

LINCOLN 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 of Lincoln County was conducted from April to November 1996. Data collection resulted in 604 recruited households. Of these, 356 provided the necessary information to result in completed surveys. The total number of activities reported was 21,098, and the total number of trips was 5584. These totals translate into an average of about 59.26 activities and about 15.69 trips per household for the two-day period. The sampled too few six- or seven-person households to make reliable estimates of person trip rates.

Average Person Trips Per Day

- One-person households averaged 3.72 trips per day,
- Two-person households averaged 7.24 trips per day,
- Three-person households averaged 12.81 trips per day,
- Four-person households averaged 17.41 trips per day,
- Five-person households averaged 15.00 trips per day,

The average rate for all households was roughly eight (8) trips per day.

Summary of Methods

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

II Sampling and Response

Sample Design

The universe consists of households in the cities of Newport, Lincoln City, and Depoe Bay in Lincoln County. The household count for the study area was 23,039 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 Clatsop County 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.

The Lincoln County sample included the cities of Newport (zip codes 97365,97366), Lincoln City (97367), and Depoe Bay (97341). These zip codes cover 58% of the households in the county.

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 - 604 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 (60%) to the total number of recruited households.

| Recruitment Rate Calculation | | |
|--|-------------|-------------------|
| | Calculation | Total/ Percent |
| Number of Recruited Households | | 604 |
| Total Number of Eligible and Ineligible Sample | 868 + 574 | 1,442 |
| Proportion of Eligible Sample | 868 / 1,442 | 60% |
| Proportion of Ineligible Sample | 574 / 1,442 | 40% |
| Number of Eligible Households | 604 + 334 | 938 |
| Recruitment Rate | 604 / 938 | 64% |

**Table II-1
Final Sample Dispositions (n=2,051)**

| Dispositions | Frequency | Percent | Total Number and Percent |
|-----------------------------------|--------------|--------------|--------------------------|
| Eligible Sample | | | 43.4% |
| Recruited | 604 | 30.2 | |
| Second Refusal | 160 | 8.0 | |
| Terminated in middle of interview | 29 | 1.4 | |
| Over Quota | 75 | 3.7 | |
| | | | 868 |
| Ineligible Sample | | | 28.7% |
| Disconnected Number | 354 | 17.7 | |
| Deaf/Language | 32 | 1.6 | |
| Business/Government | 100 | 5.0 | |
| Computer/Fax | 34 | 1.7 | |
| Non-Qualified | 40 | 2.0 | |
| Non-Resident | 14 | .7 | |
| | | | 574 |
| Eligibility Unknown Sample | | | 27.9% |
| First Refusal | 271 | 13.6 | |
| No Answer | 144 | 7.2 | |
| Busy | 15 | .8 | |
| Answering Machines | 69 | 3.5 | |
| Call Back Appointments/Requests | 58 | 2.9 | |
| | | | 557 |
| Total Sample Pieces | 1,999 | 100.0 | |

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 (356) by the total number of recruited households (604). A completion rate of 59% was obtained. The **Overall Response Rate** is calculated by multiplying the recruitment rate (64%) by the completion rate (59%) for a rate of 38%.

The final day-of-week distribution is displayed in Table II-2. A fairly even distribution was obtained across days of the week with the exception of the Friday/Saturday pair.

**Table II-2
Travel Day of Week Distribution
(n=420)**

| Travel Day Pairs | Percent |
|--------------------|---------|
| Monday/Tuesday | 18.0% |
| Tuesday/Wednesday | 18.5% |
| Wednesday/Thursday | 17.4% |
| Thursday/Friday | 22.2% |
| Friday/Saturday | 5.6% |
| Saturday/Sunday | 0.0% |
| Sunday/Monday | 18.3% |

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 Lincoln County for reasonableness. In 1990 Lincoln County had 38,889 residents in 16,455 households; the total number of housing units was 22,389 while the number of occupied housing units was 16,455. During the study, 604 households were recruited, and 356 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). Lincoln County has an unusually low percentage of 6+ person households. 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 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=604) | Completed Households (n=356) | Census Data (n=16,513) |
|--------------------|------------------------------|------------------------------|------------------------|
| \$0-\$4,999 | 1.66% | 1.40% | 6.01% |
| \$5,000-\$9,999 | 4.80% | 5.06% | 12.28% |
| \$10,000-\$14,999 | 8.77% | 8.99% | 13.19% |
| \$15,000-\$19,999 | 7.78% | 8.15% | 11.98% |
| \$20,000-\$24,999 | 9.44% | 10.67% | 10.85% |
| \$25,000-\$29,999 | 8.44% | 9.55% | 9.23% |
| \$30,000-\$34,999 | 4.97% | 5.34% | 7.84% |
| \$35,000-\$39,999 | 6.13% | 6.18% | 6.23% |
| \$40,000-\$44,999 | 7.45% | 7.02% | 5.09% |
| \$45,000-\$49,999 | 5.96% | 5.90% | 4.02% |
| \$50,000-\$54,999 | 6.13% | 7.30% | 3.75% |
| \$55,000-\$59,999 | 4.47% | 5.06% | 2.38% |
| \$60,000-\$100,000 | 10.26% | 9.27% | 5.63% |
| \$100,000 or more | 2.65% | 2.25% | 1.55% |
| Refused | 11.09% | 7.86% | -- |

Table II-4

Household Size

| Persons per Household | Recruited Households (n=604) | Completed Households (n=356) | Census Data (n=16,513) |
|------------------------------|-------------------------------------|-------------------------------------|-------------------------------|
| 1 Person | 27.48% | 30.34% | 26.29% |
| 2 Persons | 47.85% | 51.69% | 41.84% |
| 3 Persons | 8.94% | 7.86% | 13.16% |
| 4 Persons | 10.43% | 8.15% | 11.60% |
| 5 Persons | 4.14% | 1.12% | 4.65% |
| 6 Persons | 0.33% | 0.00% | 1.71% |
| 7 or More Persons | 0.83% | 0.84% | 0.75% |
| Refused | 0.00% | 0.00% | -- |

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

| Vehicles Available | Recruited Households (n=604) | Completed Households (n=356) | Census Data (n=16,455) |
|---------------------------|-------------------------------------|-------------------------------------|-------------------------------|
| None | 4.80% | 5.06% | 6.98% |
| One | 33.28% | 33.14% | 39.15% |
| Two | 38.74% | 40.73% | 40.47% |
| Three | 15.07% | 14.61% | 10.48% |
| Four | 5.13% | 3.65% | 1.93% |
| Five or More | 2.98% | 2.81% | 0.99% |
| 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=356)**

| Income | | HH Size | | | | | | | Total |
|-----------------------------|----------|---------|--------|--------|--------|--------|-------|--------|---------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7+ | |
| less than \$4,999 | Count | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| | Row % | 80.00% | 00.00% | 20.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 3.70% | 0.00% | 3.57% | 0.00% | 0.00% | 0.00% | 0.00% | 1.4% |
| \$5,000 to \$9,999 | Count | 12 | 5 | 1 | 0 | 0 | 0 | 0 | 18 |
| | Row % | 66.67% | 27.78% | 5.55% | 0.00% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 11.11% | 2.72% | 3.57% | 0.00% | 0.00% | 0.00% | 0.00% | 5.1% |
| \$10,000 to \$14,999 | Count | 16 | 15 | 0 | 1 | 0 | 0 | 0 | 32 |
| | Row % | 50.00% | 46.88% | 0.00% | 3.12% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 14.81% | 8.15% | 0.00% | 3.45% | 0.00% | 0.00% | 0.00% | 9.0% |
| \$15,000 to \$19,999 | Count | 19 | 8 | 2 | 0 | 0 | 0 | 0 | 29 |
| | Row % | 65.52% | 27.58% | 6.90% | 0.00% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 17.59% | 4.35% | 7.15% | 0.00% | 0.00% | 0.00% | 0.00% | 8.1% |
| \$20,000 to \$24,999 | Count | 11 | 23 | 2 | 1 | 1 | 0 | 0 | 38 |
| | Row % | 28.95% | 60.53% | 5.26% | 2.63% | 2.63% | 0.00% | 0.00% | 100.0% |
| | Column % | 10.19% | 12.50% | 7.15% | 3.45% | 25.00% | 0.00% | 0.00% | 10.7% |
| \$25,000 to \$29,999 | Count | 14 | 17 | 3 | 0 | 0 | 0 | 0 | 34 |
| | Row % | 41.18% | 50.00% | 8.82% | 0.00% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 12.96% | 9.24% | 10.71% | 0.00% | 0.00% | 0.00% | 0.00% | 9.5% |
| \$30,000 to \$34,999 | Count | 6 | 12 | 0 | 0 | 0 | 0 | 1 | 19 |
| | Row % | 31.58% | 63.16% | 0.00% | 0.00% | 0.00% | 0.00% | 5.26% | 100.0% |
| | Column % | 5.56% | 6.52% | 0.00% | 0.00% | 0.00% | 0.00% | 33.34% | 5.3% |
| \$35,000 to \$39,999 | Count | 6 | 9 | 3 | 4 | 0 | 0 | 0 | 22 |
| | Row % | 27.27% | 40.91% | 13.64% | 18.18% | 9.09% | 0.00% | 0.00% | 100.0% |
| | Column % | 5.56% | 4.89% | 10.71% | 13.79% | 0.00% | 0.00% | 0.00% | 6.2% |

(Table continues on next page)

**Table III-1 (Continued)
Household Size by Income (Completed Households=356)**

| Income | | HH Size | | | | | | | Total |
|--|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7+ | |
| \$40,000 to \$44,999 | Count | 4 | 10 | 3 | 7 | 0 | 0 | 1 | 25 |
| | Row % | 16.00% | 40.00% | 12.00% | 28.00% | 0.00% | 0.00% | 4.00% | 100.0% |
| | Column % | 3.70% | 5.43% | 10.71% | 24.14% | 0.00% | 0.00% | 33.33% | 7.0% |
| \$45,000 to \$49,999 | Count | 2 | 13 | 3 | 2 | 0 | 0 | 1 | 21 |
| | Row % | 9.52% | 61.91% | 14.29% | 9.52% | 0.00% | 0.00% | 4.76% | 100.0% |
| | Column % | 1.85% | 7.07% | 10.71% | 6.90% | 0.00% | 0.00% | 33.33% | 5.9% |
| \$50,000 to \$54,999 | Count | 1 | 20 | 2 | 2 | 1 | 0 | 0 | 26 |
| | Row % | 3.85% | 76.92% | 7.69% | 7.69% | 3.85% | 0.00% | 0.00% | 100.0% |
| | Column % | 0.93% | 10.87% | 7.15% | 6.90% | 25.00% | 0.00% | 0.00% | 7.3% |
| \$55,000 to \$59,999 | Count | 0 | 11 | 3 | 3 | 1 | 0 | 0 | 18 |
| | Row % | 0.00% | 61.11% | 16.67% | 16.67% | 5.55% | 0.00% | 0.00% | 100.0% |
| | Column % | 0.00% | 5.98% | 10.71% | 10.34% | 25.00% | 0.00% | 0.00% | 5.1% |
| \$60,000 to \$100,000 | Count | 3 | 21 | 3 | 6 | 0 | 0 | 0 | 33 |
| | Row % | 9.09% | 63.64% | 9.09% | 18.18% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 2.78% | 11.41% | 10.71% | 20.69% | 0.00% | 0.00% | 0.00% | 9.3% |
| more than \$100,000 | Count | 1 | 6 | 0 | 0 | 1 | 0 | 0 | 8 |
| | Row % | 12.50% | 75.00% | 0.00% | 0.00% | 12.50% | 0.00% | 0.00% | 100.0% |
| | Column % | 0.93% | 3.26% | 0.00% | 0.00% | 25.00% | 0.00% | 0.00% | 2.2% |
| Refused | Count | 9 | 14 | 2 | 3 | 0 | 0 | 0 | 28 |
| | Row % | 32.14% | 50.00% | 7.14% | 10.72% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 8.33% | 7.61% | 7.15% | 10.34% | 0.00% | 0.00% | 0.00% | 7.9% |
| Total | Count | 108 | 184 | 28 | 29 | 4 | 0 | 3 | 356 |
| | Row % | 30.34% | 51.69% | 7.86% | 8.15% | 1.12% | 0.00% | 0.84% | 100% |
| | 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=356)**

| Vehicles | HH Size | | | | | | | | Total |
|------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7+ | | |
| None | Count | 16 | 2 | 0 | 0 | 0 | 0 | 0 | 18 |
| | Row % | 88.89% | 11.11% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 14.81% | 1.09% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 5.1% |
| 1 | Count | 66 | 50 | 2 | 0 | 0 | 0 | 0 | 118 |
| | Row % | 55.93% | 42.37% | 1.70% | 0.00% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 61.11% | 27.17% | 7.14 | 0.00% | 0.00% | 0.00% | 0.00% | 33.1% |
| 2 | Count | 17 | 97 | 9 | 17 | 3 | 0 | 2 | 145 |
| | Row % | 11.72% | 66.90% | 6.21% | 11.72% | 2.07% | 0.00% | 1.38% | 100.0% |
| | Column % | 15.74% | 52.72% | 32.14% | 58.62% | 75.00% | 0.00% | 66.67% | 40.7% |
| 3 | Count | 7 | 24 | 13 | 7 | 1 | 0 | 0 | 52 |
| | Row % | 13.46% | 46.16% | 25.00% | 13.46% | 1.92% | 0.00% | 0.00% | 100.0% |
| | Column % | 6.48% | 12.04% | 46.43% | 24.14% | 25.00% | 0.00% | 0.00% | 14.6% |
| 4 | Count | 1 | 7 | 1 | 3 | 0 | 0 | 1 | 13 |
| | Row % | 7.69% | 53.85% | 7.69% | 23.08% | 0.00% | 0.00% | 7.69% | 100.0% |
| | Column % | 0.93% | 3.81% | 3.57% | 10.34% | 0.00% | 0.00% | 33.33% | 3.7% |
| 5 or more | Count | 1 | 4 | 3 | 2 | 0 | 0 | 0 | 10 |
| | Row % | 10.00% | 40.00% | 30.00% | 20.00% | 0.00% | 0.00% | 0.00% | 100.0% |
| | Column % | 0.93% | 2.17% | 10.72% | 6.90% | 0.00% | 0.00% | 0.00% | 2.8% |
| 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 | 108 | 184 | 28 | 29 | 4 | 0 | 3 | 356 |
| | Row % | 30.34% | 51.69% | 7.86% | 8.15% | 1.12% | 0.00% | 0.84% | 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=604) | Completed Households (n=356) | Census Data (n=22,389) |
|------------------------|------------------------------|------------------------------|------------------------|
| Single, Detached | 78.15% | 77.25 | 62.97% |
| Multi Unit | 12.42% | 12.36% | 15.63% |
| Mobile Home or Trailer | 7.28% | 8.43% | 19.92% |
| Other | 1.99% | 1.96% | 1.48% |
| Refused | 0.16% | 0.00% | -- |

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

| Tenure | Recruited Households (n=604) | Completed Households (n=356) | Census Data (n=16,455) |
|---------|------------------------------|------------------------------|------------------------|
| Own | 74.50% | 75.56% | 66.02% |
| Rent | 24.84% | 23.88% | 33.98% |
| Other | 0.33% | 0.56% | -- |
| Refused | 0.33% | 0.00% | -- |

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

| | Recruited Households (n=604) | Completed Households (n=356) | Census Data (n=16,455) |
|--------------------|------------------------------|------------------------------|------------------------|
| Less than 6 months | 5.13% | 5.06% | 26.85% |
| 6 months to 1 year | 5.96% | 4.49% | |
| 1 to 5 years | 11.75% | 11.52% | 30.83% |
| 5 to 10 years | 4.64% | 5.34% | 14.96% |
| 10 to 20 years | 3.97% | 3.93% | 18.63% |
| 20 years or more | 3.15% | 3.65% | 8.73% |
| Refused | 65.40% | 66.01% | -- |

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=1330) | Completed Percentage (n=717) | Census Data (n=38,889) |
|---------|----------------------------------|---------------------------------|---------------------------|
| Male | 47.52% | 47.28% | 48.12% |
| Female | 52.41% | 52.72% | 51.88% |
| Refused | 0.07% | 0.00% | -- |

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

| Age | Recruited Percentage (n=1330) | Completed Percentage (n=717) | Census Data (n=38,889) |
|---------|----------------------------------|---------------------------------|---------------------------|
| 0-4 | 2.71% | 1.95% | 6.04% |
| 5-9 | 3.91% | 3.21% | 7.00% |
| 10-14 | 7.29% | 6.56% | 6.94% |
| 15-19 | 6.62% | 5.16% | 5.14% |
| 20-24 | 2.33% | 1.53% | 4.19% |
| 25-34 | 6.09% | 4.18% | 12.82% |
| 35-44 | 13.61% | 11.72% | 16.16% |
| 45-54 | 17.67% | 20.78% | 10.22% |
| 55-64 | 10.83% | 12.97% | 11.49% |
| 65-74 | 15.56% | 19.25% | 12.69% |
| 75+ | 12.11% | 12.27% | 7.31% |
| Refused | 1.28% | 0.42% | -- |

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

| License Status | Recruited Percentage (n=1330) | Completed Percentage (n=717) | Census Data |
|--|-------------------------------|------------------------------|-------------|
| Licensed | 76.09% | 79.64% | -- |
| Non-Licensed | 9.85% | 8.65% | -- |
| Not Applicable (under 15 years of age) | 13.91% | 11.71% | -- |
| Refused | 0.15% | 0.00% | -- |

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

| Employment Status | Recruited Percentage (n=1123) | Completed Percentage (n=623) | Census Data (n=30,336) |
|--------------------|-------------------------------|------------------------------|------------------------|
| Employed | 52.72% | 51.84% | 53.90% |
| Unemployed | 10.06% | 8.51% | 3.25% |
| Not in Labor Force | 37.04% | 39.65% | 42.85% |
| Refused | 0.18% | 0.00% | -- |

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

| Telecommute to Work? | Recruited Percentage (n=592) | Completed Percentage (n=323) | Census Data |
|----------------------|------------------------------|------------------------------|-------------|
| Yes | 14.53% | 13.00% | -- |
| No | 31.92% | 29.41% | -- |
| Refused | 53.55% | 57.59% | -- |

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

| Shift or Flexible Work Schedule | Recruited Percentage (n=592) | Completed Percentage (n=323) | Census Data |
|---------------------------------|------------------------------|------------------------------|-------------|
| Yes | 28.55% | 24.77% | -- |
| No | 17.40% | 16.72% | -- |
| Refused | 54.05% | 58.51% | -- |

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

| Length of Employment | Recruited Percentage (n=592) | Completed Percentage (n=323) | Census Data |
|----------------------|------------------------------|------------------------------|-------------|
| Less than 1 year | 13.68% | 11.15% | -- |
| 1 - 1.9 years | 9.29% | 8.98% | -- |
| 2 - 2.9 years | 7.77% | 5.57% | -- |
| 3 - 3.9 years | 7.43% | 7.43% | -- |
| 4 - 4.9 years | 4.73% | 4.95% | -- |
| 5 or more years | 56.25% | 60.68% | -- |
| Refused | 0.85% | 1.24% | -- |

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

| Student Status | Recruited Percentage (n=1308) | Completed Percentage (n=709) | Census Data (n=37,393) |
|-------------------|-------------------------------|------------------------------|------------------------|
| Not Enrolled | 80.05% | 82.37% | 78.00% |
| Part-Time Student | 2.98% | 3.67% | 22.00% |
| Full-Time Student | 16.82% | 13.96% | |
| Refused | 0.15% | 0.00% | -- |

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

| Educational Attainment | Recruited Percentage (n=1009) | Completed Percentage (n=582) | Census Data (n=27,491) |
|----------------------------|-------------------------------|------------------------------|------------------------|
| None through 4th Grade | 0.00% | 0.00% | - |
| 5th through 7th Grade | 0.19% | 0.17% | |
| 8th Grade | 1.29% | 1.38% | |
| 9th through 11th Grade | 4.96% | 3.95% | - |
| 12th Grade | 33.00% | 32.13% | - |
| College Freshman to Junior | 26.86% | 26.63% | - |
| College Senior | 16.95% | 17.70% | - |
| Post Graduate Work | 13.48% | 15.98% | - |
| Refused | 3.27% | 2.06% | -- |

**Table IV-10
Ethnicity by Person**

| Ethnicity | Recruited Percentage (n=1330) | Completed Percentage (n=717) | Census Data (n=39,557) |
|---|--------------------------------------|-------------------------------------|-------------------------------|
| White, Not Hispanic | 93.61% | 93.44% | 94.35% |
| Black, Not Hispanic | 0.08% | 0.14% | 0.17% |
| American Indian, Eskimo or Aleutian, Not Hispanic | 1.05% | 1.12% | 2.53% |
| Asian or Pacific Islander, Not Hispanic | 1.28% | 1.39% | 0.89% |
| Other Race, Not Hispanic | 1.05% | 1.81% | 0.37% |
| Hispanic (Any Race) | 1.43% | 0.98% | 1.69% |
| Refused | 1.50% | 1.12% | -- |

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

| Disability Status | Recruited Percentage (n=1123) | Completed Percentage (n=623) | Census Data (n=30,336) |
|--|--------------------------------------|-------------------------------------|-------------------------------|
| With a mobility or self-care limitation | 7.03% | 7.38% | 5.82% |
| Without a mobility or self-care limitation | 92.61% | 92.46% | 94.18% |
| Refused | 0.36% | 0.16% | -- |

V Travel Characteristics

Respondents were asked to record all activities over a two-day period. In this report, activity data is reported for the 356 households in the Lincoln County study. An average of 59.26 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, work, and rest and relaxation.

The mean number of activities per household for Day 1 is 28.54 and for Day 2 is 28.96. 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 15.69 for the two-day period. The mean number of trips for Day 1 was 7.75, while an average of 7.90 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 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-4 compares household size and trip rates. Smaller households generated fewer trips than larger households. For example, there are no zero-trip households with more than three members, and there are no 70+ trip households with fewer than four members. This data is shown in Table V-4.

Respondents were asked to record mode usage for each trip taken. Of the 21,098 activities reported by respondents (shown in Table V-1), 15,514 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. Private vehicle trips were, on average, the shortest. Walking trips and bicycle trips were similar in mean, averaging 20 and 21 minutes respectively. Trips recorded as "other", often out of the area, took the longest and were approximately 89 minutes in length. School bus trips were approximately 24 minutes in length. Public bus trips took approximately 87 minutes. This relatively high travel time is somewhat skewed by one specific trip out of the area lasting 419 minutes.

**Table V-1
Activities by Type (n=21098)**

| Activity | Frequency | Percent |
|------------------------------------|------------------|----------------|
| Trip | 5584 | 26.47% |
| Meals | 2974 | 14.10% |
| Sleep | 2844 | 13.48% |
| Personal Hygiene | 1525 | 7.23% |
| Work/Work-related activities | 898 | 4.26% |
| Rest and Relaxation | 609 | 2.89% |
| School | 370 | 1.75% |
| Shopping | 691 | 3.28% |
| Visiting | 473 | 2.24% |
| Pick-up/Drop-off Passengers | 263 | 1.25% |
| Household Obligations/Childrearing | 111 | 0.53% |
| Exercise/Athletics | 151 | 0.71% |
| Hobbies | 158 | 0.75% |
| Tag-along | 17 | 0.08% |
| Pet Care | 45 | 0.21% |
| Amusements (at home) | 2279 | 10.80% |
| Amusements (out of home) | 122 | 0.58% |
| Religion/Civil Services | 124 | 0.59% |
| Out of area | 53 | 0.25% |
| Civic | 81 | 0.38% |

**Table V-1 (Continued)
Activities by Type (n=21098)**

| Activity | Frequency | Percent |
|------------------------------|-----------|---------|
| Medical Care | 74 | 0.35% |
| Personal Services | 16 | 0.07% |
| Casual Entertaining | 10 | 0.05% |
| Culture | 19 | 0.09% |
| Household/Personal Business | 516 | 2.45% |
| Professional Services | 8 | 0.04% |
| Household Maintenance | 1008 | 4.78% |
| Spectator at Athletic Events | 7 | 0.03% |
| Incidental | 24 | 0.11% |
| Wait on Plane | 6 | 0.03% |
| Wait on Bus | 9 | 0.04% |
| Drive Through | 7 | 0.03% |
| Formal Entertaining | 22 | 0.10% |

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

| Household Size | Average Daily Trips |
|----------------|---------------------|
| One | 3.72 |
| Two | 7.24 |
| Three | 12.81 |
| Four | 17.41 |
| Five | 15.00 |
| Six | 0.00 |
| Seven or more | 42.83 |

**Table V-3
2-Day Household Trips by Household Income (n=356)**

| Number of Trips | | Income | | | Total |
|---------------------|-----------------|----------------|----------------|----------------|----------------|
| | | Under \$40,000 | Over \$40,000 | Refused | |
| none | Count | 13 | 3 | 2 | 18 |
| | Row % | 72.22% | 16.67% | 11.11% | 100.00% |
| | Column % | 6.60% | 2.29% | 7.14% | 5.06% |
| 1 to 9 | Count | 53 | 24 | 5 | 82 |
| | Row % | 64.63% | 29.27% | 6.10% | 100.00% |
| | Column % | 26.90% | 18.32% | 17.86% | 23.04% |
| 10 to 19 | Count | 102 | 45 | 12 | 159 |
| | Row % | 64.15% | 28.30% | 7.55% | 100.00% |
| | Column % | 51.78% | 34.35% | 42.86% | 44.66% |
| 20 to 29 | Count | 15 | 33 | 5 | 53 |
| | Row % | 28.30% | 62.27% | 9.43% | 100.00% |
| | Column % | 7.61% | 25.19% | 17.86% | 14.89% |
| 30 to 39 | Count | 9 | 15 | 1 | 25 |
| | Row % | 36.00% | 60.00% | 4.00% | 100.00% |
| | Column % | 4.57% | 11.45% | 3.57% | 7.02% |
| 40 to 49 | Count | 2 | 7 | 2 | 11 |
| | Row % | 18.18% | 63.64% | 18.18% | 100.00% |
| | Column % | 1.02% | 5.35% | 7.14% | 3.09% |
| 50 to 59 | Count | 3 | 1 | 0 | 4 |
| | Row % | 75.00% | 25.00% | 0.00% | 100.00% |
| | Column % | 1.52% | 0.76% | 0.00% | 1.12% |
| 60 to 69 | Count | 0 | 1 | 0 | 1 |
| | Row % | 0.00% | 100.00% | 0.00% | 100.00% |
| | Column % | 0.00% | 0.76% | 0.00% | 0.28% |
| more than 70 | Count | 0 | 2 | 1 | 3 |
| | Row % | 0.00% | 66.67% | 33.33% | 100.00% |
| | Column % | 0.00% | 1.53% | 3.57% | 0.84% |
| Total | Count | 197 | 131 | 28 | 356 |
| | Row % | 55.34% | 36.80% | 7.86% | 100.00% |
| | Column % | 100.00% | 100.00% | 100.00% | 100.00% |

**Table V-4
2-Day Household Trips by Household Size (n=356)**

| Number of Trips | | HH Size | | | | | | | Total |
|---------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7+ | |
| none | Count | 12 | 5 | 1 | 0 | 0 | 0 | 0 | 18 |
| | Row % | 66.67% | 27.78% | 5.55% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% |
| | Column % | 11.11% | 2.72% | 3.57% | 0.00% | 0.00% | 0.00% | 0.00% | 5.06% |
| 1 to 9 | Count | 32 | 46 | 3 | 1 | 0 | 0 | 0 | 82 |
| | Row % | 39.02% | 56.10% | 3.66% | 1.22% | 0.00% | 0.00% | 0.00% | 100.00% |
| | Column % | 29.63% | 25.00% | 10.72% | 3.45% | 0.00% | 0.00% | 0.00% | 23.04 % |
| 10 to 19 | Count | 63 | 87 | 5 | 3 | 1 | 0 | 0 | 159 |
| | Row % | 39.62% | 54.72% | 3.14% | 1.89% | 0.63% | 0.00% | 0.00% | 100.00% |
| | Column % | 58.33% | 47.28% | 17.86% | 10.34% | 25.00% | 0.00% | 0.00% | 44.66 |
| 20 to 29 | Count | 1 | 37 | 7 | 7 | 1 | 0 | 0 | 53 |
| | Row % | 1.88% | 69.81% | 13.21% | 13.21% | 1.89% | 0.00% | 0.00% | 100.00% |
| | Column % | 0.93% | 20.11% | 25.00% | 24.14% | 25.00% | 0.00% | 0.00% | 14.89% |
| 30 to 39 | Count | 0 | 7 | 8 | 9 | 1 | 0 | 0 | 25 |
| | Row % | 0.00% | 28.00% | 32.00% | 36.00% | 4.00% | 0.00% | 0.00% | 100.00% |
| | Column % | 0.00% | 3.81% | 28.57% | 31.03% | 25.00% | 0.00% | 0.00% | 7.02% |
| 40 to 49 | Count | 0 | 1 | 3 | 6 | 1 | 0 | 0 | 11 |
| | Row % | 0.00% | 9.09% | 27.27% | 54.55% | 9.09% | 0.00% | 0.00% | 100.00% |
| | Column % | 0.00% | 0.54% | 10.71% | 20.69% | 25.00% | 0.00% | 0.00% | 3.09% |
| 50 to 59 | Count | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 4 |
| | Row % | 0.00% | 25.00% | 25.00% | 25.00% | 0.00% | 0.00% | 25.00% | 100.00% |
| | Column % | 0.00% | 0.54% | 3.57% | 3.45% | 0.00% | 0.00% | 33.33% | 1.12% |
| 60 to 69 | Count | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | Row % | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% |
| | Column % | 0.00% | 0.00% | 0.00% | 3.45% | 0.00% | 0.00% | 0.00% | 0.28% |
| more than 70 | Count | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 3 |
| | Row % | 0.00% | 0.00% | 0.00% | 33.33% | 0.00% | 0.00% | 66.67% | 100.00% |
| | Column % | 0.00% | 0.00% | 0.00% | 3.45% | 0.00% | 0.00% | 66.67% | 0.84% |
| Total | Count | 108 | 184 | 28 | 29 | 4 | 0 | 3 | 356 |
| | Row % | 30.34% | 51.69% | 7.86% | 8.15% | 1.12% | 0.00% | 0.84% | 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=5584)**

| Mode | Percent |
|-----------------|----------------|
| Private Vehicle | 90.15% |
| Walk | 7.56% |
| Bicycle | 0.28% |
| School Bus | 1.29% |
| Public Bus | 0.11% |
| Other | 0.61% |

**Table V-6
Average Household Trip Times by Mode (n=5584)**

| Mode | Mean Trip Length (min.) |
|------------------|--------------------------------|
| Private Vehicle | 17.26 |
| Walk | 20.18 |
| Bicycle | 21.25 |
| School Bus | 23.60 |
| Public Bus | 86.50 |
| Other (Airplane) | 88.91 |

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 to minimize non-response.

**Table VI-1
Percent Item Non-Response - Household Questions (n=604)**

| Household Variables | Percent Non-Response |
|---------------------|----------------------|
| Household Size | 0.0% |
| Household Vehicles | 0.0% |
| Home Ownership | 0.3% |
| Time in Residence | 65.4% |
| Dwelling Type | 0.2% |
| Household Income | 11.1% |

**Table VI-2
Percent Item Non-Response - Person Questions (n=1330)**

| Household Variables | Percent Non-Response |
|-------------------------------|----------------------|
| Relation to Head of House | 0.2% |
| Age | 1.3% |
| Race | 1.5% |
| Drivers License Status | 0.2% |
| Employment Status | 0.2% |
| Occupation | 0.5% |
| Industry | 0.2% |
| Shiftwork | 54.1% |
| Years at Work Site | 0.8% |
| Student Status | 0.2% |
| Student Level - Head of House | 0.0% |
| Student Level - Others | 2.9% |
| Disability | 0.4% |