings are in agreement with the findings in 3.1 Descriptive Statistics; Emigrant and Troy ranked above the statewide location satisfaction average while Greycliff and Red Rock ranked below the statewide location satisfaction average. Males and rest area users who travel on Wednesdays are less likely to favor rest area location. Also, as trip length and the size of the travel party increase, rest area location is viewed as less favorable. However, as the number of people under the age of 12 in the travel party increases, rest area location is viewed as more favorable. People traveling with children are predictably more appreciative of the availability of the facilities since children often require more frequent and immediate stops.

With respect to rest area accessibility, Bridger, Dearborn, and Greycliff are all less likely to receive favorable accessibility ratings (see Table 38). This is in agreement with the findings from 3.1. Descriptive Statistics; Bridger, Dearborn and Greycliff all ranked below the statewide accessibility satisfaction average. Further, rest area users who are male, who travel on Wednesdays, and whose trip purpose is shopping are less likely to rate rest area accessibility

Table 35. Preferred Method for Receiving Travel Information

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant 1	2.08633	13.60603
Constant 2	2.63393	10.52873
Constant 3	1.98487	4.97103
Prefer pamphlets/newspapers/trip purpose indicator variable (1 if shopping, 0 otherwise)	0.72480	1.99425
Prefer bulletin boards/average length of roundtrip	-8.69291e-004	-3.80535
Prefer bulletin boards/gender indicator variable (1 if female, 0 otherwise)	0.29191	2.14151
Prefer computerized information centers or kiosks/average age	-3.37673e-002	-4.65865
Prefer computerized information centers or kiosks/average annual household income	9.4100	2.50054
Number of observations	935	
Log likelihood – initial	-1296.18523	
Log likelihood - at convergence	-1027.37316	

Table 36. Private Development Endorsement

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	-0.11590	-0.34405
Rest area location indicator variable (1 if Bridger, 0 otherwise)	0.62905	2.22528
Rest area location indicator variable (1 if Emigrant, 0 otherwise)	1.22508	3.06176
Number of people traveling in party	-1.49803e-002	-3.05668
Marital status indicator variable (1 if single, 0 otherwise)	-0.35881	-2.17390
Residence indicator variable (1 if in-state, 0 otherwise)	0.42878	1.96081
Residence indicator variable (1 if out-of-state, 0 otherwise)	0.70903	3.83395
Average annual household income	-1.03328e-005	-4.15711
Average age	1.54417e-002	3.11714
Number of observations	1045	
Log likelihood – initial	-724.3388	
Log likelihood - at convergence	-627.85361	

Table 37. Rest Area Location Rating

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	2.63759	25.07143
Rest area location indicator variable (1 if Emigrant, 0 otherwise)	0.46706	3.04141
Rest area location indicator variable (1 if Greycliff, 0 otherwise)	-0.30186	-3.06032
Rest area location indicator variable (1 if Red Rock, 0 otherwise)	-0.51920	-3.16830
Rest area location indicator variable (1 if Troy, 0 otherwise)	0.53513	2.34210
Day of the week indicator variable (1 if Wednesday, 0 otherwise)	-0.22516	-2.75152
Average length of roundtrip	-2.77616e-004	-2.55883
Number of people traveling in party	-7.28943e-003	-2.69116
Number of people under the age of 12 traveling in party	5.43358e-003	2.00056
Gender indicator variable (1 if male, 0 otherwise)	-0.18907	-2.88069
Highest level of education indicator variable (1 if post-graduate college/university, 0 otherwise)	0.23404	2.78887
Threshold 1	0.97450	20.08617
Threshold 2	2.02803	54.31758
Threshold 3	2.97763	68.22791
Threshold 4	4.78567	35.73074
Number of observations	1067	
Log likelihood – initial	-2343.91129	
Log likelihood - at convergence	-1447.24245	

Table 38. Rest Area Accessibility Rating

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	2.61658	002
Rest area location indicator variable (1 if Bridger, 0 otherwise)	-0.78721	-6.01163
Rest area location indicator variable (1 if Dearborn, 0 otherwise)	-0.29941	-2.55286
Rest area location indicator variable (1 if Greycliff, 0 otherwise)	-0.34398	-3.52994
Day of the week indicator variable (1 if Wednesday, 0 otherwise)	-0.31811	-3.93764
Trip purpose indicator variable (1 if shopping, 0 otherwise)	-0.43659	-2.35215
Number of people traveling in party	-9.80575e-003	-4.15437
Gender indicator variable (1 if male, 0 otherwise)	-0.18233	-2.81969
Threshold 1	1.07869	22.69620
Threshold 2	2.16057	62.28932
Threshold 3	2.94483	77.36799
Threshold 4	4.19276	55.10956
Number of observations	1067	
Log likelihood – initial	-2431.90288	
Log likelihood - at convergence	-1533.76009	

favorably. The likelihood for an unfavorable rating increases as the number of people in the travel party increases.

Rest area users reportedly feel most safe at Emigrant and Quartz Flats. Both of these sites ranked above the statewide safety average as reported in 3.1 Descriptive Statistics (see Table 39). Also, rest area users traveling for recreation or vacation and traveling in a pickup, van, or sport utility vehicle are more likely to report feeling safe at rest areas.

Surprisingly, as the number of people in the travel party increases, the likelihood of feeling safe and secure decreases. This is counterintuitive to earlier findings that reported a decreased importance on parking lot and pathway lighting (a safety-related feature) as the size of the travel party increases. It was speculated earlier that people predictably feel safer when traveling in the company of others. More surprising still, the level of safety experienced by rest area users increases as the number of people in the travel party under 12 increases. One would expect greater safety-related anxiety when traveling with children.

With respect to safety and security after dark, rest area users at Emigrant, Greycliff, Homestake and Red Rock are less likely to feel safe at these locations (see Table 40). In 3.1 Descriptive Statistics, each of these locations, with the exception of Emigrant, fell below the statewide safety at night average. While Emigrant was above the statewide average as reported in 3.1 Descriptive Statistics, the negative coefficient in this model indicates that if this same survey were to be repeated at the same location, rest area users would exhibit a propensity to rate the safety and security of this site lower. Not surprisingly, males are more likely to feel safe at rest areas at night. Further, rest area users who travel on Sundays and Mondays were more likely to feel safe at night. As the length of the trip increases and as the age of the rest area user increases, the likelihood of feeling safe at night increases.

Table 39. Rest Area Safety and Security Rating

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	1.44650	11.82282
Rest area location indicator variable (1 if Emigrant, 0 otherwise)	0.47312	3.21481
Rest area location indicator variable (1 if Quartz Flats, 0 otherwise)	0.46787	2.54806
Trip purpose indicator variable (1 if vacation/recreation, 0 otherwise)	0.23141	3.33110
Type of vehicle indicator variable (1 if pickup truck, van or sport utility vehicle, 0 otherwise)	0.13439	2.03229
Number of people traveling in party	-8.71352e-003	-3.24859
Number of people under age of 12 traveling in party	1.06128e-002	3.93704
Average age	5.86201e-003	2.64850
Threshold 1	1.15284	27.82780
Threshold 2	2.15987	64.37605
Threshold 3	2.92213	76.42173
Threshold 4	3.84917	54.72800
Number of observations	1067	
Log likelihood – initial	-2405.83101	
Log likelihood - at convergence	-1592.12282	

Table 40. Rest Area Safety and Security Rating After Dark

INDEPENDENT VARIABLE	ESTIMATED COEFFICIENT	t-STATISTIC
Constant	2.05154	13.27969
Rest area location indicator variable (1 if Emigrant, 0 otherwise)	-0.43246	-1.96573
Rest area location indicator variable (1 if Greycliff, 0 otherwise)	-0.21972	-2.12397
Rest area location indicator variable (1 if Homestake, 0 otherwise)	-0.52742	-3.47939
Rest area location indicator variable (1 if Red Rock, 0 otherwise)	-0.41569	-2.42942
Day of the week indicator variable (1 if Sunday, 0 otherwise)	0.67779	3.34796
Day of the week indicator variable (1 if Monday, 0 otherwise)	0.23221	2.01409
Average length of roundtrip	3.18428e-004	2.83197
Gender indicator variable (1 if male, 0 otherwise)	0.19624	2.85333
Average age	7.04269e-003	3.04468
Threshold 1	1.31123	23.39311
Threshold 2	2.54016	90.82943
Threshold 3	2.95612	99.32186
Number of observations	1067	
Log likelihood – initial	-2196.94154	
Log likelihood - at convergence	-1303.26796	

4 CONCLUSIONS AND RECOMMENDATIONS

Recall that the intent of this Rest Area User Survey was to address such questions as:

- How satisfied are current rest area users with the condition of rest areas in Montana?
- What are rest area user priorities with respect to rest area improvements?
- Where should other rest areas be located, according to rest area users?
- How do the responses to these questions differ given various rest area usage, travel-related and demographic characteristics?

Montana-specific findings related to each of these questions are summarized below.

4.1 REST AREA CONDITIONS

In all cases, responses related to Montana's rest area conditions varied significantly by rest area location. Overall rest area satisfaction ratings were generally favorable although satisfaction levels dropped when asked to compare to rest areas outside of Montana. Customer segmentation models supported these findings; larger travel parties, people traveling longer distances and out-of-state residents rate Montana's rest areas less favorably. In combination, these findings suggest room for improvement, particularly if the public favors rest areas in neighboring rural states.

While overall rest area satisfaction ratings were generally favorable, a number of specific criticisms were expressed related to rest area cleanliness, facility operability and availability of supplies. Again, these criticisms were highly location dependent. The high number of criticisms received in this survey speak to the need to re-evaluate current rest area maintenance practices.

When asked what should be done with a particular rest area, most respondents suggested leaving the facility as is or improving it. As established in the customer segmentation models, persons traveling on longer trips are likely to want the rest areas in Montana improved. Conversely, people traveling on vacation or recreation favor leaving the rest areas as is. These findings in

combination suggest that the most dissatisfied rest area users are not recreational tourists but are longer-distance, work-related travelers (i.e., sales persons, truck drivers).

The willingness of rest area users to pay a fee for rest area improvements was higher than anticipated. The most acceptable per use fee was between \$0.25 and \$1.00. Not surprisingly, work-related travelers, who may in fact be the most frequent users of rest areas in Montana, are more willing to pay a fee for rest area improvements.

4.2 REST AREA IMPROVEMENT PRIORITIES

Averaged among all sites, the five most important amenities selected by rest area users include: trashcans, parking lot/pathway lighting, year-round access to restroom facilities, sufficient restroom stalls and year-round access to parking. The importance of sufficient restroom stalls did not differ significantly by gender. Differences were noted on the basis of rest area user age and party size, however, no significant differences were noted related to vehicle type, trip length or trip purpose (i.e., work-related, long-distance).

When asked to rank the importance of travel-related information, weather, road condition and traffic condition information was viewed as most important. Travel information was preferred in pamphlets/newspapers or bulletin boards rather than computerized information centers although this varied somewhat by trip purpose. Shoppers prefer pamphlets and newspapers while persons traveling on longer-distance trips notably disfavor bulletin boards for travel information. Bulletin boards likely contain information that is either dated or too localized to be useful for longer-distance travelers (assuming that they are traveling for work and not recreational purposes).

The majority of respondents at all sites responded negatively to private development at rest areas. Of those that favored private development, the most popular services included gas or automotive services and fast food restaurants. Private development support varied somewhat by rest area user age, party size, household income and marital status.

4.3 REST AREA LOCATIONS, ACCESSIBILITY AND SAFETY

Not surprisingly, most rest area users felt that there is an insufficient number of rest areas in Montana. Rest area spacing requests ranged from one every 40 to one every 100 miles. Suggested rest area locations are depicted in Figure 10. As trip length and party size increase, rest area location rates less favorably. However, as the number of people in the party under age 12 increases, rest area location rates more favorably.

Access to and at Montana's rest areas was generally rated as good although again, variations were noted by site. Surprisingly, vehicle type (i.e., large truck) was not found to be a significant factor affecting access-related opinions. Specific access deficiencies were noted by site with respect to automobile parking, truck and RV parking, handicapped access and year-round access.

Most felt safe and secure at Montana's rest areas although the level of safety experienced dropped when qualified to reflect nighttime conditions. Longer distance travelers and older travelers are more likely to feel safe at night.

4.4 IMPLICATIONS FOR LONG-RANGE REST AREA PLAN UPDATE

Recall that one objective of this effort was to support the development of the updated Long-range Rest Area Plan by directly providing information related to rest area user opinions and needs. Implications and uses of this report's findings for the Long-range rest Area Plan Update are summarized below.

- Overall, comparative and facility/service-specific rest area satisfaction ratings, sorted by site, will allow prioritization of improvements by site and type of improvement.
- Specific criticisms related to cleanliness, operability and availability, listed by site, will allow for prioritization of improvements and will encourage a re-evaluation of existing rest area maintenance practices.
- Rest area recommended actions (i.e., abandon, improve, repair, leave as is, other) ranked by site will support decision-making and allow for prioritization of improvements.

- Although not currently under consideration in Montana, these findings could help to establish acceptable rest area user fee rates and target the more reluctant rest area user groups.
- Desirable amenities, ranked by type, will allow prioritization of added rest area facilities or services (i.e., computerized kiosks, etc.).
- Travel information, ranked by importance, will allow prioritization of desirable travel information and acceptable mediums.
- These findings establish private development at rest areas as a low priority.
- Acceptable spacing limits and rest area location suggestions will support decision-making related to new rest area facilities.
- Specific access-related deficiencies, identified by site, will at a minimum target special studies to investigate design/access deficiencies.

This report documents the needs and expectations of rest area users in Montana. As seen here, this information can be directly incorporated into rest area planning efforts. Further, this effort has directly supported the MDT, Planning Division mission “to provide ways for interested citizens and stakeholders to obtain information and provide input into transportation planning and decision-making...” In the long-term, information obtained from the user survey, in combination with other information, will aid MDT planners and policy makers in establishing priorities and allocating resources for future rest area improvements in Montana.

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APPENDICES