

EXTRA
COPY
BUT WITH
NO COMMENTS
SEE VELS FOR
WITH COMMENTS
IN THE MARCH



November 24, 1995

Mr. Brad Mettam
Yucca Mountain Repository Assessment Office
County of Inyo Planning Department
P.O. Drawer L
Independence, CA 93526

Subject: Revised SR 127 Survey Report

Dear Brad:

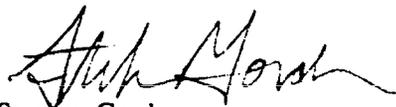
I have attached a hard copy and diskette version of a revised *1994 Inyo County Highway Traffic Study - SR 127* which incorporates comments contained in your letter of October 4. The report is redlined to facilitate your review. The most substantive changes include substantially more detail on residential location and a discussion of the differences in travel characteristics between the March and May survey data.

Unfortunately, the report is not in finished form. The reason, simply, is that we've exhausted the revised budget of \$35,000, which is about 25% less than the full project budget. I am eager to provide you with finished products but cannot do so without your reinstating the rest of the budget. Please note that I have already spent a considerable level of effort beyond what the current budget allows, to bring each report this far. A budget augmentation will also be necessary to incorporate any substantive comments or concerns that you or Caltrans may have on the draft *SR 127 Route Concept Report*, and to complete the graphics for each report.

Please call me to discuss your comments on the reports and the prospects for re-funding the study. Thank you for your consideration.

Sincerely,

ENVIRONMENTAL SCIENCE ASSOCIATES


Stephen Gordon

**Environmental
Science
Associates**

301 Brannan Street
Suite 200
San Francisco,
California
94107-1811
415-896-5900
FAX 896-0552

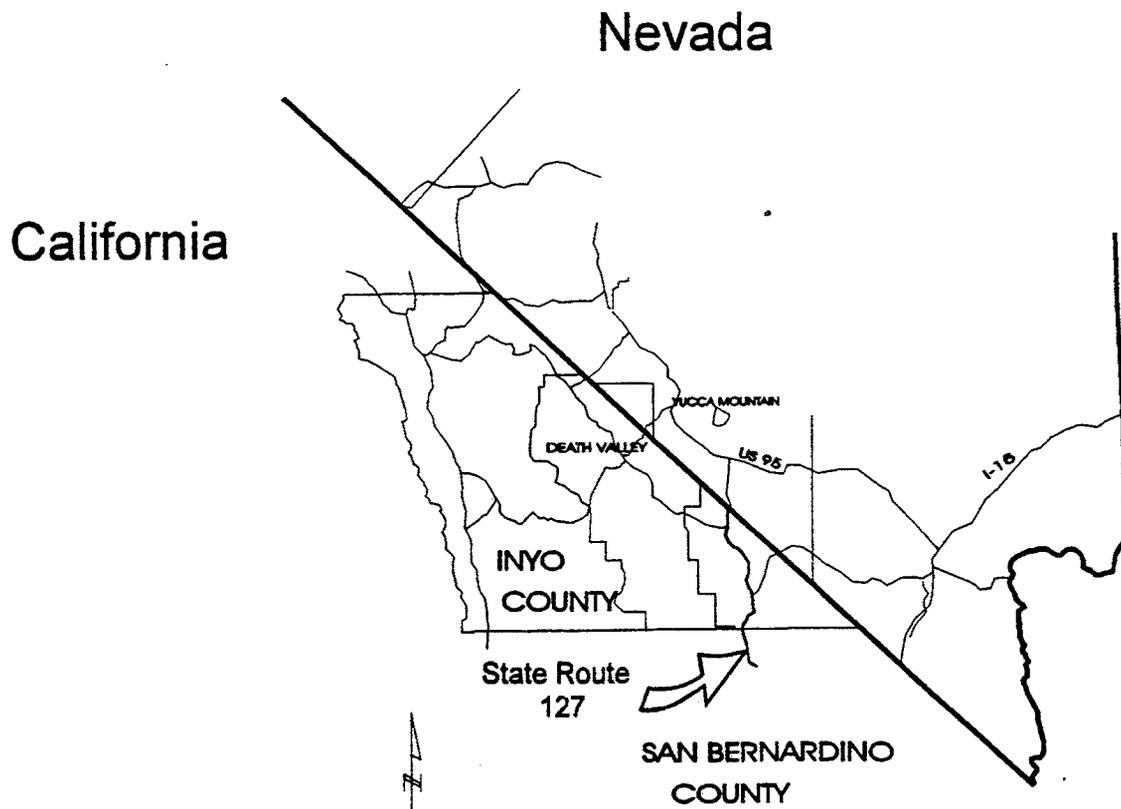
Los Angeles

San Antonio

ESA

1994 Inyo County Highway Traffic Study

State Route 127



Prepared by:

**Environmental Science Associates
San Francisco, California**

Preliminary - Subject to Revision

iiii

**1994 INYO COUNTY HIGHWAY TRAFFIC STUDY
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I. INTRODUCTION AND PURPOSE OF STUDY

INTRODUCTION

The proposed high-level radioactive waste repository at Yucca Mountain, Nevada has the potential to create transportation-related impacts, both through the eventual transportation of waste, and through shipments of materials during repository construction and operation. In fact, site characterization activities could affect traffic on State Route (SR) 127. Such impacts will occur both in the communities that are served by the highway, and in potential changes in tourism traffic to neighboring destinations. It is the responsibility of the Inyo County Yucca Mountain Repository Assessment Office to perform studies, develop monitoring systems, and ultimately prepare an impact assessment and a request for assistance based on the potential impacts that have been identified.

The California Department of Transportation (Caltrans) is responsible for current infrastructure maintenance and future infrastructure improvements on the state transportation system. It is also the responsibility of Caltrans to conduct long-range multi-modal infrastructure planning for the California transportation system. Through a Memorandum of Understanding dated May 25, 1993, the County of Inyo and Caltrans agreed to the need for, and benefit of, cooperative efforts in developing a baseline of information about existing transportation system conditions in the areas likely to be affected by transportation to a repository at Yucca Mountain. This traffic survey report is the result of a joint effort between the County and Caltrans to develop needed baseline information on the traffic volumes, flow patterns, vehicular mix, and the hazardous materials component of current highway traffic on SR 127 in Inyo County. This State highway has been identified by the U.S. Department of Energy (DOE) as a potential link in the repository transportation network. The designated California agency for routing of hazardous materials, the California Highway Patrol, has reviewed the state highway system for current shipments under the provisions of federal law and regulations (HM-64) that allow individual states to designate preferred alternate routes. The approach developed by the California Highway Patrol calls for annual review of routes and proposed shipments, and subsequent designation of routes as necessary. Following this approach, SR 127 could be designated as an alternate preferred route for shipments to a repository at Yucca Mountain.

PURPOSE

Before potential transportation system impacts to the communities served by SR 127 can be addressed, it is essential to have an understanding of current baseline traffic conditions. This study has been designed to examine the traffic volumes, flow patterns, vehicular mix, and the hazardous materials component of current highway traffic. As other agencies and organizations have an interest in the data collected, advice and assistance has been requested from such groups as the Death Valley Chamber of Commerce and the Death Valley National Park.

II. METHODOLOGY

This study effort will be modeled upon the *1989 Inyo and Mono County Recreation and Travel Study*, with adjustments made for the program's specific data and reporting needs. The 1989 study involved personal interviews with vehicle occupants at the major points of entry to Inyo and Mono Counties along the U.S. Highway 395 corridor. Its summer survey component was conducted on a neutral August mid-week day and the following Friday and Saturday. Its winter survey component was conducted on a neutral February mid-week day and the following Friday and Saturday of the President's Holiday weekend. The hours of the survey (8:00 a.m. to 5:00 p.m.) represented about 50 percent of the total 24-hour traffic at each location. The following questions were asked:

1. Number of people in vehicle?
2. Type of vehicle - classification?
3. Location of residence?
4. Purpose of trip?
5. Will you be staying in Inyo or Mono County?
6. If yes, at what type of facility?

Trucks and buses were also included in the survey and these questions were posed to the drivers. The total number of vehicles surveyed in 1989 was 16,761.

As with the 1989 survey effort, the survey methodology used for the 1994 study included personal interviews with vehicle occupants at specific locations. As the current survey focuses not on recreation, but primarily on traffic volumes and mix, there have been adjustments made to the interviewer log sheet used in the 1989 study. Questions asked for the 1994 Survey sought to obtain data on:

1. City origin / destination of trip on survey day
2. Site destination of trip, by trucks
3. Material hauled, by trucks
4. Laden weight, for trucks
5. Hazardous material placard information

The survey form developed for this task is included as "Attachment A" to this report. Some questions from the 1989 survey, not specifically germane to the current survey (e.g., whether a stay in Inyo County is part of the trip), have been included to facilitate comparison to prior data collection efforts.

Interview sites designated in Figure 1 were selected to capture all inbound traffic to the area highway network. These sites are described below.

Station One East of the junction of SR 127 and SR 178 eastbound, on the north side of SR 178 captured all westbound traffic from SR 178.

Station Two South of the junction of SR 127 and SR 178, on the east side of SR 127 captured all northbound traffic on SR 127.

Station Three West of the junction of SR 127 and SR 190, on the south side of SR 190) captured eastbound traffic on SR 190.

Station Four North of the junction of SR 127 and SR 190, on the west side of SR 127) captured southbound traffic on SR 127.

Station Five East of SR 127, on the north side of the Pahrump "Stateline" road) captured westbound traffic on the "Stateline" road.

Though it would have been preferable to collect the data collected continuously would be of greater utility if all at each of the five interview locations were operated continuously throughout the five day period, practicality dictated collection of data. Realistically, the same essential data can be collected by using mechanical/machine counts of vehicles in conjunction with personal interviews. The mechanical count data was collected for one day at each interview station (counts were taken at each station on a different day). To capture full twenty-four hour traffic count data, Caltrans used automatic traffic counters at seven locations - the five interview stations, plus SR 127 North (post mile 16.83) and SR 178 West (post mile 42.86). These counters operated continuously for a full seven-day period, including the personal interview days. Caltrans collected and tabulated these count data. To verify the extrapolation of vehicle classification from the nine-hour survey period to a 24-hour period, classification information was collected at Station Two from the closing of the interview station until the next morning. Caltrans provided a manual classification count board for this purpose.

Personal interviews were conducted at each survey station for one day each over a period of five consecutive days. Table II.1 provides a breakdown of the number of vehicles surveyed at each station. This allowed one crew to cover all five stations, with the traffic counters providing data for additional analysis. Caltrans provided traffic control equipment, including a message board, hard hats, orange vests and traffic control equipment (cones, etc.); Caltrans also provided the flag personnel, and one oversight staff person. The Inyo County Yucca Mountain Repository Assessment Office (RAO) provided supervisory staff and interviewers. One supervisor, flag personnel and three interviewers provided sufficient personnel to allow for breaks.

FIGURE 1

STUDY AREA AND SURVEY STATION LOCATIONS



TABLE II.1: NUMBER OF SURVEYS CONDUCTED, BY SURVEY STATION AND DATE

Station Number	Survey Date	Number of Vehicles
1	March 26, 1994	330
2	March 28, 1994	415
	May 16, 1994	239
3	March 27, 1994	353
4	March 29, 1994	284
	May 17, 1994	236
5	March 25, 1994	74
TOTAL		1,931

The RAO supplied a recreational vehicle to be stationed at the interview location, to provide restroom facilities, coldwater, a rest area, etc. In addition, the California Highway Patrol were asked to provide a law enforcement presence at the interview location. The Inyo County Sheriff's Department, and the Death Valley National Monument were advised of the survey operations. Caltrans records indicated that a nine-hour count period during daylight hours (8:00 a.m. to 5:00 p.m.) would capture the majority of the daily traffic flow through this system.

The need to capture peak and off-peak traffic flows required two "winter" counts, the first of which occurred from March 25 to March 29, 1994, to capture the peak flows during Easter. Tables II.2 displays the March 1994 survey data for vehicle count and type. Table II.3 incorporates the results of an overnight survey conducted at Station #2, to illustrate the results of a 24-hour count. The results show that the 24-hour count is 38% higher than the nine-hour count. However, the percentages for each vehicle category does not differ much from the daytime survey. Caltrans collected traffic counts concurrent with this County-sponsored survey, from March 23 through March 30. These are shown in Table II.4.

A second interview period, designed to capture "off-peak" traffic volume during an "off-peak" time of year, was conducted on May 16 and May 17, 1994. The results of this survey are shown in Table II.5. Caltrans again collected concurrent, 24-hour machine traffic counts at the same stations on May 11 and May 18, 1994. These are shown in Table II.6. Comparing the March and May machine count data indicate that traffic volume on SR 127 near SR 178 is about 50% to 60% higher in March than in May. Traffic volume to the north of SR 190 is about 18% higher in March than in May.

Table II.2

Inyo County Survey - March 1994

Vehicle Type	Station 1 SR 178 East of SR 127 (Westbound)		Station 2 SR 127 South of SR 178 (Northbound)		Station 3 SR 190 West of SR 127 (Eastbound)		Station 4 SR 127 North of SR 190 (Southbound)		Station 5 Stateline Road East of SR 127 (Westbound)		March Average	
	26-Mar		28-Mar		27-Mar		29-Mar		25-Mar			
Auto	202	61.40%	185	44.90%	234	66.29%	169	59.72%	32	43.24%	822	56.65%
Auto & Trailer	5	1.52%	4	0.97%	0	0.00%	1	0.35%	0	0.00%	10	0.69%
Van	32	9.73%	46	11.17%	50	14.16%	42	14.84%	7	9.46%	177	12.20%
Motorcycle	2	0.61%	9	2.18%	7	1.98%	0	0.00%	0	0.00%	18	1.24%
Pickup	70	21.28%	81	19.66%	29	8.22%	22	7.77%	21	28.38%	223	15.37%
R.V.	12	3.65%	59	14.32%	28	7.93%	22	7.77%	7	9.46%	128	8.82%
Bus	1	0.30%	1	0.24%	1	0.28%	1	0.35%	0	0.00%	4	0.28%
Large Truck	2	0.61%	6	1.46%	2	0.57%	4	1.41%	2	2.70%	16	1.10%
Truck & 1 Trailer	2	0.61%	13	3.16%	1	0.28%	17	6.01%	5	6.76%	38	2.62%
Truck & 2 Trailers	0	0.00%	8	1.94%	0	0.00%	4	1.41%	0	0.00%	12	0.83%
Unknown	1	0.30%	0	0.00%	1	0.28%	1	0.35%	0	0.00%	3	0.21%
Total	329	100%	412	100%	353	100%	283	100%	74	100%	1451	100%

Inyo County Survey - March 1994 (Summarized)

Vehicle Type	Station 1 SR 178 East of SR 127 (Westbound)		Station 2 SR-127 South of SR 178 (Northbound)		Station 3 SR 190 West of SR 127 (Eastbound)		Station 4 SR 127 North of SR 190 (Southbound)		Station 5 Stateline Road East of SR 127 (Westbound)		March Average	
	26-Mar		28-Mar		27-Mar		29-Mar		25-Mar			
Autos/Autos+Trailers	207	62.92%	189	45.87%	234	66.29%	170	60.07%	32	43.24%	832	57.34%
Motorcycle	2	0.61%	9	2.18%	7	1.98%	0	0.00%	0	0.00%	18	1.24%
Vans/Pickups/R.V.s	114	34.65%	186	45.15%	107	30.31%	86	30.39%	35	47.30%	528	36.39%
Buses	1	0.30%	1	0.24%	1	0.28%	1	0.35%	0	0.00%	4	0.28%
Large Truck	2	0.61%	6	1.46%	2	0.57%	4	1.41%	2	2.70%	16	1.10%
Truck + 1 Trailer	2	0.61%	13	3.16%	1	0.28%	17	6.01%	5	6.76%	38	2.62%
Truck + 2 Trailer	0	0.00%	8	1.94%	0	0.00%	4	1.41%	0	0.00%	12	0.83%
Unknown	1	0.30%	0	0.00%	1	0.28%	1	0.35%	0	0.00%	3	0.21%
Total	329	100%	412	100%	353	100%	283	100%	74	100%	1451	100%

Table II.3

**County Survey Adjusted to
Reflect 24-Hour Count**

Station 2
SR-127
South of SR 178
(Northbound)

<u>Vehicle Type</u>	<u>28-Mar</u>	
Auto	252	44.37%
Auto & Trailer	9	1.58%
Van	59	10.39%
Motorcycle	13	2.29%
Pickup	118	20.77%
R.V.	67	11.80%
Bus	1	0.18%
Large Truck	11	1.94%
Truck & 1 Trailer	25	4.40%
Truck & 2 Trailers	13	2.29%
Unknown	0	0.00%
Total	568	100%

Station 2
SR-127
South of SR 178
(Northbound)

<u>Vehicle Type</u>	<u>28-Mar</u>	
Autos/Autos+Trailers	261	45.95%
Motorcycle	13	2.29%
Vans/Pickups/R.V.s	244	42.96%
Buses	1	0.18%
Large Truck	11	1.94%
Truck + 1 Trailer	25	4.40%
Truck + 2 Trailer	13	2.29%
Unknown	0	0.00%
Total	568	100%

Table II.4

March 1994 Machine Counts - Same Day/Direction as County Survey (Summarized)

Vehicle	Station 1	Station 2	Station 3	Station 4	Station 5	March Average	
	SR 178 East of SR 127 (Westbound)	SR-127 South of SR 178 (Northbound)	SR 190 West of SR 127 (Eastbound)	SR 127 North of SR 190 (Southbound)	Stateline Road East of SR 127 (Westbound)		
	26-Mar	28-Mar	27-Mar	29-Mar	25-Mar		
Autos/Autos+Trailers (FHWA=2)		347 56.51%		253 69.70%	74 58.73%	674	61.11%
Motorcycle (FHWA=1)		11 1.79%		1 0.28%	0 0.00%	12	1.09%
Vans (FHWA=3)/Pickups (FHWA=3)/R.V.s (FHWA=3,5,6)		202 32.90%		70 19.28%	45 35.71%	317	28.74%
Buses (FHWA=4)		7 1.14%		4 1.10%	2 1.59%	13	1.18%
Large Truck (FHWA=7)		0 0.00%		0 0.00%	0 0.00%	0	0.00%
Truck + 1 Trailer (FHWA=8,9,10)		38 6.19%		33 9.09%	5 3.97%	76	6.89%
Truck + 2 Trailer (FHWA=11,12,13)		9 1.47%		2 0.55%	0 0.00%	11	1.00%
Total		614 100%		363 100%	126 100%	1103	100%

March 1994 Machine Count - Same Day/Direction as County Survey (Summarized by Inyo County)

Vehicle	Station 1	Station 2	Station 3	Station 4	Station 5	March Average	
	SR 178 East of SR 127 (Westbound)	SR-127 South of SR 178 (Northbound)	SR 190 West of SR 127 (Eastbound)	SR 127 North of SR 190 (Southbound)	Stateline Road East of SR 127 (Westbound)		
	26-Mar	28-Mar	27-Mar	29-Mar	25-Mar		
Autos/Auto +Trailers (FHWA = 2)		347 56.51%		253 69.70%	74 58.73%	674	61.11%
Motorcycle (FHWA=1)		11 1.79%		1 0.28%	0 0.00%	12	1.09%
Pickups (FHWA = 3)		193 31.43%		65 17.91%	39 30.95%	297	26.93%
Buses (FHWA = 4)		7 1.14%		4 1.10%	2 1.59%	13	1.18%
Heavy Trucks (FHWA = 5, 6, 7, 8, 9, 10, 11, 12, 13)		56 9.12%		40 11.02%	11 8.73%	107	9.70%
Total		614 100%		363 100%	126 100%	1103	100%

March 1994 Machine Counts: Two-Way Traffic, 8-Day Average

Vehicle	Station 1	Station 2	Station 3	Station 4	Station 5	SR 127		March Average	
	SR 178 East of SR 127	SR-127 South of SR 178	SR 190 West of SR 127	SR 127 North of SR 190	Stateline Road East of SR 127	North of SR 178W			
Autos/Auto +Trailers (FHWA = 2)		703 62.94%		429 67.35%	139 65.26%	282 61.17%	1271	64.62%	
Motorcycle (FHWA=1)		9 0.81%		5 0.78%	3 1.41%	5 1.08%	17	0.86%	
Pickups (FHWA = 3)		297 26.59%		117 18.37%	54 25.35%	99 21.48%	468	23.79%	
Buses (FHWA = 4)		12 1.07%		10 1.57%	3 1.41%	5 1.08%	25	1.27%	
Heavy Trucks (FHWA = 5, 6, 7, 8, 9, 10, 11, 12, 13)		96 8.59%		76 11.93%	14 6.57%	70 15.18%	186	9.46%	
Total		1117 100%		637 100%	213 100%	461 100%	1967	100%	

Table II.5

Inyo County Survey - May 1994

<u>Vehicle Type</u>	Station 2 SR 127 South of SR 178 (Northbound)		Station 4 SR 127 North of SR 190 (Southbound)		<i>May Average</i>	
	<u>16-May</u>		<u>17-May</u>			
Auto	121	51.05%	148	62.71%	269	56.87%
Auto & Trailer	0	0.00%	0	0.00%	0	0.00%
Van	21	8.86%	20	8.47%	41	8.67%
Motorcycle	1	0.42%	0	0.00%	1	0.21%
Pickup	61	25.74%	26	11.02%	87	18.39%
R.V.	7	2.95%	10	4.24%	17	3.59%
Bus	4	1.69%	9	3.81%	13	2.75%
Large Truck	5	2.11%	3	1.27%	8	1.69%
Truck & 1 Trailer	13	5.49%	19	8.05%	32	6.77%
Truck & 2 Trailers	4	1.69%	0	0.00%	4	0.85%
Unknown	0	0.00%	1	0.42%	1	0.21%
Total	237	100%	236	100%	473	100%

Inyo County Survey - May 1994 (Summarized)

<u>Vehicle Type</u>	Station 2 SR 127 South of SR 178 (Northbound)		Station 4 SR 127 North of SR 190 (Southbound)		<i>May Average</i>	
	<u>16-May</u>		<u>17-May</u>			
Autos/Autos+Trailers	121	51.05%	148	62.71%	269	56.87%
Motorcycle	1	0.42%	0	0.00%	1	0.21%
Vans/Pickups/R.V.s	89	37.55%	56	23.73%	145	30.66%
Buses	4	1.69%	9	3.81%	13	2.75%
Large Truck	5	2.11%	3	1.27%	8	1.69%
Truck + 1 Trailer	13	5.49%	19	8.05%	32	6.77%
Truck + 2 Trailer	4	1.69%	0	0.00%	4	0.85%
Unknown	0	0.00%	1	0.42%	1	0.21%
Total	237	100%	236	100%	473	100%

Table II.6

May 1994 Machine Counts - Summarized

Vehicle	Station 2 SR 127 South of SR 178 (Northbound)		Station 4 SR 127 North of SR 190 (Southbound)	
	16-May		17-May	
Autos/Autos+Trailers (FHWA=2)			202	64.74%
Motorcycle (FHWA=1)			0	0.00%
Vans (FHWA=3)/Pickups (FHWA=3)/R.V.s (FHWA=3,5,6)			72	23.08%
Buses (FHWA=4)			10	3.21%
Large Truck (FHWA=7)			0	0.00%
Truck + 1 Trailer (FHWA=8,9,10)			27	8.65%
Truck + 2 Trailer (FHWA=11,12,13)			1	0.32%
Total			312	100%

March 1994 Machine Count **May 1994 Machine Counts - Summarized by Inyo County**

Vehicle	Station 2 SR 127 South of SR 178 (Northbound)		Station 4 SR 127 North of SR 190 (Southbound)	
	16-May		17-May	
Autos/Auto +Trailers (FHWA = 2)			202	64.74%
Motorcycle (FHWA=1)			0	0.00%
Pickups (FHWA = 3)			64	20.51%
Buses (FHWA = 4)			10	3.21%
Heavy Trucks (FHWA = 5, 6, 7, 8, 9, 10, 11, 12, 13)			36	11.54%
Total			312	100%

May 1994 Machine Counts: Two-Way Traffic, 8-Day Average

Vehicle	Station 2 SR 127 (SB only) South of SR 178		Station 4 SR 127 North of SR 190		SR 127 North of SR 178 W	
Autos/Auto +Trailers (FHWA = 2)	222	62.01%	372	68.76%	178	59.73%
Motorcycle (FHWA=1)	3	0.84%	5	0.92%	6	2.01%
Pickups (FHWA = 3)	87	24.30%	83	15.34%	54	18.12%
Buses (FHWA = 4)	7	1.96%	11	2.03%	4	1.34%
Heavy Trucks (FHWA = 5, 6, 7, 8, 9, 10, 11, 12, 13)	39	10.89%	70	12.94%	56	18.79%
Total	358	100%	541	100%	298	100%

III. SURVEY FINDINGS AND CONCLUSIONS

This section provides a complete breakdown of the answers to the survey questions. Percentage graphs complement the statistical data. The report highlights key, salient results and findings, based on an assessment of data collected from the combined RAO / Caltrans survey efforts.

This discussion addresses the following trip and vehicle characteristics: Trip Purpose; Location of Residence; Trip Origin and Destination; Trip Accommodations within Inyo County; Duration of Stay in Inyo County; Vehicle Classification; Truck Destination, Materiel and Weight. The Section III.A discussion on traffic volume reflects data collected from the three sources described in Section II. The discussion in Sections III.B through III.E are specifically based on data collected by the personal surveys. Findings described in Sections III.F and III.G are based primarily on Caltrans' continuous 24-hour counts taken during the same week as the personal surveys. These represent a more comprehensive and accurate traffic data-base for vehicle counts and classification than the nine-hour personal surveys or single-day mechanical counts.

A. TRAFFIC VOLUME

Tables II.2 through II.6 displays vehicle volumes by survey location, source, and time. The data shows that there was a considerable range of volume at each location, depending on the survey period. As expected, traffic volume at all stations was significantly higher in March, than in May. The differences were highest at survey station locations south of SR 190, where March volumes were 50% to 60% higher than in May. North of SR 190, the differences from March to May / June narrow to the 15% - 20% range. The greater differences counted at survey stations to the south probably reflect variations in traffic volume going into or out of DVNP from metropolitan Las Vegas and from southern California.

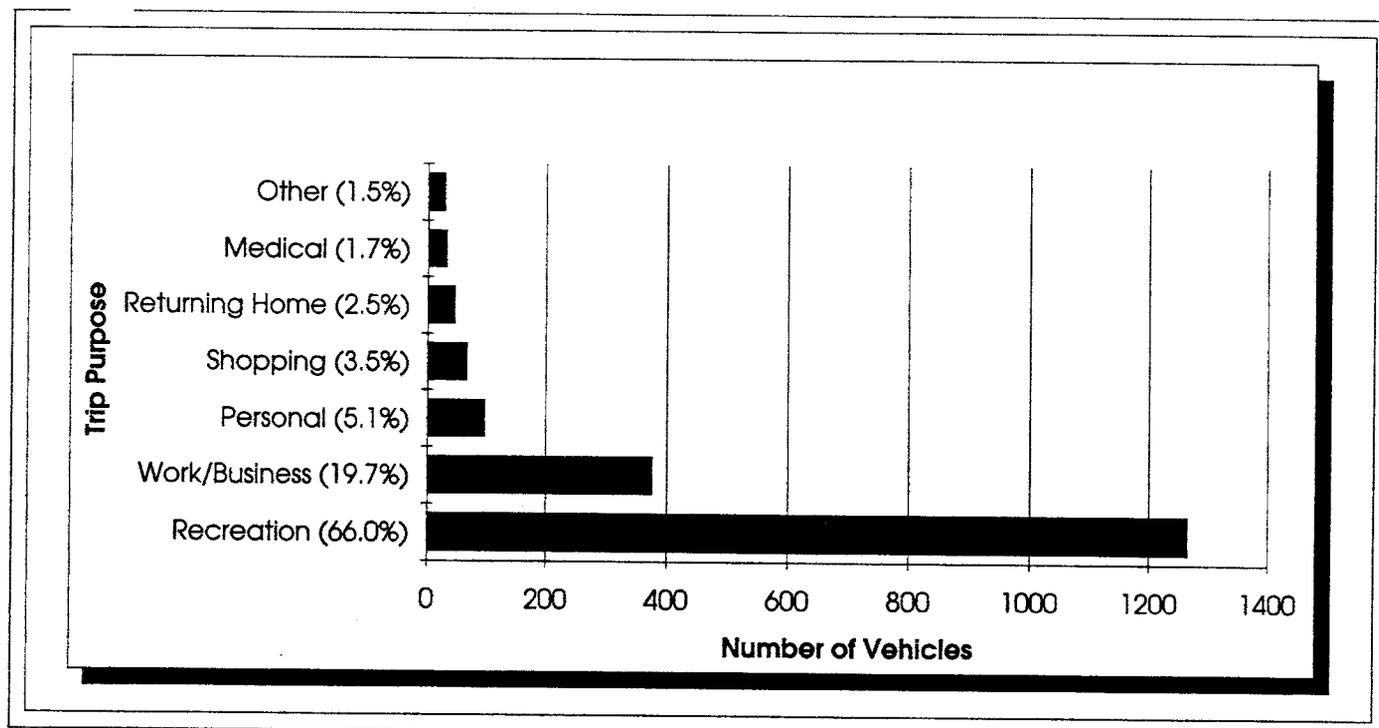
B. TRIP PURPOSE

Table III.1X and Figure III.1X show that two-thirds (66%) of all trips within the SR 127 Corridor were for recreational purposes. The next largest component was for work-related trips (20%). The remaining 14% were split among personal business, shopping, and medical trips.

Table III.1 - Purpose of Trip

<u>Trip Purpose</u>	<u>Number of Vehicles</u>	<u>Percent of Traffic</u>
Recreation	1,266	66.0%
Work/Business	377	19.7%
Personal	98	5.1%
Shopping	68	3.6%
Returning Home	47	2.4%
Medical	32	1.7%
Other	29	1.5%
TOTAL	1,917	100.0%

Figure III.1 - Purpose of Trip



C. LOCATION OF RESIDENCE

Overview

It follows from the preponderance of recreational travel within the corridor, that most survey respondents reside outside of the area. Table III.2X and Figure III.2Y show that only 6% of respondents live within the corridor, and 8% within Inyo County itself. About one-third (32%) of all respondents live in other California counties, while about one-quarter (24%) live in Nevada. Sixteen percent live in American states other than Nevada and California. A very substantial component (20%) live in foreign countries.

California Respondants

Of the respondents who are California residents residing outside of Inyo County, slightly more than half (57%) are from southern California Los Angeles, San Diego, Riverside, San Bernadino, Ventura, Santa Barbara, and Kern counties). Most of the rest are distributed between the Bay Area, Central Valley (Chico-to-Fresno), and Sierra regions.

Out-of-State Respondants

Survey respondents included residents of 45 states. Approximately 300 respondents (16%) reside in states other than California and Nevada. Table III.3 provides additional detail on survey respondents who reside in these "other" states. Residents of the Pacific Northwest - Oregon, Washington, Idaho - constituted the largest bloc (25%) of this group. Residents of Arizona, the closest neighboring state, had the next largest share (9%). Other states with significant representation include high-population states such as New York (8%), Texas (5%), Ohio (4.6%), Illinois (4%), and Florida (4%). The remaining population of this sub-group was fairly evenly distributed among other states.

Foreign Respondants

Survey respondents included residents of 23 foreign countries, including 16 European countries. Table III.4 provides additional detail on survey respondents who reside in foreign countries. Approximately 85% of surveyed foreign travelers were European. The majority of these were residents of German speaking countries, most of whom were citizens of Germany. Germans constituted 46% of all surveyed foreigners and 54% of surveyed Europeans. Citizens of

Table III.2 - Location of Residence

Geographic Location	Number of Vehicles	Percent of Traffic
Within SR 127 Corridor	110	5.7%
Other Inyo County	40	2.1%
Other California	610	31.8%
Nevada	466	24.3%
Other U.S.	302	15.8%
Foreign	390	20.3%
TOTAL	1,918	100.0%

Figure III.2 - Location of Residence

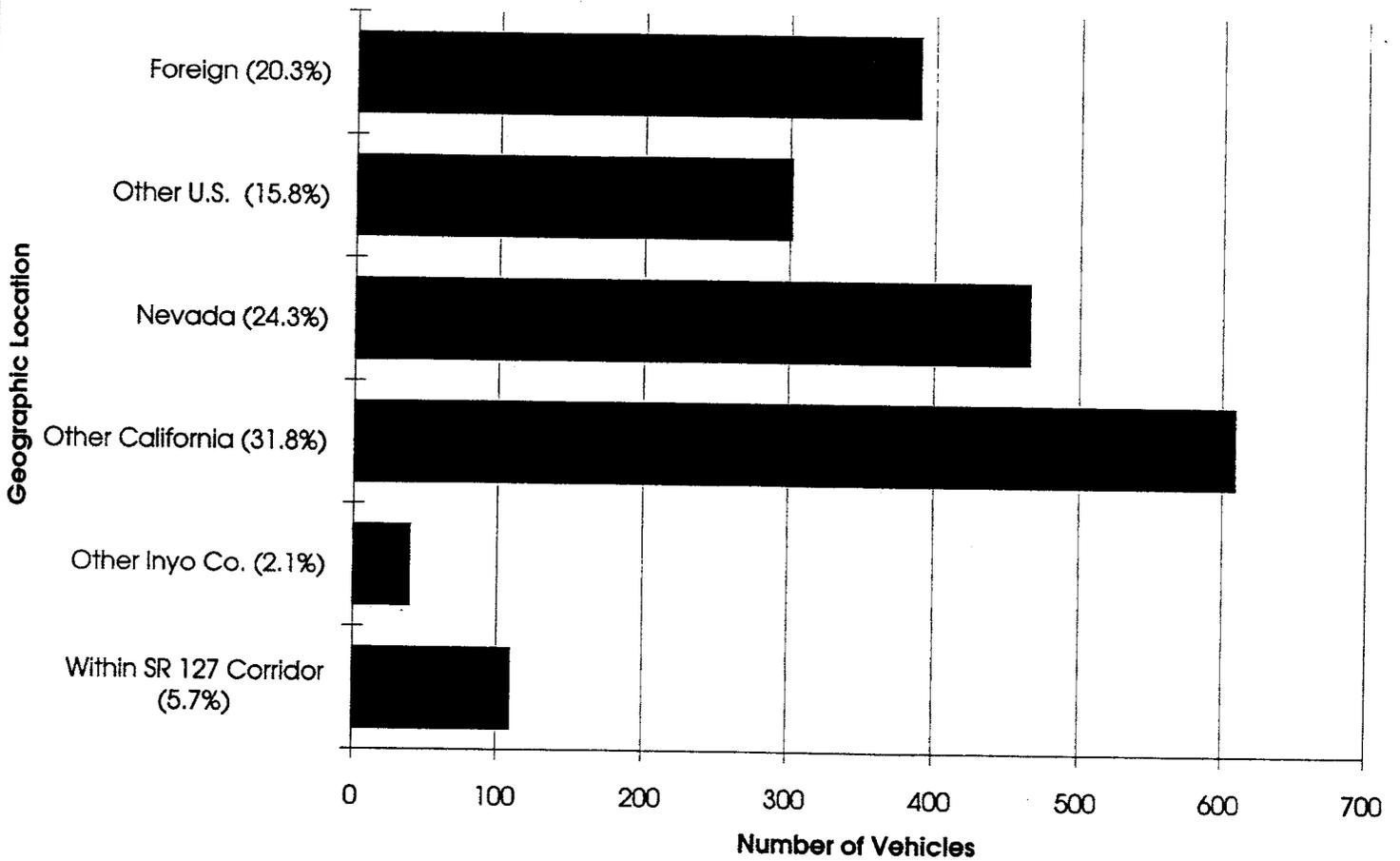


Table III.3: Residential Origins - Inyo County Survey Respondants

<u>Residence</u>	<u>Number of Vehicles</u>	<u>Percent of Survey Traffic</u>
Within SR 127 Corridor	110	5.7
Other Inyo County	40	2.1
Nevada	466	24.3
<u>Other U.S.</u>		
Alaska	2	0.1
Alabama	2	0.1
Arizona	26	1.4
Colorado	9	0.5
Connecticut	3	0.2
Washington, D.C.	1	0.1
Delaware	1	0.1
Florida	12	0.6
Georgia	2	0.1
Hawaii	3	0.2
Iowa	1	0.1
Idaho	6	0.3
Illinois	12	0.6
Indiana	5	0.3
Kansas	1	0.1
Kentucky	1	0.1
Louisiana	2	0.1
Massachusetts	6	0.3
Maryland	2	0.1
Mississippi	7	0.4
Minnesota	8	0.4
Missouri	5	0.3
Montana	2	0.1
Nebraska	2	0.1
North Carolina	2	0.1
New Hampshire	1	0.1
New Jersey	9	0.5
New Mexico	4	0.2
New York	24	1.3
Ohio	14	0.7
Oklahoma	5	0.3
Oregon	38	2.0
Pennsylvania	7	0.4
South Dakota	2	0.1
Tennessee	4	0.2
Texas	15	0.7
Utah	7	0.4
Vermont	1	0.1
Virginia	5	0.3
Washington	30	1.6
Wisconsin	9	0.5
Wyoming	4	0.2
Total Other U.S.	390	16%

Table III.4

Residential Origins - Inyo County Survey Respondants

<u>International</u>	Number of <u>Vehicles</u>	Percent of <u>Survey Traffic</u>
Australia	8	2.1
Austria	10	2.6
Belgium	10	2.6
Brazil	2	0.5
Canada	41	10.5
Czech Republic	1	0.25
Denmark	3	0.7
France	21	5.4
Germany	180	46.2
Great Britain	48	12.3
Greece	1	0.25
Holland	17	4.4
Hong Kong	1	0.25
Ireland	1	0.25
Italy	1	1.0
Japan	3	0.8
Mexico	1	0.25
New Zealand	1	0.25
Poland	1	0.25
Portugal	1	0.25
Spain	2	0.5
Sweden	2	0.5
Switzerland	<u>31</u>	<u>7.9</u>
Total International	390	20.3

German-speaking countries (Germany, Switzerland, and Austria) constituted 57% of all surveyed foreigners and 66% of surveyed Europeans. British respondents constituted 12% of all surveyed foreigners and 14% of the Europeans. Respondants from all other European countries constituted less than 10% each. After Germany and Great Britain, citizens of Canada were the next largest group of surveyed foreigners (11%).

Only 33 (8.5%) of the 390 surveyed foreigners, or 1.7% of all respondents used foreign-language survey forms. Of these, 27 (82%) used German language forms and six used French-language forms. This indicates a broad level of English proficiency among the foreign tourist population. Most (82%) of those who used the foreign language surveys were German speakers. Note that most citizens of the Federal Republic of Germany typically have a fundamental knowledge of English, and it is possible that some of those who used the foreign-language forms might have communicated in English, if necessary. Hence, the ability to communicate to foreign travelers during an emergency scenario should not constitute a significant problem. However, it may be useful for agencies responsible for disseminating travel information and tourist literature (on paper) to make such information available in German/French/Spanish format.

D. TRIP ORIGIN AND DESTINATION

Due to the large number of recreational users/respondants, the surveyed trip origin-destination patterns shown in Table III.5X and Figure III.3Y do not show a strong statistical correspondance with residential origins. The most frequent point of origin were points east/northeast in Nevada (44% of all trips). In a sense, this is not surprising since Las Vegas is the closest large metropolitan area, and a one of the most prominent tourist destinations in the U.S. A comparable percentage (43%) were destined for Death Valley and points along US 395. This indicates a significant level of traffic between metropolitan Las Vegas, and Death Valley and the recreational areas of the California-Sierra Nevada region - a likely recreational travel route. Local trips (i.e. those beginning and ending within the SR 127 corridor) make up 13% to 14% of all trips. A relatively small percentage (19%) of all trips originate from points southwest / southeast; most of these are probably from southern California. Only 10% of all trips are destined for that area.

E. TRIP ACCOMMODATIONS WITHIN INYO COUNTY

Table III.6X and Figure III.4Y show that the most frequent type of accommodation among respondents is to either camp-out or use a motor-home (40%). The next largest number of

Table III.5 - Trip Origins and Destinations

Origin of Trip

Geographic Location	Number of Vehicles	Percent of Traffic
North/Northwest: <i>Death Valley, Bishop, etc.</i>	416	24.02%
South: <i>Southwest / east via I-15</i>	321	18.53%
East/Northeast: <i>Las Vegas, Pahrump, etc.</i>	763	44.05%
Within Corridor: <i>Shoshone, Tecopa, etc.</i>	232	13.39%
TOTAL	1732	100.0%

Destination of Trip

Geographic Location	Number of Vehicles	Percent of Traffic
North/Northwest: <i>Death Valley, Bishop, etc.</i>	775	43.25%
South: <i>Southwest / east via I-15</i>	182	10.16%
East/Northeast: <i>Las Vegas, Pahrump, etc.</i>	590	32.92%
Within Corridor: <i>Shoshone, Tecopa, etc.</i>	245	13.67%
TOTAL	1792	100.0%

Figure III.3 - Trip Origin and Destination

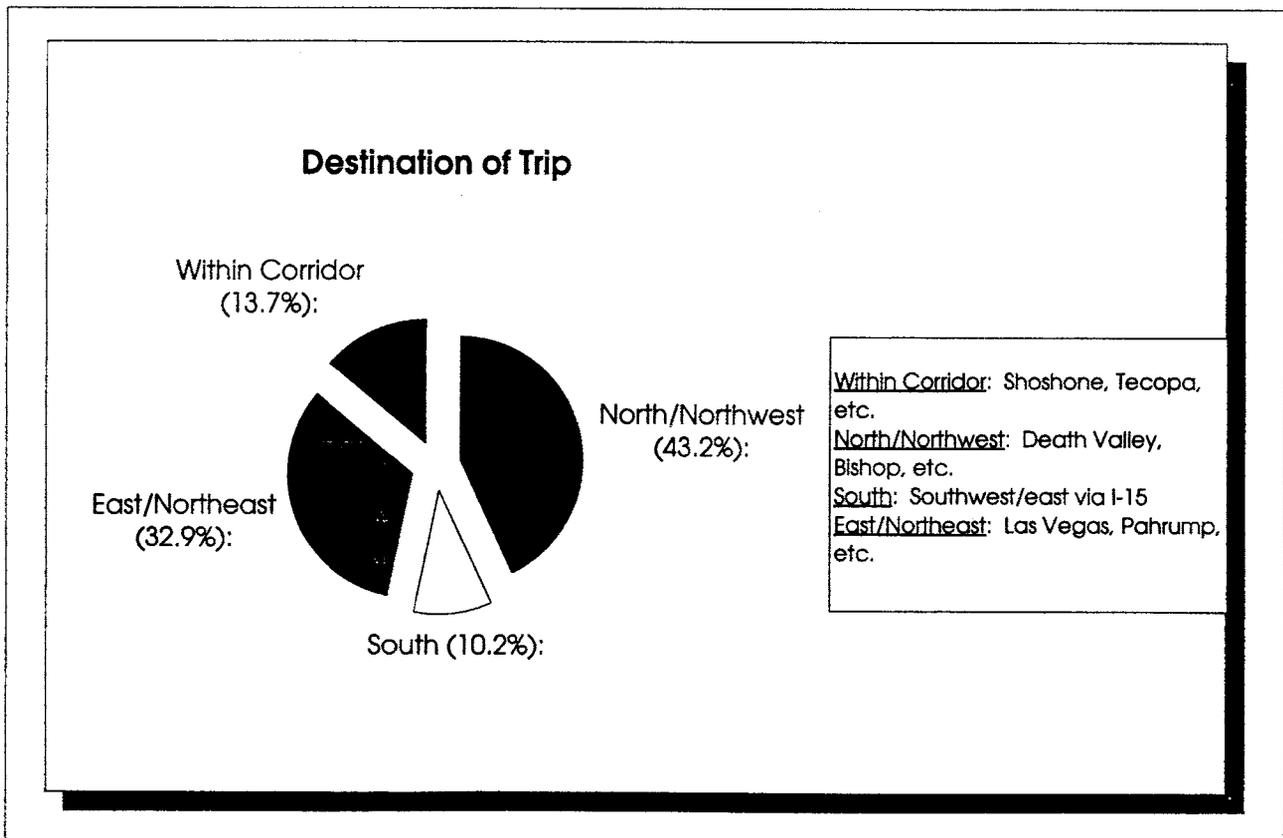
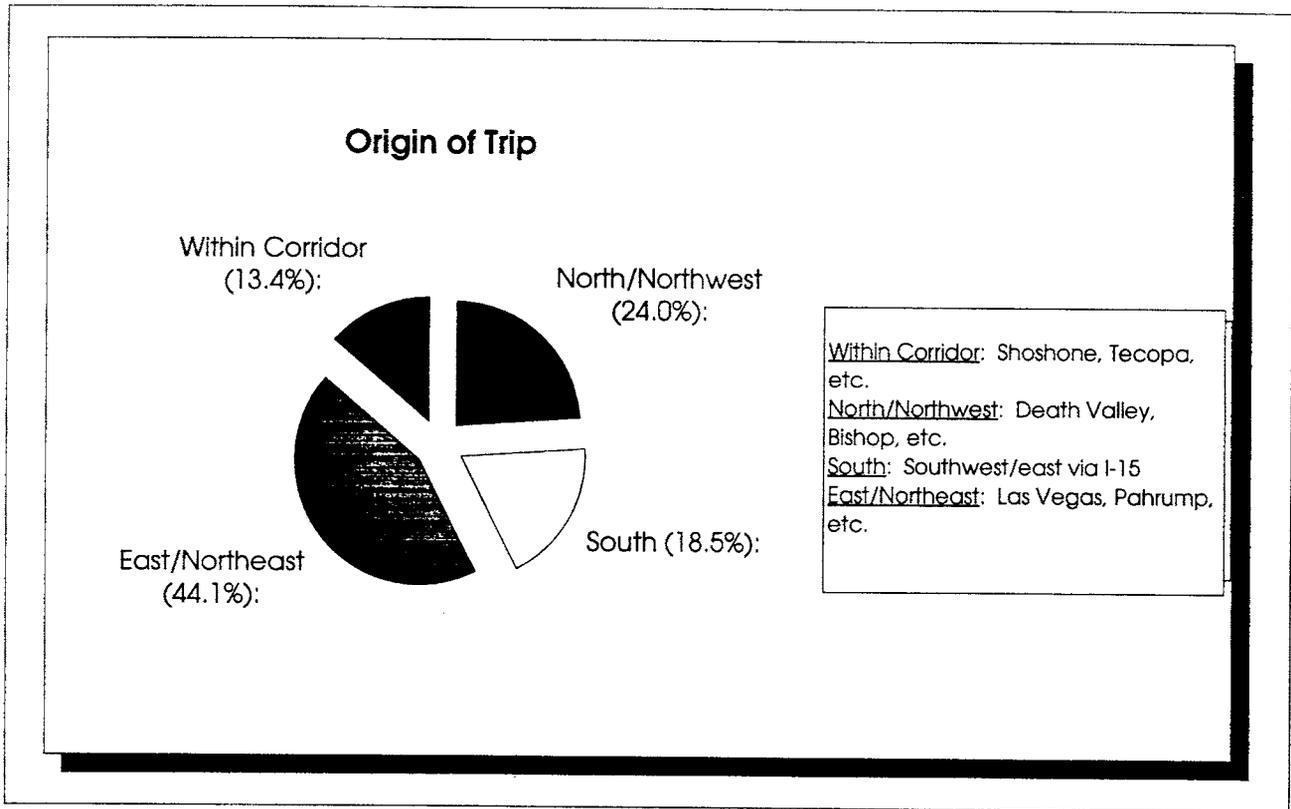
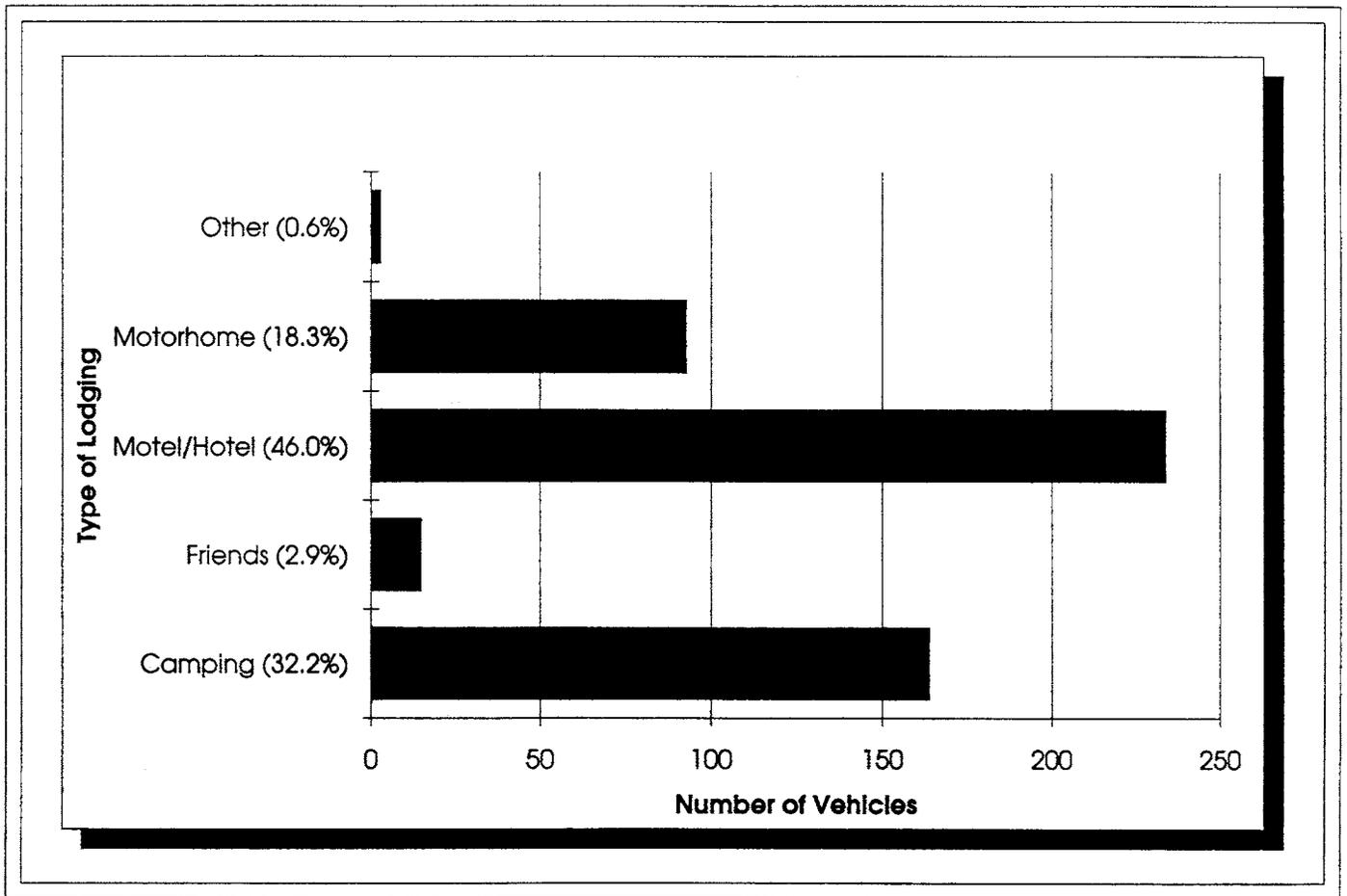


Table III.6 - Trip Accommodations in Inyo County

Type of Lodging	Number of Vehicles	Percent of Traffic
Motel/Hotel	234	36.3%
Camping	164	25.5%
Own Home	135	21.0%
Motorhome	93	14.4%
Friends' Home	15	2.3%
Other	3	0.5%
TOTAL	644	100.0%

Figure III.4 - Trip Accommodations in Inyo County



respondants (36%) stay in hotels or motels. Only 21% intend to spend the night in their own home. A small number spend the night at the residence of a friend or acquaintance.

F. DURATION OF STAY IN INYO COUNTY

Data presented in Table III.7X indicates that about half of all respondents are spending only one day in Inyo County, i.e. driving directly through without staying overnight. Approximately one-third (33%) are staying at least one night but less than one week within the County.

Approximately 10% of all respondents are spending from one to three weeks within the County, and about 8% are spending one month or more there.

G. VEHICLE CLASSIFICATION

Tables II.2 - II.4 provide detailed information on surveyed vehicle classification. In March 1994, just over one-half of all vehicles driven by survey respondents were automobiles (57%). This increases to a range of 61% to 64% in May. The average vehicle occupancy for those cars was 2.3 persons per vehicle. However, 85% of all vehicles driven by respondents were private vehicles including cars, vans, motorcycles, and trailers. An additional 8% consisted of cars with trailers or recreational vehicles (RVs). About 6% of all vehicles were truck rigs of various configuration (see Section HG below), and the remainder consisted primarily of buses.

H. TRUCK DESTINATION, MATERIALS AND WEIGHT

Table III.8X displays truck destination and materiel hauled by laden weight. The data shows that about 43% of all trucks surveyed were small to medium sized vehicles, i.e. 20 tons or less with cargo. Larger truck rigs (over 20 tons) accounted for about 57% of all trucks surveyed. Approximately one-fourth (24%) of all truck trips (or 1.5% of all trips) haul some form of hazardous material.

I. CONCLUSIONS

The SR 127 Corridor is currently dominated by recreational travel. Most trips either begin or end in the state of Nevada or in Inyo County. A reasonable deduction would be that a substantial number and percentage of trips within the corridor travel between metropolitan Las Vegas, and Death Valley and the Sierra Nevada in California. Most survey respondents reside in California excluding Inyo County, and southern California is the largest population concentration within a

Table III.7 - Length of Stay in Inyo County (by Accommodation)

Type of Lodging	Number of Vehicles per Length of Stay																Total
	Number of Days						Number of Weeks			Number of Months							
	1	2	3	4	5	6	1	2	3	1	2	3	4	5	6	7	
Motel/Hotel	166	34	12	6	1	1	6	2	--	1	1	1	--	--	--	--	231
Camping	54	35	22	12	8	--	20	3	2	3	1	2	1	--	--	1	164
Motorhome	27	11	12	4	2	1	8	1	--	5	6	4	4	--	5	--	90
Friends	--	1	1	--	2	--	6	1	--	--	1	--	1	--	--	--	13
Other	1	--	--	--	--	--	--	1	--	1	--	--	--	--	--	--	3
TOTAL	248	81	47	22	13	2	40	8	2	10	9	7	6	0	5	1	501

Table III.8 - Breakdown of Trucks by Destination, Material Carried, and Weight

Material Hauled	Laden Weight (in '000's)	Destination							SUB TOTAL	TOTAL
		U.S. Ecology	Farm	Mine Site	NV Test Site	"R" ??	Retail Store	Other		
Hazardous Material	25-40				1			1	2	4
	70+							2	2	
Hazardous Waste	Empty	1							1	16
	25-40	10	1						11	
	70+	4							4	
Ore / Minerals	Empty			1					1	19
	10-25							1	1	
	25-40	1		1					2	
	70+		2	10	1		1	1	15	
Produce / Food	25-40					1			1	4
	55-70					1	1		2	
	70+		1						1	
Livestock	55-70		1						1	6
	70+		5						5	
Goods / Material	10-25		1					1	2	10
	25-40					1	2	1	4	
	55-70					1		1	2	
	70+		1						1	
	blank						1		1	
Other	Empty							2	2	19
	10-25		1						1	
	25-40			1	1			2	4	
	40-55					1		1	2	
	55-70							1	1	
	70+		3					3	6	
	blank							3	3	
Blank Entry	25-40		1						1	4
	70+		1					1	2	
	blank			1					1	
TOTAL	ALL	16	18	14	3	5	5	21	82	

day's drive of the study area. However, a relatively small percentage of trips through the study area begin or end there.

Truck trips account for a relatively small proportion of all surveyed vehicles (6%). However, about one-fourth of all truck trips currently carry hazardous materiel.