

MALHEUR COUNTY SUMMARY OF FINDINGS

I Executive Summary

Introduction

The purpose of the 1996 Oregon Travel Behavior Survey is to provide information suitable for gaining an in-depth understanding of the activity and travel behavior of both households in non-metropolitan areas and the individuals within those households. The sampling approach used was designed to ensure that representative statewide data were obtained.

The 1996 Oregon Travel Behavior Survey was conducted under the auspices of the Oregon Department of Transportation. This survey relied on the willingness of area residents to complete diary records of their daily travel. Recruitment of households was conducted through a "recruitment interview" in which respondents were informed of the survey, its purpose and the respondent's obligation to complete diaries. Data on households and household members were also collected during the recruitment interview.

Participating households were assigned a "2-day travel period", which typically occurred 10 days after recruitment. Household members were asked to record travel information in their diaries for the specified 48-hour period. Immediately after the assigned date, households were contacted to retrieve the diary information.

The survey consisted of a scientifically formulated sample design, appropriate instruments for data collection, a package of written materials to communicate with survey respondents, a toll-free survey hotline, and data collection, processing and reporting procedures that comported to standards of the Council of American Survey Research Organizations (CASRO).

Data collection for Malheur County was conducted from April to June 1996. Data collection resulted in 473 recruited households. Of these, 317 provided the necessary information to result in completed surveys. The total number of activities reported was 23,526, and the total number of person trips was 5,728. These totals translate into an average of 74 activities and 18 trips per household for the two-day period. As expected, trips rates were shown to increase with respect to household size.

Average Person Trips Per Day

- One-person households averaged 3.46 trips per day,
- Two-person households averaged 6.88 trips per day,
- Three-person households averaged 10.57 trips per day,
- Four-person households averaged 12.44 trips per day,
- Five-person households averaged 17.93 trips per day,
- Six-person households averaged 22.85 trips per day, and
- Seven-or-more-person households averaged 28.67 trips per day.

The average rate for all households was roughly nine (9) person trips per day.

Summary of Methods

The accompanying "Technical Memorandum" describes the survey methodology in detail.

II Sampling and Response

Sample Design

The universe consists of households in the city of Ontario in Malheur County. This specification defined the universe as households in zip code 97914 which represents 69% of the county's households. The household count for the study area was 17,261 households. It was determined using projections of annual growth rates from 1994 and/or 1995 commercial estimates. For purposes of the survey, a household was defined as "all persons currently living in the same dwelling who typically share meals together as well as share at least a part of their income."

The Oregon Travel Behavior Survey used a random sample of telephone numbers in the study area. A random sample is one in which the probability, or relative chance, that any given household will be included in the sample is the same for all households in the universe. The sampling frame for the Oregon Travel Behavior Survey consisted of listed and unlisted telephone numbers for Ontario drawn in proportion to their distribution within the county. Due to the nature of the sampling frame requested in the survey proposal, households without telephones were excluded from the sample.

Response Rate

The Oregon Travel Behavior Survey used a two-stage sampling process (household recruitment and household retrieval). In such a case, response rates for recruitment and retrieval stages are reported independently, and then an overall response rate is reported by multiplying the two rates.

The **recruitment rate** is calculated using the following formula:

$$\text{Recruitment rate} = \frac{\text{Number of Recruited Households}}{\text{Number of Eligible Households in Sample}}$$

The number of recruited households is known - 473 households. The number of eligible households in the sample is calculated from the dispositions recorded for each sample piece. Contact attempts yielded three types of sample dispositions: (1) Eligible Sample, (2) Ineligible Sample, and (3) Eligibility Unknown Sample (see Table II-1). In estimating the eligible households, the number of eligible sample units is combined with a pro-rated number of eligibility unknown sample units. The pro-rated number is determined by totaling the number of eligible and ineligible sample, and then identifying the portion of the total comprised by eligible or ineligible sample. The number of eligible households is then calculated by adding the proportion of unknown sample (66%) to the total number of recruited households.

Recruitment Rate Calculation		
	Calculation	Total/ Percent
Number of Recruited Households		473
Total Number of Eligible and Ineligible Sample	602+311	913
Proportion of Eligible Sample	602 / 913	66%
Proportion of Ineligible Sample	311 / 913	34%
Number of Eligible Households	602 + 306	908
Recruitment Rate	602 / 908	52%

**Table II-1
Final Sample Dispositions (n=1,347)**

Dispositions	Frequency	Percent	Total Number and Percent
Eligible Sample			43.8%
Recruited	473	34.4	
Second Refusal	52	3.8	
Terminated in middle of interview	65	4.7	
Over Quota	12	0.9	
			602
Ineligible Sample			22.6%
Disconnected Number	184	13.4	
Deaf/Language	42	3.1	
Business/Government	51	3.7	
Computer/Fax	28	2.0	
Non-Qualified	6	0.4	
			311
Eligibility Unknown Sample			33.6%
First Refusal	283	20.6	
No Answer	73	5.3	
Busy	22	1.6	
Answering Machines	51	3.7	
Call Back Appointments/Requests	34	2.5	
			463
Total Sample Pieces	1,376	100.1	

The **completion rate** is the rate at which recruited households complete the survey process. It is a measure of sample attrition, which is one determinant of sample bias. This rate is calculated by dividing the total number of completed surveys by the total number of recruited households. In the study, 316 households, of 472 recruited households, completed their surveys for a completion rate of 67%. Multiplying the recruitment rate by the completion rate, we arrive at 35% as the **overall response rate**.

The final day-of-week distribution is displayed in Table II-2. A fairly even distribution was obtained across each day of the week. All weekend travel was recorded in conjunction with a weekday (Friday/Saturday and Sunday/Monday) at the client's request.

**Table II-2
Travel Day of Week Distribution
(n=316)**

Travel Day Pairs	Percent
Monday/Tuesday	19.9%
Tuesday/Wednesday	13.9%
Wednesday/Thursday	14.2%
Thursday/Friday	18.0%
Friday/Saturday	14.6%
Saturday/Sunday	0.0%
Sunday/Monday	19.6%

Survey Validation

The objective of validation was to estimate the precision of the survey results and evaluate the reasonableness of the survey results. The survey validation involved comparing regional population and housing characteristics with the 1990 STF-3A Census data for Malheur County for reasonableness. In 1990 Malheur County had 26,038 residents in 9,484 households; the total number of housing units was 10,649 while the number of occupied housing units was 9,457. During the study, 473 households were recruited, and 317 actually completed the survey. The following three tables (II-3, II-4, and II-5) compare these Census data elements to the survey data.

Survey respondents reported higher household incomes than are reflected by the Census (Table II-3). Several factors account for this discrepancy. First, the survey contacted only telephone households, while the Census reached every household. Non-telephone households tend to have lower incomes than telephone households, and this bias is reflected in the data. Second, six years have passed since Census data were collected. Incomes tend to increase over time, and this trend is reflected in the data. Third, the unemployment rate of survey respondents was considerably lower than the county-wide rate reported in the Census (see Table IV-4). A higher percentage of employed persons would generate a higher level of income, and this condition is reflected in the data as well.

Household sizes correspond well with Census data (Table II-4). Still, a greater percentage of two-person households completed the survey than are represented by the Census. Also, a smaller percentage of large households completed the survey than are represented by Census data. The burden of collecting activity data over two days may have been too heavy for each member of a large household. Therefore, households with five or more members may be represented less by the survey than by the Census.

Percentages of surveyed housing units with one, two, and three vehicles correspond with Census findings (Table II-5). There is some divergence at the extremes, however. The Census reports a greater percentage of housing units with no vehicles. Potential respondents without vehicles may not have thought a travel survey was relevant to them. First refusals such as this were referred to a Refusal Specialist who attempted to demonstrate the survey's relevance to the respondent. Also, the survey reached only households with telephones. Households with no telephones may be more likely to have no vehicles, and this bias may be represented in the data. Finally, the survey reached more higher-income households than are represented by the Census, and these households are more likely to own vehicles.

**Table II-3
Household Income**

Income	Recruited Households (n=473)	Completed Households (n=317)	Census Data (n=9,484)
\$0-\$4,999	2.53%	2.21%	7.55%
\$5,000-\$9,999	5.29%	4.10%	15.61%
\$10,000-\$14,999	9.94%	10.09%	13.25%
\$15,000-\$19,999	9.94%	10.09%	13.10%
\$20,000-\$24,999	7.82%	7.26%	9.95%
\$25,000-\$29,999	6.98%	6.94%	9.10%
\$30,000-\$34,999	5.71%	7.26%	7.39%
\$35,000-\$39,999	5.50%	5.99%	6.17%
\$40,000-\$44,999	7.87%	8.20%	3.96%
\$45,000-\$49,999	6.77%	7.57%	3.38%
\$50,000-\$54,999	5.71%	6.62%	2.83%
\$55,000-\$59,999	4.65%	5.99%	1.22%
\$60,000-\$100,000	9.73%	9.46%	4.56%
\$100,000 or more	2.96%	2.84%	1.95%
Refused	8.67%	5.36%	--

**Table II-4
Household Size**

Persons per Household	Recruited Households (n=473)	Completed Households (n=317)	Census Data (n=9,484)
1 Person	19.45%	23.66%	24.57%
2 Persons	39.11%	39.75%	32.73%
3 Persons	13.32%	11.36%	14.47%
4 Persons	14.80%	13.25%	13.89%
5 Persons	6.98%	6.94%	8.39%
6 Persons	4.44%	4.10%	3.34%
7 or More Persons	1.90%	0.95%	2.61%
Refused	0.00%	0.00%	--

**Table II-5
Vehicles available per Occupied Housing Unit**

Vehicles Available	Recruited Households (n=473)	Completed Households (n=317)	Census Data (n=9,484)
None	1.90%	1.26%	6.75%
One	24.95%	24.29%	30.05%
Two	37.84%	37.22%	38.79%
Three	18.82%	19.24%	17.80%
Four	10.57%	11.99%	4.97%
Five or More	5.92%	5.99%	1.65%
Refused	0.00%	0.00%	--

III Household Characteristics

The following tables provide information about respondents' households. Where available, collected data is compared to Census Data.

**Table III-1
Household Size by Income (Completed Households=317)**

Income		HH Size							Total
		1	2	3	4	5	6	7+	
less than \$4,999	Count	4	2	0	1	0	0	0	7
	Row %	57.14%	28.57%	0.00%	14.29%	0.00%	0.00%	0.00%	100.0%
	Column %	5.33%	1.59%	0.00%	2.38%	0.00%	0.00%	0.00%	2.21%
\$5,000 to \$9,999	Count	7	2	2	1	1	0	0	13
	Row %	53.85%	15.38%	15.38%	7.69%	7.69%	0.00%	0.00%	100.0%
	Column %	9.33%	1.59%	5.56%	2.38%	4.55%	0.00%	0.00%	4.10%
\$10,000 to \$14,999	Count	13	11	3	0	2	0	3	32
	Row %	40.63%	34.38%	9.38%	0.00%	6.25%	0.00%	9.38%	100.0%
	Column %	20.00%	8.73%	8.33%	0.00%	9.09%	0.00%	100.00%	10.09%
\$15,000 to \$19,999	Count	15	10	1	3	3	0	0	32
	Row %	46.88%	31.25%	3.13%	9.38%	9.38%	0.00%	0.00%	100.0%
	Column %	20.00%	7.94%	2.78%	7.14%	13.64%	0.00%	0.00%	10.09%
\$20,000 to \$24,999	Count	8	8	1	3	3	0	0	23
	Row %	34.78%	34.78%	4.35%	13.04%	13.04%	0.00%	0.00%	100.0%
	Column %	10.67%	6.35%	2.78%	7.14%	13.64%	0.00%	0.00%	7.26%

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Table III-1 (Continued)
Household Size by Income (Completed Households=316)

Income		HH Size							Total
		1	2	3	4	5	6	7+	
\$25,000 to \$29,999	Count	6	7	3	4	0	2	0	22
	Row %	27.27%	31.82%	13.64%	18.18%	0.00%	9.09%	0.00%	100.0%
	Column %	8.00%	5.56%	8.33%	9.52%	0.00%	15.38%	0.00%	6.94%
\$30,000 to \$34,999	Count	6	9	3	3	1	1	0	23
	Row %	26.09%	39.13%	13.04%	13.04%	4.35%	4.35%	0.00%	100.0%
	Column %	8.00%	7.14%	8.33%	7.14%	4.55%	7.69%	0.00%	7.26%
\$35,000 to \$39,999	Count	5	5	3	3	1	2	0	19
	Row %	26.32%	26.32%	15.79%	15.79%	5.26%	10.53%	0.00%	100.0%
	Column %	6.67%	3.97%	8.33%	7.14%	4.55%	15.38%	0.00%	5.99%
\$40,000 to \$44,999	Count	3	15	0	6	2	0	0	26
	Row %	11.54%	57.69%	0.00%	23.08%	7.69%	0.00%	0.00%	100.0%
	Column %	4.00%	11.90%	0.00%	14.29%	9.09%	0.00%	0.00%	8.20%
\$45,000 to \$49,999	Count	1	10	4	4	4	1	0	24
	Row %	4.17%	41.67%	16.67%	16.67%	16.67%	4.17%	0.00%	100.0%
	Column %	1.33%	7.94%	11.11%	9.52%	18.18%	7.69%	0.00%	7.57%
\$50,000 to \$54,999	Count	0	14	2	4	1	0	0	21
	Row %	0.00%	66.67%	9.52%	19.05%	4.76%	0.00%	0.00%	100.0%
	Column %	0.00%	11.11%	5.56%	9.52%	4.55%	0.00%	0.00%	6.62%
\$55,000 to \$59,999	Count	0	9	4	3	2	1	0	19
	Row %	0.00%	47.37%	21.05%	15.79%	10.53%	5.26%	0.00%	100.0%
	Column %	0.00%	7.14%	11.11%	7.14%	9.09%	7.69%	0.00%	5.99%
\$60,000 to \$100,000	Count	2	12	6	3	1	6	0	30
	Row %	6.67%	40.00%	20.00%	10.00%	3.33%	20.00%	0.00%	100.0%
	Column %	2.67%	9.52%	16.67%	7.14%	4.55%	46.15%	0.00%	9.46%
more than \$100,000	Count	0	4	1	3	1	0	0	9
	Row %	0.00%	44.44%	11.11%	33.33%	11.11%	0.00%	0.00%	100.0%
	Column %	0.00%	3.17%	2.78%	7.14%	4.55%	0.00%	0.00%	2.84%
Refused	Count	5	8	3	1	0	0	0	17
	Row %	29.41%	47.06%	17.65%	5.88%	0.00%	0.00%	0.00%	100.0%
	Column %	6.67%	6.35%	8.33%	2.38%	0.00%	0.00%	0.00%	5.36%
Total	Count	75	126	36	42	22	13	3	313
	Row %	23.66%	39.75%	11.36%	13.25%	6.94%	4.10%	0.95%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table III-2
Household Size by Number of Vehicles Available
(Completed Households=317)**

Vehicles	HH Size								Total
	1	2	3	4	5	6	7+		
None	Count	4	0	0	0	0	0	0	4
	Row %	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.0%
	Column %	5.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.26%
1	Count	52	17	5	2	0	0	1	77
	Row %	67.53%	22.08%	6.49%	2.60%	0.00%	0.00%	1.30%	100.0%
	Column %	69.33%	13.49%	13.89%	4.76%	0.00%	0.00%	33.33%	24.29%
2	Count	17	59	12	15	11	3	1	118
	Row %	14.41%	50.00%	10.17%	12.71%	9.32%	2.54%	0.85%	100.0%
	Column %	22.67%	46.83%	33.33%	35.71%	50.00%	23.08%	33.33%	37.22%
3	Count	1	30	8	15	4	3	0	61
	Row %	1.64%	49.18%	13.11%	24.59%	6.56%	4.92%	0.00%	100.0%
	Column %	1.33%	23.81%	22.22%	35.71%	18.18%	23.08%	0.00%	19.24%
4	Count	0	16	6	8	3	4	1	38
	Row %	0.00%	42.11%	15.79%	21.05%	7.89%	10.53%	2.63%	100.0%
	Column %	0.00%	12.70%	16.67%	19.05%	13.64%	30.77%	33.33%	11.99%
5 or more	Count	1	4	5	2	4	3	0	19
	Row %	5.26%	21.05%	26.32%	10.53%	21.05%	15.79%	0.00%	100.0%
	Column %	1.33%	3.17%	13.89%	4.76%	18.18%	23.08%	0.00%	6.01%
Refused	Count	0	0	0	0	0	0	0	0
	Row %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.0%
	Column %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	Count	75	126	36	42	22	13	3	317
	Row %	23.66%	39.75%	11.36%	13.25%	6.94%	4.10%	0.95%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table III-3
Dwelling Type (All Housing Units)**

Type of Dwelling	Recruited Households (n=473)	Completed Households (n=317)	Census Data (n=10,649)
Single, Detached	79.28%	80.76%	67.37%
Multi Unit	11.21%	11.67%	13.73%
Mobile Home or Trailer	8.88%	7.26%	18.19%
Other	0.21%	0.32%	0.71%
Refused	0.42%	0.00%	--

**Table III-4
Owner/Renter Status (Occupied Housing Units)**

Tenure	Recruited Households (n=473)	Completed Households (n=317)	Census Data (n=9,457)
Own	75.26%	78.23%	64.14%
Rent	22.83%	20.82%	35.86%
Other	0.85%	0.63%	--
Refused	1.06%	0.32%	--

**Table III-5
Length of Residence (Occupied Housing Units)**

	Recruited Households (n=473)	Completed Households (n=317)	Census Data (n=9,457)
Less than 6 months	1.27%	0.95%	25.59%
6 months to 1 year	3.59%	3.79%	
1 to 5 years	5.29%	4.42%	21.77%
5 to 10 years	2.96%	3.15%	13.59%
10 to 20 years	3.59%	3.15%	22.06%
20 years or more	1.27%	1.26%	16.99%
Refused	82.03%	83.28%	--

IV Person Characteristics

The following tables provide information about the respondents themselves. Where available, collected data is compared to Census Data.

**Table IV-1
Gender**

Gender	Recruited Percentage (n=1,289)	Completed Percentage (n=813)	Census Data (n=26,038)
Male	47.40%	46.62%	48.91%
Female	52.60%	53.38%	51.09%
Refused	0.00%	0.00%	--

**Table IV-2
Age of Household Members**

Age	Recruited Percentage (n=1,289)	Completed Percentage (n=813)	Census Data (n=26,038)
0-4	6.98%	6.27%	8.40%
5-9	6.21%	5.29%	8.68%
10-14	9.31%	7.63%	8.66%
15-19	9.15%	9.35%	7.85%
20-24	4.34%	3.69%	4.91%
25-34	8.46%	7.50%	13.00%
35-44	13.81%	14.27%	13.43%
45-54	15.36%	15.74%	9.80%
55-64	9.23%	10.95%	9.71%
65-74	10.55%	11.81%	8.88%
75+	6.21%	7.50%	6.66%
Refused	0.39%	0.00%	--

**Table IV-3
Licensed Drivers by Persons**

License Status	Recruited Percentage (n=1,289)	Completed Percentage (n=813)	Census Data
Licensed	70.13%	73.43%	--
Non-Licensed	7.06%	7.01%	--
Not Applicable (under 16 years of age)	22.58%	19.19%	--
Refused	0.23%	0.37%	--

**Table IV-4
Employment Status by Persons 16 and older**

Employment Status	Recruited Percentage (n=969)	Completed Percentage (n=637)	Census Data (n=18,479)
Employed	60.27%	60.44%	57.05%
Unemployed	1.44%	0.94%	4.27%
Not in Labor Force	37.77%	38.31%	38.68%
Refused	0.52%	0.31%	--

**Table IV-5
Telecommute Status by Employed Persons**

Telecommute to Work?	Recruited Percentage (n=584)	Completed Percentage (n=384)	Census Data
Yes	4.62%	4.16%	--
No	91.78%	90.91%	--
Refused	3.60%	4.94%	--

**Table IV-6
Shift or Flexible Work Schedule by Employed Persons**

Shift or Flexible Work Schedule	Recruited Percentage (n=584)	Completed Percentage (n=384)	Census Data
Yes	21.92%	21.04%	--
No	74.49%	74.29%	--
Refused	3.60%	4.68%	--

**Table IV-7
Length of Employment by Employed Persons**

Length of Employment	Recruited Percentage (n=584)	Completed Percentage (n=384)	Census Data
Less than 1 year	12.16%	12.21%	--
1 - 1.9 years	8.22%	7.79%	--
2 - 2.9 years	5.82%	5.20%	--
3 - 3.9 years	7.53%	5.97%	--
4 - 4.9 years	7.02%	6.49%	--
5 or more years	55.48%	57.40%	--
Refused	3.77%	4.94%	--

**Table IV-8
Student Status by Full- or Part-Time Schedule
Persons 3 years and older**

Student Status	Recruited Percentage (n=1,238)	Completed Percentage (n=779)	Census Data (n=24,717)
Not Enrolled	70.92%	73.17%	70.30%
Part-Time Student	4.44%	4.37%	29.70%
Full-Time Student	23.91%	21.95%	
Refused	0.73%	0.51%	--

**Table IV-9
Educational Attainment by Persons 25 years and older**

Educational Attainment	Recruited Percentage (n=823)	Completed Percentage (n=551)	Census Data (n=16,009)
None through 4th Grade	0.86%	0.54%	14.21%
5th through 7th Grade	1.09%	0.36%	
8th Grade	3.40%	2.90%	
9th through 11th Grade	7.53%	6.72%	15.93%
12th Grade	34.14%	34.48%	31.58%
College Freshman to Junior	23.21%	24.32%	25.73%
College Senior	12.64%	12.89%	8.67%
Post Graduate Work	13.97%	15.25%	4.42%
Refused	3.16%	2.54%	--

Table IV-10

Ethnicity by Person

Ethnicity	Recruited Percentage (n=1,289)	Completed Percentage (n=813)	Census Data (n=26,038)
White, Not Hispanic	80.92%	84.87%	75.62%
Black, Not Hispanic	0.39%	0.49%	0.16%
American Indian, Eskimo or Aleutian, Not Hispanic	1.47%	1.48%	0.93%
Asian or Pacific Islander, Not Hispanic	2.64%	2.71%	2.94%
Other Race, Not Hispanic	0.85%	0.74%	0.054%
Hispanic (Any Race)	13.03%	8.98%	20.25%
Refused	0.70%	0.74%	--

**Table IV-11
Disability Status of Persons 16 years and older**

Disability Status	Recruited Percentage (n=969)	Completed Percentage (n=637)	Census Data (n=18,479)
With a mobility or self-care limitation	5.78%	6.44%	5.35%
Without a mobility or self-care limitation	93.50%	92.93%	94.65%
Refused	0.72%	.63%	--

V Travel Characteristics

Respondents were asked to record all activities over a two-day period. In this report, activity data is reported for the 317 households in the Malheur County study. An average of 74.21 activities were reported by these households for the two-day period. As shown in Table V-1, the most frequently named activities are trips, meals, sleep, personal hygiene, amusements at home, and household maintenance.

**Table V-1
Activities by Type (n=23,526)**

Activity	Frequency	Percent
Trip	5,728	24.31%
Meals	3,764	15.87%
Sleep	3,305	14.02%
Personal Hygiene	2,173	9.22%
Amusements (at home)	2,123	0.52%
Household Maintenance	1,106	0.03%
Work/Work-related activities	1,090	4.58%
Rest and Relaxation	988	4.19%
School	573	2.43%
Shopping	498	2.11%
Visiting	482	2.04%
Household/Personal Business	309	0.03%
Pick-up/Drop-off Passengers	280	1.19%
Household Obligations/Childrearing	214	0.91%
Exercise/Athletics	212	0.90%
Hobbies	160	0.68%
Amusements (out of home)	110	0.43%
Religion/Civil Services	92	0.39%
Out of area	72	0.31%
Civic	65	0.28%
Pet Care	50	0.55%
Medical Care	37	0.16%
Tag-along	32	0.55%
Personal Services	14	0.06%
Casual Entertaining	14	0.06%
Culture	9	0.04%
Professional Services	6	0.03%
Spectator at Athletic Events	6	0.03%
Incidental	8	0.02%

**Table V-1 (Continued)
Activities by Type (n=23,526)**

Activity	Frequency	Percent
Formal Entertaining	4	0.02%
Wait for Plane	2	0.01%

The mean number of activities per household for Day 1 is 36.97 and for Day 2 is 36.59. The relatively small difference between the number of activities reported for each day indicates that the two-day diary worked as planned.

While the diaries focused on respondent activities, information on person trips made in conjunction with those activities was also gathered. The mean number of person trips per household was 17.70 for the two-day period. The mean number of person trips for Day 1 was 9.03, while an average of 8.67 person trips were made per household on Day 2. The average daily trip rate by household size is shown in Table V-2.

The majority of zero-trip households and households with only one to nine person trips had an average income of less than \$40,000. Households with incomes over \$40,000 had higher trip rates. These data are shown in Table V-3.

Table V-5 compares household size and person trip rates. Smaller households generated fewer trips than larger households. For example, there are no zero-trip households with more than four members, and there are no 70+trip households with fewer than five members. These data are shown in Table V-4.

Respondents were asked to record mode usage for each trip taken. Of the 23,526 activities reported by respondents (shown in Table V-1), 17,798 took place at home or had no travel associated with them. For the remaining activities, the travel modes used in accessing the activities are shown in Table V-5.

Table V-6 shows average reported trip times by mode. Bicycle trips were, on average, the shortest. The average private vehicle trip was just over 14 minutes. Walking trips and public bus trips were similar in mean length at around 17 minutes. School bus trips were longer at over 25 minutes. The few airplane trips recorded lasted, on average, over two hours.

**Table V-2
Average 1-Day Household Trip Rate
by Household Size**

Household Size	Average Daily Trips
One	3.46
Two	6.88
Three	10.57
Four	12.44
Five	17.93
Six	22.85
Seven or more	28.67

Table V-3

2-Day Household Trips by Household Income (n=317)

Number of Trips		Income			Total
		Under \$40,000	Over \$40,000	Refused	
none	Count	18	5	3	26
	Row %	69.23%	19.23%	11.54%	100.00%
	Column %	10.41%	3.84%	21.43%	8.20%
1 to 9	Count	69	11	2	82
	Row %	84.15%	13.42%	2.44%	100.00%
	Column %	39.88%	8.46%	14.29%	25.87%
10 to 19	Count	39	54	5	98
	Row %	39.80%	55.10%	5.10%	100.00%
	Column %	22.54%	41.54%	35.71%	30.92%
20 to 29	Count	26	31	4	61
	Row %	42.62%	50.82%	6.56%	100.00%
	Column %	15.03%	23.85%	28.57%	19.24%
30 to 39	Count	12	10	0	22
	Row %	54.55%	45.45%	0.00%	100.00%
	Column %	6.94%	7.69%	0.00%	6.94%
40 to 49	Count	4	7	0	11
	Row %	36.36%	63.64%	0.00%	100.00%
	Column %	2.31%	5.39%	0.00%	3.47%
50 to 59	Count	2	7	0	9
	Row %	22.22%	77.78%	0.00%	100%
	Column %	1.16%	5.39%	0.00%	2.84%
60 to 69	Count	1	2	0	3
	Row %	33.33%	66.67%	0.00%	100.00%
	Column %	0.58%	1.54%	0.00%	0.95%
more than 70	Count	2	3	0	5
	Row %	40.00%	60.00%	0.00%	100.00%
	Column %	1.16%	2.31%	0.00%	1.58%
Total	Count	173	130	14	317
	Row %	54.57%	41.01%	4.42%	100.00%
	Column %	100.00%	100.00%	100.00%	100.00%

**Table V-4
2-Day Household Trips by Household Size (n=317)**

Number of Trips		HH Size							Total
		1	2	3	4	5	6	7+	
none	Count	12	10	3	1	0	0	0	26
	Row %	46.15%	38.46%	11.54%	3.85%	0.00%	0.00%	0.00%	100.00%
	Column %	16.00%	7.94%	8.33%	2.38%	0.00%	0.00%	0.00%	8.20%
1 to 9	Count	40	29	5	5	1	2	0	82
	Row %	48.78%	35.37%	6.10%	6.10%	1.22%	2.44%	0.00%	100.00%
	Column %	53.33%	23.02%	13.89%	11.90%	4.55%	15.38%	0.00%	25.87%
10 to 19	Count	21	56	10	8	3	0	0	98
	Row %	21.43%	57.14%	10.20%	8.16%	3.06%	0.00%	0.00%	100.00%
	Column %	28.00%	44.44%	27.78%	19.05%	13.64%	0.00%	0.00%	30.91%
20 to 29	Count	2	26	10	14	8	1	0	61
	Row %	3.28%	42.62%	16.39%	22.95%	13.11%	1.64%	0.00%	100.00%
	Column %	2.67%	20.63%	27.78%	33.33%	36.36%	7.69%	0.00%	19.24%
30 to 39	Count	0	4	5	8	2	2	1	22
	Row %	0.00%	18.18%	22.73%	36.36%	9.09%	9.09%	4.55%	100.00%
	Column %	0.00%	3.17%	13.89%	19.05%	9.09%	15.38%	33.33%	6.94%
40 to 49	Count	0	1	1	3	4	2	0	11
	Row %	0.00%	9.09%	9.09%	27.27%	36.36%	18.18%	0.00%	100.00%
	Column %	0.00%	0.79%	2.78%	7.14%	18.18%	15.38%	0.00%	3.47%
50 to 59	Count	0	0	1	3	1	4	0	9
	Row %	0.00%	0.00%	11.11%	33.33%	11.11%	44.44%	0.00%	100.00%
	Column %	0.00%	0.00%	2.78%	7.14%	4.55%	30.77%	0.00%	2.84%
60 to 69	Count	0	0	1	0	1	0	1	3
	Row %	0.00%	0.00%	33.33%	0.00%	33.33%	0.00%	33.33%	100.00%
	Column %	0.00%	0.00%	2.78%	0.00%	4.55%	0.00%	33.33%	0.95%
more than 70	Count	0	0	0	0	2	2	1	5
	Row %	0.00%	0.00%	0.00%	0.00%	40.00%	40.00%	20.00%	100.00%
	Column %	0.00%	0.00%	0.00%	0.00%	9.09%	15.38%	33.33%	1.58%
Total	Count	75	126	36	42	22	13	3	317
	Row %	23.66%	39.75%	11.36%	13.25%	6.94%	4.10%	0.95%	100.00%
	Column %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

**Table V-5
Trip Mode (n=5,728)**

Mode	Percent
Private Vehicle	93.16%
Walk	2.86%
Bicycle	0.73%
School Bus	2.88%
Public Bus	0.23%
Other (Airplane)	0.14%

**Table V-6
Average “Reported” Household Trip Times by Mode (n=5,728)**

Mode	Mean Trip Length (min.)
Private Vehicle	14.33
Walk	16.75
Bicycle	11.29
School Bus	25.31
Public Bus	17.38
Other (Airplane)	123.13

VI Item Non-Response

The following tables show the item non-response for questions contained on the recruitment instrument. The non-response rate is the percentage of respondents who did not provide an answer to the item. As indicated in the tables below, all efforts were made to minimize non-response.

**Table VI-1
Percent Item Non-Response - Household Questions (n=317)**

Household Variables	Percent Non-Response
Household Size	0.00%
Household Vehicles	0.00%
Home Ownership	1.06%
Time in Residence	82.03%
Dwelling Type	0.42%
Household Income	8.67%

**Table VI-2
Percent Item Non-Response - Person Question (n=1289)**

Person Variables	Percent Non-Response
Relation to Head of Household	0.02%
Age	0.39%
Race	0.70%
Drivers License Status	0.23%
Employment Status	0.52%
Occupation	1.47%
Industry	1.32%
Shiftwork	3.60%
Years at Work Site	1.86%
Student Status	0.73%
Student Level - Head of Household	0.21%
Student Level - Others	1.10%
Disability	0.54%