

EVALUATION REPORT ON THE 1979-1983 OAKLAND COUNTY
ALCOHOL ENFORCEMENT/EDUCATION PROJECT

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16. Abstract An UMTRI research study evaluated the effects of the Oakland County Alcohol Enforcement/Education Program conducted from 1979 through 1983. Several activities in the Oakland County Program were undertaken for the purpose of reducing the rate of alcohol-related traffic accidents: police training, deployment of extra patrol cars, and public information efforts. The evaluation study, which compared the 1980-1983 period with a baseline period of 1978-1979, employed measurements that included numbers of arrests for drunken driving, percentage of the driving population aware of the increased enforcement efforts, and rates of alcohol-related and non-alcohol-related accidents within Oakland and in other large Michigan counties. Findings of the evaluation study showed that the annual drunk driving arrest rate nearly doubled, and that public awareness of the drinking-driving problem and stepped-up enforcement greatly increased. Analyses of traffic accident data showed no substantial pre- and post-program differences between the rates of alcohol-related accidents in Oakland County and the average of other large Michigan counties. The study findings offer no evidence in support of the theory that increased enforcement and public education at these program levels reduce the incidence of alcohol-related traffic accidents.					
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1.0 INTRODUCTION

1.1 Report Overview

In May of 1979 a four-year program to combat drunk driving and alcohol-related accidents was initiated in Oakland County, Michigan. The primary Project activity was the deployment of special police patrol personnel at the times and places of large numbers of past alcohol-related accidents.

Planning for this special police patrol effort was carried out by the Traffic Improvement Association of Oakland County (TIA) using its extensive computerized data base of geographically coded accidents for the entire county. TIA was also responsible for carrying out an educational program to inform the general public about the dangers of drunk driving and to warn potential drunk drivers of their increased chances of apprehension. In addition, TIA sponsored and conducted specific educational activities with many persons relevant to the Project, including police officers, driver training teachers, district court judges, and prosecutors.

Major goals of the Oakland County Alcohol Enforcement/Education Project included a 15 percent reduction in the rate of alcohol-related accidents, a 15 percent increase in arrests for drunk driving, and a significant increase in public awareness of the drunk driving problem. The University of Michigan Transportation Research Institute (UMTRI) was asked to evaluate the effectiveness of the Project in meeting its goals.

The rest of Section 1 describes the overall Project activities and goals. Sections 2 and 3 discuss in detail the goals relating to drunk driving arrests and changes in public opinion, respectively. Section 4 presents data on changes in alcohol-related and other accidents within Oakland County, in some other large Michigan counties, and in the rest of the state. Section 5 contains the summary and conclusions.

1.2 Project Description

Oakland County is the largest suburban county in the Detroit metropolitan area, with over one million people residing in 61 political

subdivisions (26 cities, 12 villages, and 23 townships). Pontiac is the county seat, and other large communities include the cities of Southfield, Royal Oak, Farmington Hills, and Troy, and the townships of Waterford, Bloomfield, and West Bloomfield. The population is concentrated in the southern and eastern parts of the county, and there are substantial rural areas to the north and west. There are 42 separate local police agencies serving the county. In addition, one Michigan State Police (MSP) post is located in the county (Pontiac), and three other nearby posts serve parts of the county (Northville, Brighton, and Romeo). Sixteen district courts with 32 judges provide first-level court services in various parts of the county.

Primary responsibility for the Oakland County Alcohol Enforcement/Education Project resided with the Traffic Improvement Association of Oakland County, whose Managing Director is Bruce B. Madsen. Also heavily involved in the Project was the Oakland County Sheriff's Department under the command of Sheriff Johannes Spreen. Financial support for the Project was provided by the Michigan Office of Highway Safety Planning (OHSP) using federal highway safety grant funds.

As mentioned above, the major Project activity was the deployment of special police patrols at the times and places of large numbers of alcohol-related accidents, based on an extensive computer analysis of past Oakland County accidents. The special patrol effort concentrated on six target road sections during the first operational year, and these were expanded to ten target areas the following year. Each target area consisted of one or more lengths of major roads on which the entire team was deployed in a saturation effort. The Sheriff's Department provided most of the Alcohol Enforcement (AE) Team personnel and was responsible for keeping records on the Team's operation. The Pontiac MSP post and a number of local police departments also provided patrol personnel and cars for the Team. Three of the Sheriff's Department cars were fitted with evidential breath-testing devices powered by the cars' batteries.

While the primary purpose of the Alcohol Enforcement Team was saturation enforcement of the drunk driving laws in the target areas of deployment, Team personnel also carried out many other law enforcement activities in their assigned areas of patrol. For example, from May,

1980, through December, 1982, the OUIL logbooks of the Sheriff's Department members of the AE Team showed 1126 other arrests/charges in addition to their 1724 OUIL (Operating Under the Influence of Liquor) arrests, and these logbooks are by no means a complete record of other enforcement activities. The logbook records included 404 traffic and other warrants, 343 driver license violations, 93 open intoxicant charges, 117 felony arrests, etc. Of course, when needed, the AE Team officers also carried out other normal road patrol activities such as assisting at traffic accidents.

TABLE 1.1
Approximate Expenditures for the Oakland County Alcohol
Enforcement/Education Project, May 1979 Through May 1983

Grant Period	Traffic Improvement Association	Oakland Sheriff's Department	Michigan State Police*	Total
5/79-5/80	\$72,388	\$63,265	\$21,421	\$157,074
6/80-5/81	\$125,197	\$235,566	\$63,755	\$424,518
6/81-5/82	\$84,539	\$219,858	\$42,868	\$347,265
6/82-5/83	\$79,900	\$231,766	\$23,333	\$334,999
Total	\$362,024	\$750,455	\$151,377	\$1,263,856

*The grant periods for the Michigan State Police were actually from October to September each year, so only two-thirds of the fourth year expenditure has been shown here.

Expenditures for the four years of the Project are shown in Table 1.1. Of the \$1,263,856 total almost 60 percent was used by the Sheriff's Department, and 12 percent was used by the Pontiac MSP post. The remainder was used by TIA for its public information, accident analysis, and coordination activities, and for payment to local police departments for participating on the Alcohol Enforcement Team when the Team was deployed in their jurisdiction. Five local police departments participated, and approximately \$44,373 in TIA funds were used to reimburse these police agencies.

Most of the funds during the first year were used for planning and

training activities. The actual police operations began on April 10, 1980, with the Alcohol Enforcement Team operating 20 hours a week. For the first two weeks it began at 10 p.m. and ended at 3 a.m. on Wednesday, Thursday, Friday, and Saturday nights. After the initial two weeks it operated from 11 p.m. to 4 a.m. on those nights. Through June 1981 the Alcohol Enforcement Team usually consisted of six deputies (one in each car) from the Sheriff's Department, two troopers (in one car) from the Pontiac MSP post, and one or two police officers and cars from a cooperating local police department.

The Project budget covered the complete costs for the six deputies assigned to the Alcohol Enforcement Team, not just for the 20 hours weekly of Team operation. The cost of the MSP car and two troopers averaged over \$300 per night (paying each officer at overtime rates for six hours), while the cost of the local police participation averaged about \$90 per night for one car and one officer. In July 1981 the Team was reduced from six to five deputies due to Project budget reductions, and in October 1981 state police participation was reduced to two or three nights a week (Friday and Saturday and sometimes Thursday) for similar reasons. The initial Project was scheduled to end in May 1983, but it was extended for one year with an additional OHSP grant of approximately \$485,000. This evaluation report covers the period through May 1983. Two earlier reports have been published.¹

1.3 Project Goals and Evaluation Activities

The overall goal of this four-year project was to reduce the suffering and costs associated with alcohol-related accidents in Oakland County. Specifically, the Project aimed to reduce the rate of alcohol-related fatal and injury accidents in the whole county by 15 percent and to reduce the rate in the designated selective enforcement "target

¹First Evaluation Report on the Oakland County Alcohol Enforcement/Education Project, A. C. Wolfe, Report No. UM-HSRI-81-6, The University of Michigan, Highway Safety Research Institute, February 1981.

Interim (Two-Year) Evaluation Report on the Oakland County Alcohol Enforcement/Education Project, A. C. Wolfe, Report No. UMTRI-83-12, The University of Michigan, Transportation Research Institute, March 1983.

areas" by 30 percent.

These goals were inserted in the first year project application to the Michigan Office of Highway Safety Planning. In subsequent years the goal of a 30 percent reduction in the target areas was deleted from the official list of Project goals, partly due to reductions in budget and program from that which had originally been anticipated.

While the project goals were stated in terms of a reduced rate of alcohol-related crashes, this rate was not precisely defined. A population rate could be defined as:

$$\frac{\text{Number of Alcohol-Related Accidents}}{\text{Population of the County}}$$

This could be computed from year to year, and since population changes relatively slowly, would be essentially equivalent to accident frequency. However, looking at changes in accident frequency for only one county makes it impossible to determine whether the changes result from the program activities or from other factors such as changes in the economy.

A second possible definition of "rate" is:

$$\frac{\text{Number of Alcohol-Related Accidents}}{\text{Total Accidents}}$$

The problem with this definition of rate is that changes in the denominator will influence the rate even if the frequency of alcohol-related crashes remains constant. Another way of looking at this is that successful program activities may affect both the denominator and numerator of the above equation. The rate may not change at all, but the program may be quite successful. It is not hard to conceive of a visible alcohol enforcement campaign having a greater effect on the denominator than on the numerator of this last equation. Although the original program goals were stated in terms of this measure, it does not seem to be fully appropriate in the present circumstance.

In view of the foregoing the most useful measure of change for this project is a comparison of changes in the accident count for Oakland County with changes in peer counties within Michigan or with the rest of the state. This involves a careful examination of the accident

experience in Oakland county vis-a-vis the same information for other counties.

In the interests of completeness, a number of statistics will be presented in this report. Changes in the frequency of all accidents, alcohol-related accidents, non-alcohol-related accidents, and changes in the rate defined in the second equation above will be displayed for Oakland County and for a number of comparison jurisdictions.

In addition to the accident reduction goals, the original Project plan listed three other goals, each of which was expected to contribute to this accident reduction. These were:

1. To increase drunk driving arrests by 30 percent in the Sheriff's Department, by 15 percent in the 42 local police departments in the county, and by 50 percent in the selected target areas.
2. To implement a drunk driving selective enforcement program in the Sheriff's Department and in at least half of the 11 police departments serving populations over 25,000.
3. To significantly increase public awareness of the magnitude of the alcohol-related traffic accident problem and public support for firm drunk driving enforcement measures.

The goals of increasing Sheriff's Department OUIL arrests by 30 percent and target area OUIL arrests by 50 percent were not restated in the second, third, and fourth year project continuation plans. However, each of these yearly plans included the objectives of decreasing alcohol-related fatal and injury accidents county-wide by five percent and of increasing OUIL arrests county-wide by five percent during the subsequent project year.

To measure the Project's success in attaining these goals, UMTRI staff, with the assistance of TIA and the Sheriff's Department, collected data on alcohol-related accidents and drunk driving arrests in Oakland County. These data were obtained for the baseline period from April 1978 through March 1980 and for the operational period from April 1980 through May 1983. UMTRI has also carried out four public opinion surveys among random samples of Oakland County drivers.

2.0 OAKLAND COUNTY OUIL ARREST DATA

A goal of the Oakland County Alcohol Enforcement/Education Project was to increase arrests for OUIL (Operating Under the Influence of Liquor) by 30 percent in the Sheriff's Department and by 15 percent in the local police departments of Oakland County. In this section trends in drunk driving arrests in Oakland County are compared with nine other large counties and with the state as a whole. Also considered are trends within the 47 police agencies operating in Oakland County. Finally information is presented on the arrests carried out by the special Alcohol Enforcement Team in its ten designated target areas.

Table 2.1 presents the county comparative data for the calendar years 1976-1981. This table is based on annual uniform crime reports which each police agency is required to submit to the Michigan State Police. Prior to 1976 some police departments did not always fulfill this obligation, and even in 1978, 1979, and 1980 the Kalamazoo County data were not complete. The published 1982 data were incomplete for most of the large counties, so they could not be meaningfully included in the table.

Table 2.1 shows that the number of drunk driving arrests has been increasing throughout the state in recent years. The general level of alcohol enforcement throughout the State of Michigan was increasing as evidenced by the fact that each county shown experienced an increase from 1976 to 1981. The statewide increase was 23.4 percent, while Oakland County's increase was 60.1 percent. Two counties, Genesee and Jackson, show slightly larger percentage increases, but they started from much lower rates of drunk driving arrests in 1976. Macomb County still shows a substantial lead in per capita arrests (7.68/1,000 population compared to Oakland's 6.66/1,000 in 1981)--as it showed throughout all of the six-year period. In 1981 Washtenaw County also had a slightly higher arrest rate (6.73/1,000), while Calhoun County (6.27/1,000) and Ingham County (6.28/1,000) were not much lower than Oakland County. Wayne County's arrest rates have been considerably

TABLE 2.1
Drunk Driving Arrests and Arrests Per Capita for Oakland County,
Nine Other Large Counties, and All Michigan, 1976-81*

County	Year						Percent Increase 1976/81
	1976	1977	1978	1979	1980	1981	
OAKLAND COUNTY							
OUIL Arrests	4253	4057	4757	5406	5916	6809	60.1%
Arrests Per 1000 Pop.	4.38	4.14	4.80	5.40	5.85	6.66	52.0%
CALHOUN COUNTY							
OUIL Arrests	815	784	669	638	789	887	8.8%
Arrests Per 1000 Pop.	5.75	5.53	4.72	4.51	5.57	6.27	9.0%
GENESEE COUNTY							
OUIL Arrests	942	1085	1329	1949	1548	1557	65.3%
Arrests Per 1000 Pop.	2.10	2.42	2.96	4.33	3.44	3.45	64.4%
INGHAM COUNTY							
OUIL Arrests	1462	1419	1110	1255	1430	1739	18.9%
Arrests Per 1000 Pop.	5.42	5.23	4.07	4.58	5.19	6.28	15.8%
JACKSON COUNTY							
OUIL Arrests	476	585	498	500	643	803	68.7%
Arrests Per 1000 Pop.	3.21	3.93	3.32	3.32	4.24	5.27	64.1%
KALAMAZOO COUNTY							
OUIL Arrests	937	919	**	**	**	1131	20.7%
Arrests Per 1000 Pop.	4.50	4.39	--	--	--	5.30	17.6%
KENT COUNTY							
OUIL Arrests	1263	1288	1248	1436	1481	1661	31.5%
Arrests Per 1000 Pop.	2.93	2.96	2.85	3.26	3.33	3.71	26.6%
MACOMB COUNTY							
OUIL Arrests	3909	3637	3628	4293	4234	5390	37.9%
Arrests Per 1000 Pop.	5.86	5.40	5.33	6.24	6.10	7.68	31.1%
WASHTENAW COUNTY							
OUIL Arrests	1127	1342	1307	1402	1232	1802	59.9%
Arrests Per 1000 Pop.	4.46	5.25	5.05	5.36	4.65	6.73	50.7%
WAYNE COUNTY							
OUIL Arrests	9574	10306	11740	11125	11372	10281	7.4%
Arrests Per 1000 Pop.	3.87	4.23	4.88	4.69	4.86	4.46	15.1%
ALL MICHIGAN							
OUIL Arrests	38488	37532	39628	41937	41032	47511	23.4%
Arrests Per 1000 Pop.	4.22	4.10	4.31	4.55	4.43	5.11	20.9%

*These data are from Return B of the Michigan Uniform Crime Report.

lower throughout the period, and there has not been much change in the frequency of arrests there.

2.1 Local OUIL Arrest Data

Table 2.2 shows how the numbers of drunk driving arrests have changed for each police agency in Oakland County for the 24 months preceding the special enforcement effort and for the 38 operational months from April 1980 through May 1983. For the county as a whole, OUIL arrests increased 21.7 percent from the baseline period to the operational period. A large share of that increase was due to the Sheriff's Department, which increased its average annual OUIL arrests 97.5 percent--from 970 in the prior 24 months to 3,033 during the 38 months of Project operation. This increase was far above the original goal of a 30 percent increase.

For the 42 local police departments in Oakland County the combined rate of increase in OUIL arrests in the operational period was 14.5 percent, virtually the planned 15 percent goal. The most significant increase was achieved by Royal Oak City, which almost quadrupled its average annual OUIL arrests for a 295.6 percent increase. It moved from fourteenth to third place among the local police departments in number of OUIL arrests. However, Troy began with a much higher arrest rate in the baseline period, and its 106.8 percent increase moved it from fourth place to first place among the local police departments in total OUIL arrests. Other large departments showing significant increases were Southfield (23.7 percent--to maintain its second place standing), Farmington Hills (37.4 percent), and Bloomfield Township (22.4 percent). Among the smaller departments with substantial increases in the number of OUIL arrests were Berkley (154 percent), Milford (50 percent), Franklin (33 percent), Ferndale (70 percent), Farmington (91 percent), Lake Orion (58 percent), Wixom (87 percent), Birmingham (62 percent), White Lake Township (73 percent), and Wolverine Lake (107 percent).

On the other hand, 15 of the local police departments had declines in their numbers of OUIL arrests. Waterford Township showed a 35.2 percent decrease, dropping it from fifth to ninth place in total OUIL arrests, and its arrest rate per 1,000 police duty hours declined at

TABLE 2.2
Changes in Oakland County DUIL Arrests From the Baseline Period to the
Operational Period by Police Agency, April 1978 to May 1983**

Police Agency	Baseline 4/78-3/80			Operational 4/80-5/83			Average % Change in Arrests
	DUIL Arrests	Man-hours (1000s)#	Arrest Rate##	DUIL Arrests	Man-hours (1000s)#	Arrest Rate##	
Berkley	53	79.86	0.66	213	125.18	1.70	+153.8
Beverly Hills	97	93.50	1.04	177	136.28	1.30	+15.2
Birmingham	110	119.75	0.92	283	189.06	1.50	+62.5
Bloomfield Hills	33	*	*	54	*	*	+3.3
Bloomfield Township	309	176.54	1.75	599	275.95	2.17	+22.4
Clawson	181	*	*	370	*	*	+29.1
Farmington	105	*	*	317	119.00	2.66	+90.7
Farmington Hills	216	*	*	470	*	*	+37.4
Ferndale	197	150.69	1.31	529	177.68	2.98	+69.6
Franklin	51	27.85	1.83	107	42.04	2.55	+32.5
Hazel Park	674	*	*	849	*	*	-20.4
Holly	191	59.15	3.23	245	83.75	2.93	-19.0
Huntington Woods	64	43.87	1.46	95	70.76	1.34	-6.2
Keego Harbor	109	18.88	5.77	206	31.29	6.58	+19.4
Kensington Park	12	*	*	39	*	*	+105.3
Lake Orion	38	22.69	1.67	95	38.50	2.47	+57.9
Lathrup Village	2	*	*	3	*	*	-5.2
Madison Heights	239	125.11	1.91	366	175.24	2.09	-3.3
Milford	30	29.56	1.01	71	61.76	1.15	+49.5
Northville	133	42.97	3.10	209	79.59	2.63	-0.8
Novi	228	52.05	4.38	325	107.37	3.03	-10.0
Oakland University	8	*	*	17	*	*	+34.2
Oak Park	413	*	*	672	*	*	+2.8
Oak. Co. Safety Div.	25	40.37	0.62	42	238.41	0.18	+6.1
Orchard Lake	62	*	*	60	*	*	-38.9
Oxford	148	31.74	4.66	145	*	*	-38.1
Pleasant Ridge	0	*	*	4	*	*	--
Pontiac City	894	387.49	2.31	948	*	*	-33.0
Pontiac Township	187	65.74	2.84	253	101.44	2.49	-14.6
Rochester	75	*	*	71	*	*	-40.2
Royal Oak City	193	214.43	0.90	1209	*	*	+295.6
Royal Oak Township	4	*	*	15	*	*	+136.8
Southfield	719	*	*	1408	*	*	+23.7
South Lyon	223	44.43	5.02	195	50.19	3.89	-44.8
Sylvan Lake	35	*	*	45	*	*	-18.8
Troy	634	223.17	2.84	2076	379.52	5.47	+106.8
Walled Lake	181	49.83	3.63	207	79.98	2.59	-27.8
Waterford Township	565	160.90	3.51	569	230.89	2.46	-36.4
West Bloomfield Twp.	535	*	*	643	*	*	-24.1
White Lake Township	149	30.61	4.87	408	58.24	7.01	+72.9
Wixom	69	*	*	204	*	*	+86.7
Wolverine Lake	28	20.84	1.34	92	22.95	4.01	+107.5
SUBTOTAL, Local PDs	8219	2312.02	2.20@	14905	2875.07	2.67@	+14.5
Brighton MSP Post	38	7.02	5.45	58	10.15	5.73	-3.9
Northville MSP Post	789	118.77	6.64	1284	132.67	9.68	+2.8
Pontiac MSP Post	847	189.53	4.47	1815	244.50	7.42	+29.5
Romeo MSP Post	136	23.28	5.84	102	20.09	5.08	-52.6
SUBTOTAL, MSP Posts	1810	338.60	5.35	3259	407.41	8.00	+13.7
D.C. Sheriff's Dept.	970	319.19	3.04	3033	479.85	6.32	+97.5
TOTAL COUNTY	10999	2969.81	2.65@	21197	3762.33	3.71@	+21.7

*Man-hours data are unavailable for all or part of the time period.
 **Most of these data were provided by the County-wide Law Enforcement Management System (CLEMIS). Additional data were provided directly by the four MSP posts and local police departments which do not participate in CLEMIS. Arrest data were missing for Farmington 4/78-11/78, Farmington Hills 4/78-11/81, Lathrup Village 4/78-11/78, Oak Park 4/78-10/78, and Wixom 10/78-11/78 and 9/79. These were estimated by month using the Uniform Crime Report data for the year. For the Brighton, Northville, and Romeo MSP posts the arrest and man-hours data are estimates based on post totals multiplied by the estimated percentage of patrol time in Oakland County.
 #These are total police duty man-hours, not just patrol hours.
 ##This rate is the number of DUIL arrests per 1,000 total police duty hours.
 @These rates are based on only local police departments which provided complete man-hours data (25 in the first period and 23 in the second period).

about the same rate, from 3.51 to 2.46. Pontiac City also had a large decrease (33.0 percent), moving it from first to fourth place among the local police departments, but its arrest rate per 1,000 police hours remained approximately the same for the time that man-hours data were available, suggesting that its decrease was more a result of a change in the police budget than of a change in priorities. West Bloomfield Township also showed a substantial decline (24.1 percent), but man-hours data were not available for that department.

Hazel Park had a 20.4 percent decline in arrests, dropping from third to fifth place, which is still quite high considering its relatively small size. Among the local police departments it had by far the highest OUIL arrest rate for the first 24 months when man-hours data were available. Its rate was 7.98 per 1,000 police duty hours (not shown in Table 2.2). It was followed by White Lake Township with a 7.01 rate. Keego Harbor was third with 6.58, while Troy achieved its number one place in total arrests among the local police departments with a 5.47 arrest rate per 1,000 police duty hours.

Among the four MSP posts, Pontiac had the largest rate of increase in its OUIL arrests, 29.5 percent. Its 1,815 arrests in the operational period placed it third in the county after the Sheriff's Department and Troy (2,076). However, the Northville post led all police agencies in arrest rate with 9.68 OUIL arrests per 1,000 police duty hours. The Pontiac post (7.42) and the Sheriff's Department (6.32) also had high arrest rates per 1,000 police duty hours.

2.2 Alcohol Enforcement Team Arrest Data

As discussed in Section 1, the major new enforcement activity was deployment of a special Alcohol Enforcement Team on Wednesday, Thursday, Friday, and Saturday nights. During the first two weeks the Team worked from 10 p.m. to 3 a.m.; but beginning on April 24, 1980, the target hours were 11 p.m. to 4 a.m. During the first 15 months the AE Team consisted of six deputies with six patrol cars from the Sheriff's Department, two officers with one patrol car from the Pontiac MSP post, and various numbers of officers and patrol cars from the cooperating local police departments. In July 1981 the Sheriff's Department

staffing was reduced to five officers, and on September 30, 1981, the Pontiac MSP stopped participating in the Team on Wednesday and some Thursday nights. Both changes were due to Project budget reductions. Occasionally two officers from the Sheriff's Department would work together in one car.

The Team started operations on Thursday night, April 10, 1980, and was deployed every Wednesday, Thursday, Friday, and Saturday night during the 38 months discussed in this report (except for Wednesday, Dec. 24, 1980). The number of officers on the Team on a given night varied from four to 13, with an average of 8.0. The number of patrol cars varied from four to 11, with an average of 7.1. The number of OUIL arrests per night varied from 0 to 13, with an average of 3.70.

Table 2.3 presents the statistics of AE Team operation for each of the twelve quarters and one two-month period in the 38 months from April 1980 through May 1983. Each year the arrest rates (per 1,000 car-hours or man-hours) tended to be higher in the fall and winter quarters than in the spring and summer quarters. The table also shows a decline in arrest totals with the reduced second year staffing, but the arrest rates for the second year are actually slightly higher than for the first year. However, in the third year both the quarterly arrest totals and the arrest rates declined somewhat.

Table 2.3 also shows arrest statistics for the four nights of the week on which the Team was deployed. The number of OUIL arrests was considerably higher on Friday night than on other nights, as were arrest rates. Thursday night was second in number and rate of arrests, slightly above Saturday night. Wednesday night had the lowest number and rate of arrests. On a man-hours basis there was one arrest per 9.5 man-hours on Friday nights, one arrest per 10.9 man-hours on Thursday nights, one arrest per 11.3 man-hours on Saturday nights, and one arrest per 11.8 man-hours on Wednesday nights. Overall each of the 2,417 arrests required an average of 10.7 patrol man-hours and 9.6 patrol car-hours.

Table 2.4 shows similar data for the special target areas in which the Alcohol Enforcement (AE) Team was deployed. The target areas were designated roads on which high numbers of alcohol-related accidents had

TABLE 2.3

OUIL Arrests and Arrest Rates by Quarter and by Night of the Week for the Oakland County Alcohol Enforcement Team, April 1980 to May 1983*

Quarter/Night	Number of Nights	OUIL Arrests	Arrests		Arrests	
			Total Manhours	Per 1000 Manhours	Total Carhours	Per 1000 Carhours
Apr.-June 1980	47	182	2203	82.61	1880	96.81
July-Sep. 1980	52	200	2535	78.90	2210	90.50
Oct.-Dec. 1980	52	262	2490	105.22	2160	121.30
Jan.-Mar. 1981	51	277	2535	109.27	2260	122.57
Apr.-June 1981	52	219	2210	99.10	1960	111.73
July-Sep. 1981	53	176	2070	85.02	1820	96.70
Oct.-Dec. 1981	53	200	1815	110.19	1680	119.05
Jan.-Mar. 1982	51	184	1795	102.51	1650	111.52
Apr.-June 1982	52	174	1835	94.82	1660	104.82
July-Sep. 1982	51	141	1740	81.03	1535	91.86
Oct.-Dec. 1982	53	165	1825	90.41	1675	98.51
Jan.-Mar. 1983	51	159	1800	88.33	1610	98.76
Apr.-May 1983	34	77	1215	63.37	1045	73.68
Wednesday Nights	163	517	6080	85.03	5470	94.56
Thursday Nights	164	628	6828	91.97	6075	103.37
Friday Nights	163	717	6805	105.36	6020	119.10
Saturday Nights	163	555	6265	88.59	5535	100.27
Total	653	2417	25978	93.04	23100	104.63

*These data were provided by the Oakland County Sheriff's Department which handled the record keeping for the Alcohol Enforcement Team.

TABLE 2.4
 OUIL Arrests and Arrest Rates by Target Area by Night of the Week for the
 Oakland County Alcohol Enforcement Team, April 1980 to March 1983*

Quarter/Night	Number of Nights	OUIL Arrests	Total Man-hours	Arrests Per 1,000 Man-hours	Total Car-hours	Arrests Per 1,000 Car-hours
#1 Wednesday	27	103	1245	82.73	1110	92.79
Thursday	29	145	1418	102.26	1265	114.62
Friday	31	174	1520	114.47	1340	129.85
Saturday	29	119	1335	89.13	1200	99.16
Total	116	541	5518	98.04	4915	110.07
#3 Wednesday	24	64	855	74.85	770	83.12
Thursday	24	72	920	78.26	845	85.21
Friday	24	100	930	107.53	815	122.70
Saturday	24	78	835	93.41	735	106.12
Total	96	314	3540	88.70	3165	99.21
#4 Wednesday	24	91	960	94.79	875	104.00
Thursday	23	111	1030	107.77	900	123.33
Friday	21	101	900	112.22	795	127.04
Saturday	21	83	895	92.74	790	105.06
Total	89	386	3785	101.98	3360	114.88
#5 Wednesday	19	75	830	90.36	755	99.34
Thursday	20	74	940	78.72	840	88.10
Friday	20	79	925	85.41	870	90.80
Saturday	20	78	870	89.66	775	100.65
Total	79	306	3565	85.83	3240	94.44
#6 Wednesday	21	57	765	74.51	705	80.85
Thursday	21	72	835	86.23	745	96.64
Friday	20	83	810	102.47	715	116.08
Saturday	21	71	795	89.31	705	100.71
Total	83	283	3205	88.30	2870	98.61
#7 Wednesday	12	35	350	100.00	335	104.48
Thursday	12	31	425	72.94	375	82.67
Friday	11	42	435	96.55	375	112.00
Saturday	12	36	410	87.80	360	100.00
Total	47	144	1620	88.89	1445	99.65
#8 Wednesday	12	36	355	101.41	235	153.19
Thursday	11	37	410	90.24	355	104.23
Friday	12	42	420	100.00	365	115.07
Saturday	12	23	380	60.53	335	68.66
Total	47	138	1565	88.18	1290	106.98
#9 Wednesday	12	25	350	71.43	335	74.63
Thursday	12	38	425	89.41	380	100.00
Friday	12	48	415	115.66	365	131.51
Saturday	12	30	360	83.33	320	93.75
Total	48	141	1550	90.97	1400	100.71
#10 Wednesday	12	31	370	83.78	350	88.57
Thursday	12	48	425	112.94	370	129.73
Friday	12	48	450	106.67	380	126.32
Saturday	12	37	385	96.10	315	117.46
Total	48	164	1630	100.61	1415	115.90
TOTAL	653	2417	25978	93.04	23100	104.63

*These data were provided by the Oakland County Sheriff's Department which handles the record keeping for the Alcohol Enforcement Team.

taken place in previous years. During the first year of operation there were five of these areas (original Target Areas 1 and 2 were combined after the first month), and the AE Team worked in each area two weeks at a time (with one exception in July 1980 when the Team stayed only one week in Target Area 6). Beginning April 29, 1981, four additional target areas were designated, and the AE Team stayed in each area only two nights at a time. There were six nights in which the Team stayed only one night in a given target area.

The specific descriptions of the target areas are listed below:

Target Areas 1 and 2

M-59 (Highland): Telegraph Rd. - Bogie Lake Rd.
Dixie Highway: West Independence Twp. Limit - Silver Lake Rd.
Silver Lake Rd.: Dixie Highway - Walton Blvd.
Walton Blvd.: Silver Lake Rd. - Dixie Highway

Target Area 3

Saginaw: South Blvd. - Wide Track
Wide Track: Saginaw - Oakland; Oakland - Saginaw
Orchard Lake Rd.: Johnson - Saginaw
Auburn Rd.: Saginaw - East Blvd.
East Blvd.: Auburn - Montcalm
Montcalm: Perry - Oakland
Oakland: Montcalm - Wide Track
Elizabeth Lake Rd. (State): Huron - Telegraph Rd.
Huron (M-59): Telegraph - I-75
Perry: Wide Track - Lapeer Connector
I-75: Lapeer Connector - Baldwin
Baldwin: I-75 - Oakland
University: Wide Track - East Blvd.

Target Area 4

Woodward Ave.: Eight Mile Rd. - Square Lake Rd.

Target Area 5

Telegraph Rd.: Eight Mile Rd. - County Center Dr.

Target Area 6

Lapeer Rd. (M-24): I-75 Connector - Ray Rd.

Target Area 7

Orchard Lake Rd.: Ten Mile Rd. - Cass Lake Rd.
Cass Lake Rd.: Orchard Lake Rd. - Pontiac Lake Rd.

Target Area 8

Rochester Rd.: Avon - Maple (15 Mile)
Maple: Rochester Rd. - John R Rd.

Target Area 9

Fourteen Mile Rd.: Southfield Rd. - John R Rd.
John R Rd.: Fourteen Mile - Thirteen Mile
Thirteen Mile Rd.: John R Rd. - Southfield Rd.
Southfield Rd.: Thirteen Mile - Fourteen Mile

Target Area 10

Twelve Mile Rd.: Southfield Rd. - John R Rd.
John R Rd.: Twelve Mile Rd. - Eleven Mile Rd.
Eleven Mile Rd.: John R Rd. - Southfield Rd.
Southfield Rd.: Eleven Mile Rd. - Twelve Mile Rd.

Table 2.4 shows that the highest man-hours arrest rate was in Target Area 4 with 101.98 arrests per 1,000 man-hours. Next is Target Area 10 which actually had a higher car-hours arrest rate than Target Area 4. Target Area 1 had the most nights of deployment and the most arrests, but it was third in arrest rates. Least productive was Target Area 5 with 85.83 arrests per 1,000 man-hours. The most productive nights by target area were Friday nights in Target Area 9 (8.6 man-hours per arrest) and Thursday nights in Target Area 10 (8.9 man-hours per arrest).

Clearly the AE Team's 2,417 arrests are a very large portion of the 3,782 increase in county-wide OUIL arrests from what would have been expected based on the average of the baseline years. The Team's overall OUIL arrest rate of 93.04 per 1,000 patrol man-hours is far higher than the total OUIL arrest rate for any police agency based on all police duty hours. Also the AE Team not only made OUIL arrests while on patrol, but, as indicated in Chapter 1, it carried out other normal patrol activities such as issuing citations for hazardous violations and investigating accidents.

Table 2.5 shows arrest data beginning in July 1981 for the seven police agencies that took part in the AE Team. Southfield had a particularly high "production" rate at 6.2 patrol hours per arrest, while Waterford Township averaged 21.5 patrol hours per arrest. The state police have a quite high arrest rate per 1,000 car patrol hours (121.77), but with their policy of providing two troopers per car their man-hours arrest rate is somewhat below average (60.89).

As mentioned previously, the overall average man-hours per OUIL arrest for the 38 months of the Alcohol Enforcement Team operations was

TABLE 2.5
OUIL Arrests and Arrest Rates by Police Agency for the Oakland
County Alcohol Enforcement Team, July 1981 to May 1983

Police Agency	Number of Nights	OUIL Arrests	Total Manhours	Arrests Per 1000 Manhours	Total Carhours	Arrests Per 1000 Carhours
Pontiac MSP	248	151	2480	60.89	1240	121.77
Bloomfield Twp.	41	16	205	78.05	205	78.05
Royal Oak	47	16	235	68.09	235	68.09
Southfield	36	25	180	138.89	180	138.89
Waterford Twp.	43	10	215	46.51	215	46.51
White Lake Twp.	40	11	200	55.00	200	55.00
Sheriff's Dept.	398	1047	10580	98.96	10400	100.67
Total	398	1276	14095	90.53	12675	100.67

10.7, including over an hour in average processing time for each arrest. Of course there were also other enforcement and administrative activities which reduced the Team's actual time on the road looking for drunk drivers. It is interesting to compare the average time per OUIL arrest with the times reported by five recent Comprehensive Alcohol Safety Projects in Illinois.² Based on total project hours these were 4.9 hours per arrest in Springfield, 5.4 hours in Elmhurst, 9.3 hours in Winnebago County, 9.9 hours in Waukegan, and 10.8 hours in Elgin. Thus the Oakland County's AE Team "productivity" was comparable to that in the Illinois programs.

²Iams, Debra M., Illinois Department of Transportation. Personal Communication regarding reviews of five Comprehensive Alcohol Safety Projects, June 21, 1984.

OUIL Arrest Data

Evaluation Report on the
Oakland County Alcohol Project

3.0 OAKLAND COUNTY PUBLIC OPINION ON ALCOHOL AND HIGHWAY SAFETY

Although an increase in drunk driving arrests is a useful indication of increased enforcement effort, it is hoped that an increased arrest frequency will lead to a reduction in drunk driving and consequent accidents within Oakland County. The effect of convicting and removing individual drivers from the road can be much amplified if knowledge about such apprehensions and convictions serves as a general deterrent to other potential drunk drivers.

Such a deterrent effect can come about in part by "word of mouth" dissemination in bars or by discussions among friends and relatives. But such general deterrence can be enhanced by a well-organized public information campaign which informs the public about:

- 1) The dangers of drinking and driving
- 2) The need for an increased enforcement program
- 3) The existence of an increased enforcement program
- 4) The increased chances of arrest and the unpleasant consequences therefrom if drivers do drive after drinking too much
- 5) Appropriate alternatives if one has drunk too much for safe driving
- 6) How to take action as a caring host or friend to prevent someone from driving in an intoxicated condition

Such a public education program was the second major part of the Alcohol Enforcement/Education Project. From the beginning of the Project, TIA provided a number of press releases on Project plans which received widespread publicity in the County. With the beginning of the Alcohol Enforcement Team operations in April 1980, publicity efforts were greatly intensified through a kick-off luncheon, television news coverage, and press releases. Subsequently, large-scale public information campaigns were mounted in late 1980 and early 1981 and in later years.

In order to measure the impact of the TIA information and education program on the driving public, a series of four mail surveys was carried out with random samples of Oakland County drivers taken from the Department of State license files. These surveys were begun in the

winter of each Project year, and with the assistance of reminder postcards and two follow-up mailings to nonrespondents, each survey was able to obtain an unusually high 85 percent response rate. This is not high enough to eliminate all bias, but it is high enough that one can be confident that survey results accurately represent all Oakland County drivers within a few percentage points. The numbers of respondents varied from 467 in 1982 to 567 in 1983.

The initial 1980 survey spanned the time of the publicity kickoff for the Oakland County Alcohol Enforcement/Education Program, so it was possible to compare responses completed before and after that date. The appendix to this report shows the question-by-question survey results for those two groups on the first survey plus the total groups of respondents to each of the four surveys.

Probably the question of greatest interest (Question 15) was whether the respondent had "happened to see or hear anything about a special program in Oakland County to reduce accidents caused by drunk drivers". In the 1980 survey 10.5 percent of the group responding before April 9 said "yes", and 28.3 percent of the group responding after April 9 said "yes". In the 1981 survey 37.4 percent claimed awareness of a special program, and in 1982 and 1983 this group increased to 43.0 percent and 41.5 percent, respectively. The chief reported source of information for the "aware" groups in 1980 and 1981 was the press, but in 1982 and 1983 television became the chief information source. In 1983, 39 percent of the aware group (about 15 percent of the total sample) indicated billboards as a source of information. Thus, TIA's public education and information campaign was clearly successful in reaching a sizable proportion of Oakland County drivers.

Not all of the respondents indicating an awareness of the program were able to give information about the activities and themes of the program. But substantial numbers did mention increased police enforcement even in the 1980 survey at the beginning of the Project. Beginning in 1981, increasing numbers of respondents reported hearing the major program messages such as "the party's over for drunk drivers in Oakland County", or "we're cracking down on drunk drivers in Oakland

County". In 1983 these themes were mentioned by almost half of the aware respondents, or about one-fifth of the total sample.

Another question of considerable interest is the respondents' perception of the greatest cause of traffic deaths and injuries (Question 3). In 1980 a sizable proportion, 43.4 percent, mentioned drunk driving, but by 1983 this proportion had grown to 73.2 percent. Similarly, when asked on what violation police agencies should most concentrate stricter enforcement efforts (Question 7), 59.5 percent mentioned drunk driving in 1983, compared to 33.8 percent in the 1980 survey. Another question indicative of knowledge and concern asked respondents to estimate the percentage of fatal traffic accidents that involve a drunk driver (Question 12). In all years some of the estimates were unrealistically high (up to 100 percent), but the proportion estimating 60 percent or more of fatal accidents to be alcohol-related grew from 40 percent in 1980 to 54 percent in 1983. Thus there is evidence of substantial increases in knowledge and concern about drunk driving from 1980 to 1983. The TIA, of course, was assisted in the publicity efforts about the drunk driving problem by citizen action groups such as Mothers Against Drunk Driving (MADD), and it is not possible to allocate these changes to individual publicity efforts. The mention of TIA themes by many respondents suggests that the TIA activities were responsible for a major part of the increase in awareness and concern.

Two other questions of considerable interest to the potential effectiveness of the special alcohol enforcement/education project have to do with the respondents' perceptions of the chance of being arrested. This was asked with regard to the "average drunk driver" and for himself/herself if drunk (Questions 13 and 14). Respondents usually have difficulty in estimating probabilities, and answers to these questions ranged from "1 in 2" to "1 in 1,000,000". Of more interest than the absolute values reported are any changes in the distribution of responses from year to year. In each year of the survey the most frequent responses to each question were "1 in 100" and "1 in 1,000", with more than half of the respondents picking one or the other of these ratios and in roughly equal numbers. However, there was also a gradual

increase in choices of "1 in 10" or other high ratios. On the self-arrest question the percentage choosing a ratio of "1 in 100" or higher was 43.0 percent in 1980, 46.4 percent in 1981, 49.1 percent in 1982, and 55.1 percent in 1983. This indicates a substantial movement in the desired direction, and it suggests that the Oakland program did change the perceived probability of arrest for drunk driving for many Oakland County drivers.

It is interesting that on the self-arrest question (Q.14) there are many more responses at both ends of the distribution than on the average drunk driver question (Q.13). Possibly some abstainers and light drinkers can't visualize themselves in such a situation and choose a very low probability, while others choose a very high probability of being caught if they did drive drunk.

In regard to actual drunk driving, respondents were asked if they had driven in the past year after drinking enough that they might be considered legally under the influence (Question 23). Each year roughly one-quarter of the respondents admitted to doing so at least once (24.6 percent in 1980, 26.7 percent in 1981, 25.9 percent in 1982, and 27.3 percent in 1983). Similarly the proportions of respondents who took some action in the previous year to prevent someone from driving who had been drinking a lot (Question 16) remained about the same in the three surveys in which this question was asked (42.7 percent in 1980, 43.1 percent in 1981, and 41.5 percent in 1982). Thus, while the survey data do indicate a slight increase in the perceived chance of arrest, they do not indicate a real change in either drunk driving or interventionist behavior.

In 1983 some additional questions were asked which had not been used in the first three surveys. These also showed substantial concern about the drunk driving problem. Almost half (47.5 percent) of the respondents said that enforcement of drunk driving laws should be increased greatly, and 32.3 percent said such enforcement should be increased somewhat. Only one percent said enforcement should be decreased. Similarly 44.9 percent said penalties for convicted drunk drivers should be much more severe, and 28.9 percent said that penalties should be somewhat more severe. Only 2.5 percent said that penalties

should be decreased. Over a quarter of the sample (27.2 percent) were strongly in favor of police using road blocks late at night to make quick checks for heavy drinking drivers, and another 28.8 percent were somewhat in favor, while 19.3 percent were somewhat opposed, and 24.6 percent were strongly opposed.

Also more than two thirds of the 1983 sample thought that the chance of arrest for a drunk driver had increased greatly (25.0 percent) or somewhat (44.4 percent) in Oakland County compared to three or four years earlier. Only 4.9 percent thought that the chance of arrest had decreased. Also many respondents thought that the general attitude of the drinking public toward driving after heavy drinking had changed in the past few years. About one sixth (16.8 percent) said such behavior had become much less acceptable, and 29.6 percent said it had become somewhat less acceptable. Only 14.3 percent said it had become more acceptable. Almost one quarter of the respondents reported having someone else drive or finding another means of transportation because they had been drinking, and 11.4 percent said they had stayed somewhere to sleep after drinking too much. On the other side, during the previous year 39.6 percent said they had persuaded a drinking person not to drive, while 18.6 percent said they had driven a drinker home who had planned to drive himself or herself, and 20.4 percent said they had had a drinker stay at their home to sleep. Further it is interesting that 31.7 percent admitted to riding as least once with a driver who had been drinking too much, while 19.0 percent reported refusing such a ride at least once.

Many 1983 respondents showed a rather limited recognition of the current most common penalties for convicted drunk drivers. From a list of ten possible penalties the two most common penalties checked were warning (56.2 percent) and probation (44.9 percent). License restriction was checked by 19.0 percent, while loss of license was checked by 11.5 percent, and special driver school was checked by 20.2 percent. Almost one third (30.7 percent) checked paying a fine under \$100, while 15.7 percent checked paying a fine over \$100. Only 25.0 percent checked that insurance rates are increased. Given these perceptions of current penalties, it is not surprising that so many

respondents thought that penalties should be more severe. When asked to check which penalties should be used for convicted drunk drivers, paying a fine over \$100 was most frequently checked (46.5 percent), followed by loss of license (41.3 percent). Over one third of the respondents checked required treatment for alcohol problems (35.3 percent), probation (34.7 percent), required driver school (34.4 percent), and increased insurance rates (34.2 percent). Only 12.7 percent had thought that jail was a common current penalty, while 23.5 percent thought that jail should be a common penalty.

It is interesting to see how some of these opinions and reported behaviors varied among different respondents in relation to their own reported drinking and driving behavior. In Table 3.1 results for seven survey questions are summarized using the four years of survey data for four groups of respondents: abstainers, drinkers who said they did not drive after drinking too much in the previous year, drinkers who admitted they drove once or twice after drinking too much in the previous year, and drinkers who admitted driving after drinking too much three to 80 times in the previous year.

In regard to perception of drunk driving as the major cause of traffic casualties there was not much difference among the three drinking groups, but abstainers were somewhat more likely to mention this cause. Abstainers were also more likely to suggest drunk driving as an area for increased police enforcement than were the drinking groups, and "frequent" drunk drivers were less likely to suggest this than the other two drinking groups. Both drunk driver groups tended to estimate lower chances of arrest if they were driving drunk than did the abstainers and the never-drunk drivers if they were driving drunk. Not surprisingly, the frequent drunk drivers were most likely to report having been arrested for drunk driving (6.3 percent). Both drunk driving groups were also somewhat more likely to say that they had heard of the special program to reduce drunk driving accidents in Oakland County, but still less than half of them had heard of it.

The biggest difference was on the taking of preventive action to stop drunk drivers. Almost 70 percent of the frequent drunk drivers said they had taken such action in the previous year, while only 23.3

TABLE 3.1
Responses of Four Drinking/Driving Subgroups to Seven Perceptual or Behavioral Questions, in Percentages of the Total Groups

Responses on Seven Different Perceptual or Behavioral Questions	Subgroup in Relation to Reported Drunk Driving				Total
	Abstainers	Drinkers Who Never Drive Drunk	Drinkers Who Seldom Drive Drunk	Drinkers Who Often Drive Drunk	
Alcohol Suggested as Major Cause of Traffic Accidents	66.8%	56.4%	60.4%	57.7%	59.1%
Drunk Driving Suggested as Violation Needing Increased Police Enforcement	58.0%	45.8%	48.4%	36.1%	47.3%
Drunk Driving Arrest Chance for Self as 1/100 or Higher	51.5%	51.1%	43.9%	38.3%	48.5%
Ever Arrested for Drunk Driving	3.0%	1.9%	2.2%	6.3%	2.7%
Heard of Special Oakland County Alcohol Program	31.4%	32.6%	39.2%	38.6%	34.0%
Took Personal Action to Stop a Drinker from Driving Drunk	23.3%	33.4%	57.2%	69.7%	39.2%
Always or Almost Always Wear Safety Belt	22.0%	23.6%	24.6%	14.0%	22.2%
Total	N 402	1121	276	258	2057
Row %	19.5%	54.5%	13.4%	12.5%	99.9%

percent of the abstainers said they had done so. Presumably this is related to relevant contacts. Many abstainers added comments to the questionnaire indicating that they never associate with persons who drink to excess. Still it is encouraging that such large proportions of the drunk driver groups seem to recognize the problem and report having

taken action to stop others from driving drunk. Finally the last row of Table 3.1 shows that frequent drunk drivers are less likely to claim that they almost always wear safety belts than the other three groups, suggesting that such drivers are more likely to take risks in general than the other groups.

Table 3.2 goes on to compare the drinking and socio-demographic characteristics of these four groups. Not surprisingly, the two drunk driving groups tend to classify themselves as heavier drinkers than the never-drunk group, but it is perhaps somewhat surprising that so many in these groups consider themselves to be very light or fairly light drinkers. As expected, the two drunk driver groups are disproportionately male, but still females comprise more than one third of the admitted drunk drivers. In regard to age, all four groups under 35 are overrepresented in the two drunk driver groups, with the 21-24 group being particularly overrepresented among the frequent drunk drivers. Never married and divorced or separated drivers are also overrepresented among the drunk driver groups, particularly among the frequent drunk drivers. There seems to be a less clear relationship with education, but the "some college" group is somewhat overrepresented among the drunk drivers.

Clearly the Traffic Improvement Association's public information and education efforts have succeeded in informing a sizable proportion of Oakland County drivers about the special alcohol enforcement program, and they have contributed to a climate of greatly increased concern about the drunk driving problem and of somewhat increased perceived chance of being arrested if driving drunk. However, although persons who admit to driving drunk were somewhat more likely to have heard of the special program than other drivers, still less than half of this target group indicated awareness of the program. And there is no evidence from the four waves of survey data of any substantial change in self-reported drunk driving behavior or of interventionist behavior to stop drivers from driving drunk.

TABLE 3.2
Drinking Self-Classification and Age, Sex, Marital Status, and
Education by Drinking/Driving Type, in Column Percentages

	Drinking/Driving Type				Total
	Abstainers	Drinkers Who Never Drive Drunk	Drinkers Who Seldom Drive Drunk	Drinkers Who Often Drive Drunk	
<u>Drinking Type</u>					
Abstainer	100.0%	0.0%	0.0%	0.0%	19.4%
Very Light	0.0%	67.1%	27.5%	11.6%	41.7%
Fairly Light	0.0%	20.6%	37.7%	21.3%	18.9%
Moderate	0.0%	11.8%	33.3%	55.0%	17.9%
Fairly Heavy	0.0%	0.5%	1.4%	11.2%	1.9%
Very Heavy	0.0%	0.0%	0.0%	0.8%	0.1%
<u>Age Group</u>					
16-17	6.0%	3.0%	5.1%	5.0%	4.1%
18-20	6.5%	5.3%	14.5%	14.7%	7.9%
21-24	4.0%	7.5%	13.5%	22.9%	9.7%
25-34	16.0%	22.9%	29.1%	28.7%	23.2%
45-64	48.8%	52.1%	37.1%	27.5%	42.2%
65 and Older	18.8%	9.3%	0.7%	1.2%	9.1%
<u>Sex</u>					
Male	44.0%	40.6%	60.4%	66.1%	47.8%
Female	56.0%	59.4%	39.6%	33.9%	52.2%
<u>Marital Status</u>					
Never Married	16.5%	18.9%	35.6%	43.4%	23.8%
Married	70.5%	69.8%	57.1%	45.0%	65.1%
Divorced/Sep.	6.3%	6.5%	5.8%	10.5%	6.9%
Widowed	6.8%	4.8%	1.5%	1.2%	4.3%
<u>Education</u>					
No Degree	21.9%	10.4%	9.8%	8.9%	12.5%
High Sch. Degree	37.7%	29.0%	23.6%	20.5%	28.9%
Some College	23.4%	32.0%	42.5%	44.2%	33.4%
College Degree	9.5%	16.8%	13.5%	18.2%	15.0%
Graduate Degree	7.5%	11.8%	10.5%	8.1%	10.2%
Total	N 402	1121	276	258	2057
Row %	19.5%	54.5%	13.4%	12.5%	99.9%

Public Opinion

Evaluation Report on the
Oakland County Alcohol Project

4.0 OAKLAND COUNTY ACCIDENT DATA

As mentioned in the introduction, the primary goal of the Oakland County Alcohol Enforcement/Education Project was to reduce the rate of alcohol-related crashes. For this report principal comparisons are made on fatal and injury accident trends because of the greater variability which is likely in the reporting of property-damage-only accidents in different jurisdictions. For completeness, data on all accidents are also presented.

A potential problem is the "alcohol-related" designation for an accident. Only the minority of accident-involved motorists who are arrested for drunk driving and some others who are hospitalized have their blood alcohol concentration (BAC) actually measured. For most accidents the only means of categorizing the accident as alcohol-related is to see whether the investigating police officer checked the "Had Been Drinking" (HBD) box for any involved party on the accident report form. The state police accident investigation guidelines specify that this box should be checked when, in the officer's considered opinion, the driver, pedestrian, or bicyclist appeared to have been consuming alcoholic beverages or controlled substances. If the officer does not believe the person has been drinking, he is supposed to check the "Had Not" (HN) box. The officer must make a subjective judgment in each case, based on smell of the breath, evidence of behavioral impairment, etc.

As used in this report an alcohol-related accident is one in which at least one involved driver, pedestrian, or bicyclist had "HBD" checked on the accident report form. The fact that one or more parties to an accident had been drinking prior to the accident does not necessarily mean that alcohol was causally related to the accident. A non-alcohol-related accident is an accident in which no HBD box was checked for any of the involved parties.

The subjective judgment of the officers would not be a great hindrance to measuring changes in alcohol-related accidents over time if the skills and attitudes of the involved police officers remained

relatively stable. However, with regard to this evaluation effort, it seems likely that both attitudes and skills changed among substantial numbers of Oakland County police officers during the course of the Project. During a period of increased public concern about drunk driving, it is likely that police officers all over Michigan tended to become more concerned with drunk driving and alcohol-related accidents, and in Oakland County this tendency may have been accentuated by the existence of the special Alcohol Enforcement/Education Project. In addition, as part of this Project, a special four-day alcohol enforcement training program was given to 350 police officers from 29 departments out of the 1408 local police officers in Oakland County. This training program should have increased these officers' skills in detecting alcohol involvement, and it is clear from the pre and post questionnaires completed by these officers that the training also tended to make them more concerned about the drunk driving problem.

However, there is no way to determine how much such changes in police officers' skills and attitudes may have affected the reported incidence of alcohol-related accidents in Oakland County. From a pre- to post-period measurement perspective only, the ideal situation would have been for no change to occur in reporting practices. But, as the rest of this chapter analyzes the changes in alcohol-related accidents between the baseline years and the operational years, it must be remembered that possibly greater-than-evident actual reductions in alcohol-related accidents may have been masked by changes in the ways individual police officers made their HBD judgments.

While no direct information is available on this subject from Oakland County police officers, results of surveys of police officers at the beginning and end of the Washtenaw County Alcohol Safety Action Program in the early 1970s suggest that some such change is likely among Oakland County police officers. In 1971 two percent of the responding Washtenaw County police officers said they checked HBD only when a drinking related arrest was made; eleven percent said they checked HBD whenever the driver's drinking was considered a contributing factor in the accident; and the remaining 87 percent said they checked HBD whenever the driver appeared to have been drinking at all, whether or

not the drinking was considered to have contributed to the accident. In 1973 (after training programs comparable to those used in the Oakland County work) these proportions for the three different criteria had changed to one percent, seven percent, and 92 percent, respectively.³

4.1 Trends in Oakland County Accidents

In Table 4.1 data are presented on all police-reported accidents in Oakland County for 1977 through March 1983. For each quarter and operational year (April to March) the frequency and percentage of alcohol-related accidents are shown for fatal accidents, other injury accidents, property-damage-only accidents, fatal and injury accidents combined, and all accidents.

Table 4.1 shows that generally accident frequencies declined substantially in 1979, 1980, 1981, and 1982, compared to 1977 and 1978, and this decline was particularly sharp in the period since April, 1980, when the special alcohol enforcement effort began. If one compares the first baseline year (1978-79) with the third operational year (1982-83), one finds a 24.6 percent reduction in alcohol-related fatal and injury accidents. Comparing the two baseline years with the three operational years, one obtains a reduction of 17.7 percent in the average annual frequency of alcohol-related accidents.

However, when one looks at the columns of alcohol-related percentages, one finds little change from year to year. Fatal accidents are more likely to be reported as alcohol-related than injury accidents, and injury accidents are more likely to be reported as alcohol-related than property-damage-only accidents. For example, in 1982-83 62.8 percent of the fatal accidents, 20.9 percent of the other injury accidents, and 12.1 percent of the property-damage-only accidents were considered to be alcohol-related.

For the 24 baseline months from April 1978 to March 1980 the alcohol-related percentage for fatal and injury accidents combined was

³Chapman, Marion M., and Arthur C. Wolfe, 1971 and 1973 ASAP Surveys: Washtenaw County Law Enforcement Agencies, Ann Arbor: Highway Safety Research Institute, October 1973.

TABLE 4.1
 Alcohol-Related Accidents in Oakland County by Degree of Severity by Quarter, January 1977 to March 1983

	Fatal Accidents			Other Injury Accidents			Property-Damage-Only Accidents			Fatal and Injury Accidents			All Accidents		
	Total	Alcohol Related Total	Alcohol Related Percent	Total	Alcohol Related Total	Alcohol Related Percent	Total	Alcohol Related Total	Alcohol Related Percent	Total	Alcohol Related Total	Alcohol Related Percent	Total	Alcohol Related Total	Alcohol Related Percent
1st Quarter 1977	23	12	52.5	2929	538	18.4	7016	719	10.2	2952	550	18.6	9968	1269	12.7
2nd Quarter 1977	39	23	59.0	2980	621	20.8	5553	709	12.8	3019	644	21.3	8572	1353	15.8
3rd Quarter 1977	38	12	31.6	3156	637	20.2	5603	757	13.5	3194	649	20.3	8797	1406	16.0
4th Quarter 1977	40	21	52.5	3328	733	22.0	7976	899	11.3	3368	754	22.4	11,344	1653	14.6
1st Quarter 1978	27	10	37.0	3120	575	18.4	8917	773	8.7	3147	585	18.6	12,064	1358	11.3
Total 1977-1978	144	66	45.8	12,584	1566	20.4	28,049	3138	11.2	12,728	2632	20.7	40,777	5770	14.2
2nd Quarter 1978	50	29	58.0	3167	675	21.3	5991	784	13.1	3217	704	21.9	9208	1488	16.2
3rd Quarter 1978	46	23	50.0	3121	688	22.0	5813	787	13.5	3167	711	22.5	8980	1498	16.7
4th Quarter 1978	41	25	61.0	3595	869	24.2	7509	988	13.2	3636	894	24.6	11,145	1882	16.9
1st Quarter 1979	36	18	50.0	3437	717	20.9	8337	859	10.3	3473	735	21.2	11,810	1594	13.5
Total 1978-1979	173	95	54.9	13,320	2949	22.1	27,650	3418	12.4	13,493	3044	22.6	41,143	6462	15.7
2nd Quarter 1979	33	16	48.5	3191	706	22.1	5837	723	12.4	3224	722	22.4	9061	1445	15.9
3rd Quarter 1979	44	20	45.5	3209	742	23.1	5525	743	13.4	3253	762	23.4	8778	1505	17.1
4th Quarter 1979	40	21	52.5	3469	808	23.3	7180	912	12.7	3509	829	23.6	10,689	1741	16.3
1st Quarter 1980	27	14	51.9	2714	603	22.2	5945	704	11.8	2741	617	22.5	8686	1321	15.2
Total 1979-1980	144	71	49.3	12,583	2859	22.7	24,487	3082	12.6	12,727	2930	23.0	37,214	6012	16.2
2nd Quarter 1980	45	23	51.1	2803	644	23.0	5009	671	13.4	2848	667	23.4	7857	1338	17.0
3rd Quarter 1980	30	18	60.0	2974	672	22.6	5042	707	14.0	3004	690	23.0	8046	1397	17.4
4th Quarter 1980	40	24	60.0	3062	695	22.7	6207	771	12.4	3102	719	23.2	9309	1490	16.0
1st Quarter 1981	33	13	39.4	2529	543	21.5	5971	639	10.7	2562	556	21.7	8533	1195	14.0
Total 1980-81	148	78	52.7	11,368	2554	22.5	22,229	2788	12.5	11,516	2632	22.9	33,745	5420	16.1
2nd Quarter 1981	36	19	52.8	2631	617	23.5	4842	633	13.1	2667	636	23.8	7509	1269	16.9
3rd Quarter 1981	35	22	62.9	2851	620	21.7	5038	709	14.1	2886	642	22.2	7924	1351	17.0
4th Quarter 1981	39	20	51.3	2947	649	22.0	5900	728	12.3	2986	669	22.4	8886	1397	15.7
1st Quarter 1982	24	12	50.0	2724	489	18.0	7421	630	8.5	2748	501	18.2	10,169	1131	11.1
Total 1981-82	134	73	54.5	11,153	2375	21.3	23,201	2700	11.6	11,287	2448	21.7	34,488	5148	14.9
2nd Quarter 1982	32	23	71.9	2506	557	22.2	4780	577	12.1	2538	580	22.9	7318	1157	15.8
3rd Quarter 1982	42	25	59.5	2774	549	19.8	4506	584	13.0	2816	574	20.4	7322	1158	15.8
4th Quarter 1982	41	25	61.0	2944	641	21.8	5621	666	11.8	2985	666	22.3	8606	1332	15.5
1st Quarter 1983	22	13	59.1	2336	461	19.7	4938	565	11.4	2358	474	20.1	7296	1039	14.2
Total 1982-83	137	86	62.8	10,560	2208	20.9	19,845	2392	12.1	10,697	2294	21.4	30,542	4686	15.3

22.8 percent, while for the 36 operational months from April 1980 to March 1983 the comparable alcohol-related percentage was 22.0 percent, a reduction of 3.4 percent in the alcohol-related rate. If one compares the first baseline year alcohol-related rate of 22.6 percent with just the third operational year rate of 21.4 percent, the reduction is 4.9 percent.

4.2 Statewide Comparisons

Table 4.2 presents the changes in total and alcohol-related fatal and injury accidents in Oakland County in comparison with ten other large counties and the rest of the state from April 1978 through March 1983. This table shows that not only Oakland County but other large counties and the state as a whole have all experienced large reductions in both alcohol-related accidents and non-alcohol-related accidents during the 1978-82 period.

The sixth-column comparisons of the first baseline year (1978-79) with the third operational year (1982-83) show that for the rest of Michigan there was a decrease of 25.7 percent in the frequency of alcohol-related accidents and a similar 25.0 percent decrease in the frequency of non-alcohol-related accidents. As mentioned in Section 4.1, in Oakland County alcohol-related accidents declined 24.6 percent from 1978-79 to 1982-83, which was almost the same as in the rest of the state, while non-alcohol-related accidents declined 19.6 percent, which was somewhat less than in the rest of the state. In contrast to Oakland County's 4.9 percent decrease in the percentage of alcohol-related accidents, there was only a 0.6 percent decrease in the rest of the state. In 1978-79 five of the ten comparison counties had lower percentages of alcohol-related accidents than Oakland County did, but in 1982-83 only three comparison counties were lower than Oakland County (Ingham, Kent, and Wayne).

The last column of percentages in Table 4.2 compares the average annual frequencies of fatal and injury accidents for the full 24-month baseline period (April 1978 to March 1980) with 36 months of the operational period (April 1980 to March 1983). The table shows that Oakland County's 17.7 percent decline in alcohol-related accidents was

TABLE 4.2
Total and Alcohol-Related Fatal and Injury Accidents for Oakland County, Ten
Other Large Counties, and All Michigan, April 1978 to March 1983

County	Time Period					Change From 4/78-3/79 to 4/82-3/83	Change From 4/78-3/80 to 4/80-3/83*
	Apr. 78 Mar. 79	Apr. 79 Mar. 80	Apr. 80 Mar. 81	Apr. 81 Mar. 82	Apr. 82 Mar. 83		
<u>Oakland County</u>							
Total Accidents	13493	12727	11516	11287	10697	-20.7%	-14.8%
Non Alc.-Related	10449	9797	8884	8839	8403	-19.6%	-14.0%
Alcohol-Related	3044	2930	2632	2448	2294	-24.6%	-17.7%
Alc.-Related %	22.6%	23.0%	22.9%	21.7%	21.4%	-4.9%	-3.4%
<u>Calhoun County</u>							
Total Accidents	1712	1616	1428	1492	1317	-23.1%	-15.1%
Non Alc.-Related	1317	1214	1101	1174	995	-24.4%	-13.9%
Alcohol-Related	395	402	327	318	322	-18.5%	-19.1%
Alc.-Related %	23.1%	24.9%	22.9%	21.3%	24.4%	+6.0%	-4.7%
<u>Genesee County</u>							
Total Accidents	5292	4802	4416	4439	4201	-20.6%	-13.8%
Non Alc.-Related	3915	3389	3204	3190	3063	-21.8%	-13.7%
Alcohol-Related	1377	1413	1212	1249	1138	-17.4%	-14.0%
Alc.-Related %	26.0%	29.4%	27.4%	28.1%	27.1%	+4.1%	-0.3%
<u>Ingham County</u>							
Total Accidents	3187	2886	2708	2638	2566	-19.5%	-13.1%
Non Alc.-Related	2514	2210	2051	2023	2042	-18.8%	-13.7%
Alcohol-Related	673	676	657	615	524	-22.1%	-11.2%
Alc.-Related %	21.1%	23.4%	24.3%	23.3%	20.4%	-3.3%	+2.2%
<u>Jackson County</u>							
Total Accidents	1977	1791	1587	1511	1391	-29.6%	-20.6%
Non Alc.-Related	1417	1309	1117	1088	1027	-27.5%	-21.0%
Alcohol-Related	564	482	470	423	360	-35.0%	-19.6%
Alc.-Related %	28.3%	26.9%	29.6%	28.0%	26.2%	-7.6%	+1.3%
<u>Kalamazoo County</u>							
Total Accidents	2488	2324	2189	1953	1937	-22.1%	-15.8%
Non Alc.-Related	1975	1784	1640	1518	1521	-23.0%	-17.0%
Alcohol-Related	513	540	549	435	416	-18.9%	-11.4%
Alc.-Related %	20.6%	23.2%	25.1%	22.3%	21.5%	+4.2%	+5.2%
<u>Kent County</u>							
Total Accidents	5206	5155	4597	4550	4492	-13.7%	-12.2%
Non Alc.-Related	4221	4021	3516	3554	3566	-15.5%	-14.0%
Alcohol-Related	985	1134	1081	996	926	-6.0%	-5.5%
Alc.-Related %	18.9%	22.0%	23.5%	21.9%	20.6%	+9.0%	+7.7%
<u>Macomb County</u>							
Total Accidents	8685	7952	7004	6697	6520	-24.9%	-19.0%
Non Alc.-Related	6812	6089	5227	5099	4943	-27.4%	-21.1%
Alcohol-Related	1873	1863	1777	1598	1577	-15.8%	-11.6%
Alc.-Related %	21.6%	23.4%	25.4%	23.9%	24.2%	+12.2%	+9.1%
<u>Monroe County</u>							
Total Accidents	1708	1400	1294	1232	1257	-26.4%	-18.9%
Non Alc.-Related	1194	956	864	901	900	-24.6%	-17.4%
Alcohol-Related	514	444	430	331	357	-30.5%	-22.2%
Alc.-Related %	30.1%	31.7%	33.2%	26.9%	28.4%	-5.6%	-4.1%
<u>Washtenaw County</u>							
Total Accidents	3098	2797	2615	2484	2351	-24.1%	-15.7%
Non Alc.-Related	2360	2063	1906	1936	1823	-22.8%	-14.6%
Alcohol-Related	738	734	709	548	528	-28.5%	-19.2%
Alc.-Related %	23.8%	26.2%	27.1%	22.1%	22.5%	-5.7%	-4.0%
<u>Wayne County</u>							
Total Accidents	32288	29521	27303	25844	23817	-26.2%	-17.0%
Non Alc.-Related	25338	23012	21375	20597	19230	-24.1%	-15.6%
Alcohol-Related	6950	6509	5928	5247	4587	-34.0%	-21.9%
Alc.-Related %	21.5%	22.0%	21.7%	20.3%	19.3%	-10.5%	-5.9%
<u>All Michigan Except Oakland</u>							
Total Accidents	102036	92697	85283	81620	76334	-25.2%	-16.7%
Non Alc.-Related	78008	68961	63363	62096	58473	-25.0%	-16.6%
Alcohol-Related	24028	23736	21920	19524	17861	-25.7%	-17.2%
Alc.-Related %	23.5%	25.6%	25.7%	23.9%	23.4%	-0.6%	-0.6%

*These percentages compare the accident totals for the two baseline years with two thirds of the totals for the three operational years.

almost the same as the 17.2 percent decline in the rest of the state, while its 14.0 percent decline in non-alcohol-related accidents was slightly less than the 16.6 percent decline in the rest of the state.

For the rest of the state the alcohol-related percentage decreased only 0.6 percent, compared to Oakland County's previously noted reduction of 3.4 percent. Five of the ten comparison counties experienced increases in their percentages of alcohol-related accidents, but four counties experienced larger decreases in their rates than Oakland County did. These comparison data suggest that the large changes in alcohol-related accidents taking place in Oakland County were similar to those taking place throughout the state during these years.

Table 4.3 goes on to present similar data just for fatal and injury accidents occurring during the Alcohol Enforcement Team deployment times, that is, Wednesday, Thursday, Friday, and Saturday nights from 11 p.m. to 4 a.m. Both in Oakland County and statewide about one-seventh of the fatal and injury accidents took place during these 20 hours of the week. Almost two-fifths of all alcohol-related accidents took place at these times, and almost two-thirds of the accidents during these hours were alcohol-related.

The last column of Table 4.3 shows that in the rest of the state alcohol-related accidents declined only 11.2 percent during these hours (compared to 17.2 percent for all hours). In Oakland County alcohol-related accidents declined slightly more at 13.0 percent (compared to 17.7 percent for all hours). Oakland County non-alcohol-related accidents declined almost as much (12.3 percent) as in the rest of the state (12.9 percent) during these hours. Among the comparison counties Monroe and Wayne had somewhat greater declines in alcohol-related accidents at these hours (17.8 percent and 16.4 percent, respectively) than did Oakland County, while Jackson and Washtenaw had rather similar reductions (13.6 percent and 13.1 percent, respectively). The other six counties had much smaller declines than Oakland County. Thus, Oakland County alcohol-related accidents followed the statewide trends in declining less during these Team operational hours than during some other time periods; but they did decline slightly more than in the rest of the state and much more than in six of the ten comparison counties.

TABLE 4.3

Total and Alcohol-Related Fatal and Injury Accidents for Oakland County, Ten Other Large Counties, and All Michigan, April 1978 to March 1983, Accidents on Wednesday, Thursday, Friday, and Saturday Nights From 11 p.m. to 4 a.m.

County	Time Period					Change From 4/78-3/79 to 4/82-3/83	Change From 4/78-3/80 to 4/80-3/83*
	Apr. 78 Mar. 79	Apr. 79 Mar. 80	Apr. 80 Mar. 81	Apr. 81 Mar. 82	Apr. 82 Mar. 83		
<u>Oakland County</u>							
Total Accidents	1769	1658	1585	1519	1382	-21.9%	-12.7%
Non Alc.-Related	639	562	543	543	494	-22.7%	-12.3%
Alcohol-Related	1130	1096	1042	976	888	-21.4%	-13.0%
Alc.-Related %	63.9%	66.1%	65.7%	64.3%	64.3%	+0.6%	-0.3%
<u>Calhoun County</u>							
Total Accidents	189	212	214	180	192	+1.6%	-2.6%
Non Alc.-Related	74	78	88	72	64	-13.5%	-1.8%
Alcohol-Related	115	134	126	108	128	+11.3%	-3.1%
Alc.-Related %	60.8%	63.2%	58.9%	60.0%	66.7%	+9.6%	-0.5%
<u>Genesee County</u>							
Total Accidents	698	727	650	661	648	-7.2%	-8.4%
Non Alc.-Related	260	243	234	217	213	-18.1%	-12.0%
Alcohol-Related	438	484	416	444	435	-0.7%	-6.4%
Alc.-Related %	62.8%	66.6%	64.0%	67.2%	67.1%	+7.0%	+2.2%
<u>Ingham County</u>							
Total Accidents	366	364	345	338	311	-15.0%	-9.2%
Non Alc.-Related	107	97	84	90	84	-21.5%	-15.7%
Alcohol-Related	259	267	261	248	227	-12.4%	-6.7%
Alc.-Related %	70.8%	73.4%	75.7%	73.4%	73.0%	+3.1%	+2.8%
<u>Jackson County</u>							
Total Accidents	338	280	287	274	222	-34.3%	-15.5%
Non Alc.-Related	110	106	108	80	74	-32.7%	-19.1%
Alcohol-Related	228	174	179	194	148	-35.1%	-13.6%
Alc.-Related %	67.5%	62.1%	62.4%	70.8%	66.7%	+1.2%	+2.3%
<u>Kalamazoo County</u>							
Total Accidents	335	344	366	300	234	-30.1%	-11.6%
Non Alc.-Related	141	113	129	106	83	-41.1%	-16.5%
Alcohol-Related	194	231	237	194	151	-22.2%	-8.7%
Alc.-Related %	57.9%	67.2%	64.8%	64.7%	64.5%	+11.4%	+3.3%
<u>Kent County</u>							
Total Accidents	606	705	623	603	602	-0.7%	-7.0%
Non Alc.-Related	214	215	178	191	204	-4.7%	-11.0%
Alcohol-Related	392	490	445	412	398	+1.5%	-5.1%
Alc.-Related %	64.7%	69.5%	71.4%	68.3%	66.1%	+2.2%	+3.3%
<u>Macomb County</u>							
Total Accidents	1142	1157	1100	1064	993	-13.0%	-8.5%
Non Alc.-Related	474	436	407	375	336	-29.1%	-19.3%
Alcohol-Related	668	707	693	689	657	-1.6%	-1.1%
Alc.-Related %	58.5%	61.1%	63.0%	64.8%	66.2%	+13.1%	+8.0%
<u>Monroe County</u>							
Total Accidents	271	216	246	206	201	-25.8%	-10.6%
Non Alc.-Related	83	48	71	76	67	-19.3%	+8.9%
Alcohol-Related	188	168	175	130	134	-28.7%	-17.8%
Alc.-Related %	69.4%	77.8%	71.1%	63.1%	66.7%	-3.9%	-8.0%
<u>Washtenaw County</u>							
Total Accidents	424	388	392	348	314	-25.9%	-13.5%
Non Alc.-Related	155	139	130	127	122	-21.3%	-14.1%
Alcohol-Related	269	249	262	221	192	-28.6%	-13.1%
Alc.-Related %	63.4%	64.2%	66.8%	63.5%	61.1%	-3.6%	+0.4%
<u>Wayne County</u>							
Total Accidents	4061	3726	3646	3390	3040	-25.1%	-13.7%
Non Alc.-Related	1943	1663	1710	1631	1494	-23.1%	-10.6%
Alcohol-Related	2118	2063	1936	1759	1546	-27.0%	-16.4%
Alc.-Related %	52.2%	55.4%	53.1%	51.9%	50.9%	-2.5%	-3.1%
<u>All Michigan Except Oakland</u>							
Total Accidents	13673	13367	12864	11947	10944	-20.0%	-11.8%
Non Alc.-Related	5343	4740	4695	4376	4109	-23.1%	-12.9%
Alcohol-Related	8330	8627	8169	7571	6835	-17.9%	-11.2%
Alc.-Related %	60.9%	64.5%	63.5%	63.4%	62.5%	+2.5%	+0.7%

*These percentages compare the accident totals for the two baseline years with two thirds of the totals for the three operational years.

There was little change in the alcohol-related percentage in Oakland County (0.3 percent decrease) or in the rest of the state (0.7 percent increase) during these hours.

4.3 Target Area Accident Changes

The Traffic Improvement Association was able to use its geographic coding system to determine which accidents took place on the specific roads in the Alcohol Enforcement (AE) Team's defined target areas. Data on the fatal and injury accidents occurring in these ten target areas and in the rest of Oakland County are presented in Tables 4.4 and 4.5. The data are summed separately for Target Areas 1-6, where the AE Team began operating in April 1980 and for Target Areas 7-10, where the Team began patrols in April 1981. For the latter group of target areas the comparisons in the last column of these tables show the percentage changes between the two baseline years (1978-80) and just the second and third operational years (1981-83). Together Target Areas 1-6 accounted for 14.7 percent of Oakland County's fatal and injury accidents in the baseline period, while Target Areas 7-10 accounted for an additional 9.1 percent of such accidents.

The last column of Table 4.4 shows that in Target Areas 1-6 both alcohol-related and non-alcohol-related accidents decreased more than in the rest of Oakland County. In Target Areas 1-6 alcohol-related accidents decreased 21.0 percent, compared to a 17.3 percent decrease for the rest of the county. Similarly, non-alcohol-related accidents declined 23.7 percent in Target Areas 1-6, compared to a 13.1 percent decline in the rest of the county. However, the Target Area 7-10 decreases of 15.2 percent in alcohol-related accidents and 2.8 percent in non-alcohol-related accidents were less than in the rest of the county. The 17.3 percent decrease in alcohol-related accidents in the rest of the county was almost identical with the rest of the state decrease of 17.2 percent. It was somewhat less than the 21.9 percent decrease in neighboring Wayne County, but it was somewhat more than the 11.6 percent decrease in neighboring Macomb County. The changes in alcohol-related accidents were not uniform among the different target areas, varying from a 34.7 percent increase in Target Area 9 to a 37.9

TABLE 4.4
Total and Alcohol-Related Fatal and Injury Accidents for the Nine
Target Areas in Oakland County, April 1978 to March 1983

Target Area	Time Period					Change From 4/78-3/79 to 4/82-3/83	Change From 4/78-3/80 to 4/80-3/83*
	Apr. 78 Mar. 79	Apr. 79 Mar. 80	Apr. 80 Mar. 81	Apr. 81 Mar. 82	Apr. 82 Mar. 83		
<u>Target Area 1-2</u>							
Total Accidents	362	321	306	269	273	-24.6%	-17.2%
Non Alc.-Related	280	239	211	209	206	-26.4%	-19.6%
Alcohol-Related	82	82	95	60	67	-18.3%	-9.8%
Alc.-Related %	22.7%	25.5%	31.0%	22.3%	24.5%	+8.3%	+6.9%
<u>Target Area 3</u>							
Total Accidents	599	532	451	356	348	-41.9%	-31.9%
Non Alc.-Related	453	399	354	274	267	-41.1%	-30.0%
Alcohol-Related	146	133	97	82	81	-44.5%	-37.9%
Alc.-Related %	24.4%	25.0%	21.5%	23.0%	23.3%	-4.5%	-8.8%
<u>Target Area 4</u>							
Total Accidents	422	372	326	344	348	-17.5%	-14.5%
Non Alc.-Related	327	289	249	258	278	-15.0%	-15.0%
Alcohol-Related	95	83	77	86	70	-26.3%	-12.7%
Alc.-Related %	22.5%	22.3%	23.6%	25.0%	20.1%	-10.6%	+2.1%
<u>Target Area 5</u>							
Total Accidents	486	395	330	312	369	-24.1%	-23.5%
Non Alc.-Related	388	330	254	252	295	-24.0%	-25.6%
Alcohol-Related	98	65	76	60	74	-24.5%	-14.1%
Alc.-Related %	20.2%	16.5%	23.0%	19.2%	20.1%	-0.5%	+14.8%
<u>Target Area 6</u>							
Total Accidents	209	168	143	148	135	-35.4%	-24.7%
Non Alc.-Related	164	135	111	113	106	-35.4%	-26.4%
Alcohol-Related	45	33	32	35	29	-35.6%	-17.9%
Alc.-Related %	21.5%	19.6%	22.4%	23.6%	21.5%	-0.2%	+8.9%
<u>Target Area 7</u>							
Total Accidents	199	212	173	230	215	+8.0%	+8.3%
Non Alc.-Related	150	168	142	179	174	+16.0%	+11.0%
Alcohol-Related	49	44	31	51	41	-16.3%	-1.1%
Alc.-Related %	24.6%	20.8%	17.9%	22.2%	19.1%	-22.6%	-8.9%
<u>Target Area 8</u>							
Total Accidents	394	358	344	336	350	-11.2%	-8.8%
Non Alc.-Related	299	269	270	269	285	-4.7%	-2.5%
Alcohol-Related	95	89	74	67	65	-31.6%	-28.3%
Alc.-Related %	24.1%	24.9%	21.5%	19.9%	18.6%	-23.0%	-20.8%
<u>Target Area 9</u>							
Total Accidents	297	250	227	280	281	-5.4%	+2.6%
Non Alc.-Related	260	215	191	246	218	-16.2%	-2.3%
Alcohol-Related	37	35	36	34	63	+70.3%	+34.7%
Alc.-Related %	12.5%	14.0%	15.9%	12.1%	22.4%	+80.0%	+31.4%
<u>Target Area 10</u>							
Total Accidents	307	356	305	257	301	-2.0%	-15.8%
Non Alc.-Related	257	294	255	218	270	+5.1%	-11.4%
Alcohol-Related	50	62	50	39	31	-38.0%	-37.5%
Alc.-Related %	16.3%	17.4%	16.4%	15.2%	10.3%	-36.8%	-24.2%
<u>Target Areas 1-6</u>							
Total Accidents	2078	1788	1556	1429	1473	-29.1%	-23.1%
Non Alc.-Related	1612	1392	1179	1106	1152	-28.5%	-23.7%
Alcohol-Related	466	396	377	323	321	-31.1%	-21.0%
Alc.-Related %	22.4%	22.1%	24.2%	22.6%	21.8%	-2.8%	+2.7%
<u>Target Areas 7-10</u>							
Total Accidents	1197	1176	1049	1103	1147	-4.2%	-5.2%
Non Alc.-Related	966	946	858	912	947	-2.0%	-2.8%
Alcohol-Related	231	230	191	191	200	-13.4%	-15.2%
Alc.-Related %	19.3%	19.6%	18.2%	17.3%	17.4%	-9.6%	-10.5%
<u>Rest of County</u>							
Total Accidents	10218	9763	8911	8755	8077	-21.0%	-14.1%
Non Alc.-Related	7871	7459	6847	6821	6304	-19.9%	-13.1%
Alcohol-Related	2347	2304	2064	1934	1773	-24.5%	-17.3%
Alc.-Related %	23.0%	23.6%	23.2%	22.1%	22.0%	-4.4%	-3.7%

*These percentages compare the accident totals for the two baseline years with two thirds of the total for the three operational years, except for Target Areas 7-10 which compare the totals for April 1978 to March 1980 and April 1981 to March 1983.

percent decrease in Target Area 3. In Target Areas 1-6 the percentage of fatal and injury accidents which were alcohol-related actually increased slightly from 22.3 percent to 22.9 percent, a 2.7 percent increase. This is because non-alcohol-related accidents decreased slightly more than alcohol-related accidents in these areas (23.7 percent compared to 21.0 percent). On the other hand, in Target Areas 7-10 non-alcohol-related accidents declined very little (2.8 percent) compared to alcohol-related accidents (15.2 percent), and thus the percentage of accidents which were alcohol-related declined 10.5 percent, substantially more than in the rest of the county (3.7 percent) and more than in any of the ten comparison counties (Table 4.2).

Table 4.5 presents similar fatal and injury accident data just for the 20 hours each week that the AE Team was on patrol (Wednesday, Thursday, Friday, and Saturday nights from 11 p.m. to 4 a.m.). The data indicate a very substantial effect of the AE Team on accidents in the target areas during the special patrol hours. In Target Areas 1-6 alcohol-related accidents decreased 21.7 percent during these hours, and in Target Areas 7-10 they decreased 25.2 percent, compared to a 9.5 percent decline in the rest of the county and the 11.2 percent decline in the rest of the state (Table 4.3). Non-alcohol-related accidents decreased 35.4 percent during these hours in Target Areas 1-6, but in Target Areas 7-10 they decreased only 2.8 percent, compared to a 7.7 percent decrease in the rest of the county. Thus in Target Areas 1-6 the AE Team seems to have affected non-alcohol-related accidents even more than alcohol-related accidents during the Team patrol hours, but the opposite happened in Target Areas 7-10. The changes in alcohol-related accidents varied from a 23.1 percent increase in Target Area 9 to a 49.0 percent decrease in Target Area 10, but some of these changes are based on quite small numbers of accidents. Turning to the alcohol-related accident rate, the percentage of accidents which were alcohol-related actually went up 6.5 percent in Target Areas 1-6, while it decreased 7.2 percent in Target Areas 7-10 during the AE Team patrol hours.

In sum, during the Team hours there were well above average reductions in alcohol-related accidents in both sets of target areas

TABLE 4.5
Total and Alcohol-Related Fatal and Injury Accidents for the Nine Target Areas in Oakland County, April 1978 to March 1983, Accidents on Wednesday, Thursday, Friday, and Saturday Nights From 11 p.m. to 4 a.m.

Target Area	Time Period					Change From 4/78-3/79 to 4/82-3/83	Change From 4/78-3/80 to 4/80-3/83*
	Apr. 78 Mar. 79	Apr. 79 Mar. 80	Apr. 80 Mar. 81	Apr. 81 Mar. 82	Apr. 82 Mar. 83		
<u>Target Area 1-2</u>							
Total Accidents	43	47	51	34	31	-27.9%	-14.1%
Non Alc.-Related	13	18	15	11	11	-15.4%	-20.4%
Alcohol-Related	30	29	36	23	20	-33.3%	-10.7%
Alc.-Related %	69.8%	61.7%	70.6%	67.6%	64.5%	-7.5%	+2.8%
<u>Target Area 3</u>							
Total Accidents	84	66	50	52	43	-48.8%	-35.6%
Non Alc.-Related	29	22	22	16	20	-31.0%	-24.2%
Alcohol-Related	55	44	28	36	23	-58.2%	-41.4%
Alc.-Related %	65.5%	66.7%	56.0%	69.2%	53.5%	-18.3%	-10.1%
<u>Target Area 4</u>							
Total Accidents	67	55	47	49	42	-37.3%	-24.6%
Non Alc.-Related	31	22	10	14	15	-51.6%	-50.9%
Alcohol-Related	36	33	37	35	27	-25.0%	-4.3%
Alc.-Related %	53.7%	60.0%	78.7%	71.4%	64.3%	+19.6%	+25.7%
<u>Target Area 5</u>							
Total Accidents	72	39	41	33	37	-48.6%	-33.3%
Non Alc.-Related	30	14	16	14	11	-63.3%	-37.9%
Alcohol-Related	42	25	25	19	26	-38.1%	-30.3%
Alc.-Related %	58.3%	64.1%	61.0%	57.6%	70.3%	+20.5%	+2.2%
<u>Target Area 6</u>							
Total Accidents	26	17	18	21	17	-34.6%	-13.2%
Non Alc.-Related	10	6	6	5	3	-70.0%	-41.7%
Alcohol-Related	16	11	12	16	14	-12.5%	+3.7%
Alc.-Related %	61.5%	64.7%	66.7%	76.2%	82.4%	+33.8%	+18.5%
<u>Target Area 7</u>							
Total Accidents	34	33	22	38	26	-23.5%	-4.5%
Non Alc.-Related	7	11	5	12	5	-28.6%	-5.6%
Alcohol-Related	27	22	17	26	21	-22.2%	-4.1%
Alc.-Related %	79.4%	66.7%	77.3%	68.4%	80.8%	+1.7%	+2.1%
<u>Target Area 8</u>							
Total Accidents	47	46	30	32	34	-27.7%	-29.0%
Non Alc.-Related	6	11	12	9	11	+83.3%	+17.6%
Alcohol-Related	41	35	18	23	23	-43.9%	-39.5%
Alc.-Related %	87.2%	76.1%	60.0%	71.9%	67.6%	-22.5%	-14.7%
<u>Target Area 9</u>							
Total Accidents	27	20	14	22	24	-11.1%	-2.1%
Non Alc.-Related	12	9	3	10	4	-66.7%	-33.3%
Alcohol-Related	15	11	11	12	20	+33.3%	+23.1%
Alc.-Related %	55.6%	55.0%	78.6%	54.5%	83.3%	+50.0%	+25.8%
<u>Target Area 10</u>							
Total Accidents	30	36	27	21	23	-23.3%	-33.3%
Non Alc.-Related	7	8	7	8	10	+42.9%	+20.0%
Alcohol-Related	23	28	20	13	13	-43.5%	-49.0%
Alc.-Related %	76.7%	77.8%	74.1%	61.9%	56.5%	-26.3%	-23.4%
<u>Target Areas 1-6</u>							
Total Accidents	292	224	207	189	170	-41.8%	-26.9%
Non Alc.-Related	113	82	69	60	60	-46.9%	-35.4%
Alcohol-Related	179	142	138	129	110	-38.5%	-21.7%
Alc.-Related %	61.3%	63.4%	66.7%	68.3%	64.7%	+5.6%	+6.5%
<u>Target Areas 7-10</u>							
Total Accidents	138	135	93	113	107	-22.5%	-19.4%
Non Alc.-Related	32	39	27	39	30	+21.9%	-2.8%
Alcohol-Related	106	96	66	74	77	-27.4%	-25.2%
Alc.-Related %	76.8%	71.1%	71.0%	65.5%	72.0%	-7.2%	-6.3%
<u>Rest of County</u>							
Total Accidents	1339	1299	1285	1217	1105	-17.5%	-8.8%
Non Alc.-Related	494	441	447	444	404	-18.2%	-7.7%
Alcohol-Related	845	858	838	773	701	-17.0%	-9.5%
Alc.-Related %	63.1%	66.1%	65.2%	63.5%	63.4%	+0.5%	-0.7%

*These percentages compare the accident totals for the two baseline years with two thirds of the total for the three operational years, except for Target Areas 7-10 which compare the totals for April 1978 to March 1980 and April 1981 to March 1983.

(10.5 percent and 14.0 percent above the reduction in the rest of the state). However, non-alcohol-related accidents declined even more than alcohol-related accidents in Target Areas 1-6, while in Target Areas 7-10 they declined much less than in the rest of the county and state.

TABLE 4.6
Comparison of Accident Changes in the Target Areas and in
the Rest of Oakland County, 4/78-3/80 to 4/81-3/83

Area/Time	Alcohol-Related Accidents	Non-Alcohol-Related Accidents	Alcohol-Related Percentage
<u>Target Areas 1-6</u>			
Patrol Hours	-25.5%	-38.5%	+7.0%
Other Hours	-25.1%	-23.9%	-1.4%
Total	-25.3%	-24.8%	-0.5%
<u>Target Areas 7-10</u>			
Patrol Hours	-25.2%	-2.8%	-7.2%
Other Hours	-7.3%	-2.8%	-4.1%
Total	-15.2%	-2.8%	-10.5%
<u>Target Areas 1-10</u>			
Patrol Hours	-25.4%	-28.9%	+1.6%
Other Hours	-19.4%	-15.5%	-3.9%
Total	-21.8%	-16.3%	-5.3%
<u>Rest of County</u>			
Patrol Hours	-13.4%	-9.3%	-1.7%
Other Hours	-24.3%	-14.7%	-9.5%
Total	-20.3%	-14.4%	-5.4%
<u>All Oakland County</u>			
Patrol Hours	-16.3%	-13.7%	-1.1%
Other Hours	-23.2%	-14.9%	-8.3%
Total	-20.6%	-14.8%	-5.3%

Table 4.6 summarizes the accident changes in the target areas and in the rest of the county using just comparisons between the baseline years and the second and third operational years (April 1981 to March 1983) when the AE Team patrols were implemented in all of the target areas. This table demonstrates again that alcohol-related accidents declined more (20.6 percent) than non-alcohol-related accidents (14.8 percent) throughout the county, resulting in a 5.3 percent reduction in the percentage of fatal and injury accidents which were alcohol-related.

And it shows that the reductions in both alcohol-related and non-alcohol-related accidents were slightly greater in the combined target areas (21.8 percent and 16.3 percent, respectively) than in the rest of the county (20.3 percent and 14.4 percent, respectively). It also shows that these more favorable apparent effects on the target areas were almost entirely accounted for by changes in accidents during the AE Team's patrol hours. In fact during the other 148 hours of the week alcohol-related accidents actually decreased more in the rest of the county (24.3 percent) than in the target areas (19.4 percent).

During the Team patrol hours alcohol-related accidents decreased 25.4 percent in the target areas and 13.4 percent in the rest of the county; while non-alcohol-related accidents decreased slightly more, 28.9 percent, in the target areas but decreased only 9.3 percent in the rest of the county. On the other hand, during the other hours alcohol-related accidents decreased somewhat more in the rest of the county (24.3 percent) than in the target areas (19.4 percent); while the reductions in non-alcohol-related accidents were fairly similar--14.7 percent in the rest of the county and 15.5 percent in the target areas. Thus the AE Team patrols seem to have had a substantial impact on both alcohol-related and non-alcohol-related accidents in the target areas during the special patrol hours.

4.4 Accident Data Discussion

It is interesting that the special alcohol enforcement/education program had its greatest effect on alcohol-related accidents in the target areas during the special patrol hours. Also it is interesting that non-alcohol-related accidents declined slightly more than alcohol-related accidents in these areas during the patrol hours. The publicity about the special alcohol patrols did not specify the actual target areas or deployment times. However, there was newspaper coverage about the patrols on Dixie Highway and some other roads due to complaints from bar proprietors. And undoubtedly there was some "word of mouth" publicity about the times and places of deployment from bar and restaurant personnel and from late-night drivers who observed patrol cars with the special AE Team logo. It should also be borne in mind

that the AE Team averaged less than two nights a month of actual deployment in each target area, so the differential effect on accidents in the target areas could not have resulted only from reduced speeds and more cautious driving during the particular ten hours or less each month of special patrol activity in a given target area. There was clearly a wider effect. Apparently during these special patrol hours, even though the special patrol was only operating in one of the target areas on any given night, both sober and drinking drivers drove more carefully on these major target area roads.

Overall, based on the available data, the Oakland County Alcohol Enforcement/Education Project does not appear to have had a large differential effect on alcohol-related accidents in Oakland County. In the county-wide comparisons with other major counties and the rest of the state, alcohol-related accidents in Oakland County declined at about the same rate as in the rest of the state, while non-alcohol-related accidents declined somewhat less than in the rest of the state. Probably some of the credit for the greater decrease in alcohol-related than in non-alcohol-related accidents belongs to the special alcohol enforcement/education program. There was a decrease of 3.4 percent in the percentage of fatal and injury accidents which were alcohol-related, but this decrease was more a result of below-average reductions in non-alcohol-related accidents than of above-average reductions in alcohol-related accidents. However, in the target areas during the special patrol hours, there were above-average reductions in both alcohol-related and non-alcohol-related accidents, and these high reductions are probably related to the AE Team patrol activity in these areas.

Accident Data

Evaluation Report on the
Oakland County Alcohol Project

5.0 SUMMARY AND CONCLUSIONS

In May 1979 a four-year Alcohol Enforcement/Education Project was initiated by the Traffic Improvement Association and the Sheriff's Department of Oakland County. Its goal was to reduce alcohol-related accidents in Oakland County by means of a saturation program of selective enforcement at times and places of the greatest number of drunk driving accidents, combined with a large-scale public education effort. Operation of the special Alcohol Enforcement Team commenced on April 10, 1980, and continued on Wednesday, Thursday, Friday, and Saturday nights thereafter. For the first two weeks it operated from 10 p.m. to 3 a.m., but then it changed to an 11 p.m. - 4 a.m. operation. For the first year the program operated in six different specified target areas, usually for two weeks at a time in one area. The Team usually consisted of six Sheriff's Department cars, one Michigan state police car, and one or more local police department cars. In the second operational year four more target areas were added, the Team was reduced slightly, and the deployment sequence was changed to two nights in a row in each area, instead of two weeks.

The Project was sponsored by the Michigan Office of Highway Safety Planning, and this agency also awarded a contract to the University of Michigan Transportation Research Institute to evaluate the effectiveness of the Project in meeting its goals. This evaluation report covers the first 38 months of Alcohol Enforcement Team operation through May 1983, and it presents available evaluation data in three areas: OUIL arrests, public opinion, and accidents. The Project was extended for another year to May 1984.

5.1 Drunk Driving Enforcement

The Oakland Project was quite successful in meeting its goals of increasing the level of enforcement. The 2,417 OUIL arrests made by the special Alcohol Enforcement Team officers helped the Sheriff's Department to increase its arrests at an average annual rate of 97.5

percent from the baseline period to the operational period, far exceeding the goal of a 30 percent increase. Among the 42 local police departments there were some which declined in their numbers of OUIL arrests from the baseline period to the operational period, but there were more local departments which increased their drunk driving enforcement, and overall local police department OUIL arrests increased 14.5 percent--just slightly under the 15 percent goal. Especially noteworthy were the large increases in OUIL arrests in Royal Oak and Troy. However, despite Oakland County's overall increase of 21.7 percent in OUIL arrests from the baseline period to the operational period, its 1981 arrest rate per capita of 6.66/1,000 was matched by Washtenaw County's 6.73/1,000 and was somewhat less than Macomb County's 7.68/1,000. So, although the Project met its goals handily in the enforcement area, it did not achieve a level of enforcement high enough to make it stand out among its neighbors.

5.2 Public Information and Education

A comparison of the public opinion survey data for 1980, 1981, 1982, and 1983 shows a significant increase in awareness of and knowledge about the special alcohol program among drivers residing in Oakland County. Prior to the April 1980 publicity about the Alcohol Enforcement Team, only 10.5 percent of the respondents said they were aware of the program. This grew to 41.5 percent in 1983, and in that year about one-fifth of the total sample was able to volunteer one of the major program messages such as "the party's over for drunk drivers in Oakland County." There were also substantial increases in the proportion of respondents who thought drunk driving was the most important cause of traffic deaths and injuries (from 43 percent in 1980 to 73 percent in 1983) and in the proportion who thought drunk driving was the most important violation for the police to concentrate on (from 34 percent in 1980 to 60 percent in 1983). In 1983 79.8 percent of the respondents supported increased enforcement of the drunk driving laws, and 73.8 percent supported more severe penalties for convicted drunk drivers. However, many respondents were not well-informed about the most common penalties presently imposed on convicted drunk drivers. The message-recall data indicate that much of the change in public opinion

can be attributed to the Traffic Improvement Association's public education efforts. The publicity given to organizations such as Mothers Against Drunk Drivers presumably played a complementary role in bringing about these changes.

In 1983 69.4 percent of the respondents said that the chances of arrest for drunk driving had increased in Oakland County in recent years, and the survey data also show some increase in respondents' perceptions of their own chance of being arrested if driving drunk. However, there was no significant change in the numbers of respondents who admitted driving after drinking too much (about one-quarter of the sample each year) and in the numbers of respondents who said they had taken some action to prevent others from driving drunk (about 42 percent each year).

5.3 Alcohol-Related Accident Reduction

The analysis of fatal and injury accident data for Oakland county and the rest of the state shows that:

- 1) Both alcohol-related and non-alcohol-related accidents decreased substantially in Oakland County (17.7 percent and 14.0 percent, respectively) from the baseline period (1978-80) to the operational period (1980-83).
- 2) The percentage of fatal and injury accidents which were alcohol-related was reduced 3.4 percent from the baseline period to the operational period.
- 3) Both alcohol-related and non-alcohol-related accidents declined substantially statewide and in each of the ten comparison counties from 1978-80 to 1980-83. The comparison with rest-of-the-state accident trends shows that the Oakland County reduction in alcohol-related accidents was about the same as the rest of the state reduction (17.7 percent compared to 17.2 percent), while the Oakland County reduction in non-alcohol-related accidents was slightly less than the statewide reduction (14.0 percent compared to 16.6 percent).
- 4) Both statewide and in Oakland County accidents were reduced less during the Alcohol Enforcement Team patrol hours than during the rest of the week. The Oakland County reduction in alcohol-related accidents during these hours (13.0 percent) was slightly higher than the rest of the state reduction during these hours (11.2 percent).
- 5) In the specified target areas patrolled by the AE Team, alcohol-related accidents were reduced 25.4 percent (comparing 1978-80 with 1981-83) during the special patrol hours, but they decreased only 13.4 percent in the rest of the county during these hours.

Similarly, non-alcohol-related accidents decreased slightly more, 28.9 percent, in the target areas during the special patrol hours, but they decreased only 9.3 percent in the rest of the county during these hours.

- 6) During the other 148 hours in the week, alcohol-related accidents decreased 19.4 percent in the target areas and 24.3 percent in the rest of the county, while non-alcohol-related accidents decreased 15.5 percent in the target areas and 14.7 percent in the rest of the county.

While alcohol-related fatal and injury accidents in Oakland County declined substantially from the baseline years to the operational years (17.7 percent), this decline was almost identical with the average decline in the rest of the the state (17.2 percent), and was actually less than in some other large counties which did not have a special program (e.g., Wayne declined 21.9 percent and Monroe 22.2 percent). The percentage of fatal and injury accidents which were judged to be alcohol-related (which we have argued is a tenuous measure of performance) changed from 22.8 percent in the baseline period to 22.0 percent in the operational period, a 3.4 percent reduction.

During the special AE Team's patrol hours both alcohol-related and non-alcohol-related accidents were reduced even more in the specified target areas (25.4 percent and 28.9 percent, respectively) than in the rest of the county (13.4 percent and 9.3 percent, respectively) and in the rest of the state (11.2 percent and 12.9 percent, respectively). Despite the fact that the special patrols averaged less than two nights per month in each target area, they seem to have had a differential impact on both alcohol-related and non-alcohol-related accidents in these areas during the patrol hours. A more pessimistic view might attribute the observed reductions in the target areas to a regression to the mean effect. Available data are insufficient to confirm this, however.

In the comparisons with ten other large counties in Michigan, Oakland County was sixth in its reduction of alcohol-related accidents for all hours and fifth for the specific AE Team patrol hours. It is possible that there was some spillover effect to the other counties in southeast Michigan from the TIA-sponsored media activities. Certainly the activities must have contributed to the general climate of increased

concern about drunk driving throughout Michigan. It is also possible that in the absence of the special program alcohol-related accidents might not have declined as much in Oakland County as they did in the rest of the state. From the accident data available it is not possible to address these speculations.

5.4 Conclusions

The Oakland County Alcohol Enforcement/Education Project was clearly successful in meeting its direct goals of significantly increasing enforcement and modifying public opinion concerning drunk driving. OUIL arrests by the Sheriff's Department were increased far beyond the original 30 percent goal, and the increase in arrests by the local police departments essentially matched the 15 percent goal. The four waves of public opinion surveys showed that there were significant increases in public awareness of the magnitude of the drunk driving problem and in public support for firm drunk driving enforcement measures.

Turning to the primary goal of reducing alcohol-related accidents, it is more difficult to assess the effectiveness of the Project due to the potential unreliability of the only available direct indicator of whether an accident was alcohol-related, i.e., the police officer's subjective judgment recorded on the accident report form. Analyses of the accident data show that the large decline in alcohol-related accidents from the baseline years to the operational years was about the same in Oakland County as in the rest of the state and in selected other large counties without a similar special alcohol enforcement/education program. The 3.4 percent decline in the alcohol-related accident percentage was also considerably less than the ambitious goal of a 15 percent reduction, but it was greater than the 0.6 percent reduction in the alcohol-related rate in the rest of the state. The reduction in alcohol-related accidents was particularly high in the target areas during the special patrol hours, suggesting a significant impact for the alcohol enforcement/education program at those times and places.

If, as seems likely, some Oakland County police officers increased their skills at and concern about detecting alcohol involvement in

accidents and thus classified some accidents as alcohol-related in the operational period which would not have been classified as alcohol-related in the baseline period, then the real impact of the program on alcohol-related accidents was greater than that indicated by the available accident data. For example, if just five percent of the accidents classified as alcohol-related in the operational period would not have been classified as alcohol-related in the baseline period, and if these accidents were considered non-alcohol-related in the accident analysis, then instead of the 17.7 percent reduction in alcohol-related accidents there would be a 21.8 percent reduction. Similarly, instead of the 3.4 percent reduction in the alcohol-related rate there would be an 8.2 percent reduction. The reported accident data indicate that the special alcohol enforcement/education program had at least a small impact on alcohol-related accidents in Oakland County, especially in the ten target areas during the special patrol hours, and it is possible that the impact was somewhat greater than that indicated in the accident data due to changes in the manner in which accidents were categorized as alcohol-related or not.

5.5 Discussion

There is little question that drunk driving has been and continues to be a major factor in traffic accidents. Changing the public attitude so as to reduce the incidence of drinking and driving seems to require a number of parallel activities: public education to increase awareness of the problem and increase support for needed countermeasures, imposition of penalties on individual offenders, and strong visible enforcement of the drunk driving laws (which is expected to impact both the individuals who are arrested and those who hear of such actions by word of mouth or the mass media).

During the 1970s the National Highway Traffic Safety Administration sponsored a number of Alcohol Safety Action Programs throughout the United States. State, local, and private organizations have also implemented and evaluated numerous efforts to reduce drunk driving. In addition, a moderately extensive international literature on preventing alcohol-impaired driving has emerged. Some of these efforts were based

on strong enforcement programs, some on treatment of alcoholics, some on public education campaigns, and some on combinations of these approaches. The Oakland County Traffic Improvement Association had the advantage of the reported experience in laying out the program reported on here.

There is no question that enforcement activities were enhanced in Oakland County. Similarly, the public education programs were successful in raising the awareness of Oakland County residents to the drunk driving problem. It is less clear that the drinking driving practices of Oakland County residents changed significantly (as evidenced by either the survey results or the accident data).

One can speculate on the reasons for the smaller-than-expected change in alcohol-related accident rates. Perhaps there are opposing forces operating--an increase in happy hour discounts, more advertising by establishments serving liquor, external efforts to keep up sales in the face of decreases associated with increased law enforcement. Changing people's long-term behavioral patterns is known to be extremely difficult. Perhaps the present programs have brought the public to the threshold of change, but something more is needed to break over that threshold.

For example, introduction of sobriety checklanes might increase motorists' perception of a high risk of apprehension (in combination with the other education and enforcement programs now in place) and thus bring about the desired change. An additional value of such checklanes would be the ability to monitor the alcohol level of the driving population on a more or less continuous basis, providing an immediate measure of the effectiveness of the control programs.

Other regions have undertaken activities aimed at countering increased liquor promotion. The Traverse City area has published lists of blood alcohol levels of arrestees along with names of establishments which served the last drink to them. Threat of loss of a liquor license, or the need to defend against liability suits under the dram shop laws, could have a powerful effect on bar owners' efforts to control intoxicated potential drivers.

In summary, the Oakland County program must be viewed as a positive effort in the drive to control drunk driving. The objectives of increased public awareness and increased enforcement were achieved. The goal of a 15 percent reduction in the alcohol-related crash rate may have been unrealistic, at least in part because the same programs that are intended to modify drinking driving may have similar effects on non-drinkers. The relatively small differences in alcohol-related or other accidents between Oakland County and other jurisdictions in the state provide little support for the theory that increased drunk-driving arrests and increased public awareness of the drunk-driving problem produce a reduction in the frequency or rate of alcohol-related traffic accidents.

APPENDIX

Question-by-Question Results From the 1980, 1981, 1982,
and 1983 Oakland County Highway Safety Surveys

QUESTION 1: About how many miles would you estimate that you yourself drove a motor vehicle in the past 12 months?

Miles	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
3500 or Less	17.9%	21.4%	18.7%	19.7%	17.1%	21.6%	19.4%
3500-7500	17.6%	21.4%	18.5%	18.9%	21.0%	18.6%	19.2%
7500-11,500	22.3%	21.4%	22.1%	21.4%	19.3%	19.0%	20.5%
11,500-15,500	19.4%	19.8%	19.5%	18.5%	23.2%	19.0%	19.9%
15,500-19,500	4.2%	3.2%	4.0%	5.9%	5.2%	4.1%	4.8%
19,500 or More	18.6%	12.7%	17.2%	15.5%	14.3%	17.7%	16.3%
Total N	403	126	529	523	462	559	2073

QUESTION 2: About what percent of those miles would you guess were driven in Oakland County?

Miles	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Under 10%	2.0%	1.6%	1.9%	1.3%	0.6%	2.3%	1.6%
10-19%	2.5%	4.0%	2.8%	3.8%	1.9%	2.5%	2.8%
20-34%	5.2%	9.6%	6.2%	9.4%	6.3%	9.2%	7.8%
35-49%	4.9%	4.8%	4.9%	3.8%	5.2%	5.6%	4.9%
50-64%	17.5%	12.8%	16.4%	12.8%	17.7%	18.9%	16.4%
65-79%	22.2%	17.6%	21.1%	21.0%	16.9%	19.4%	19.7%
80-89%	16.5%	15.2%	16.2%	14.9%	20.6%	16.3%	16.9%
90% Up	29.1%	34.4%	30.4%	33.0%	30.7%	25.9%	29.9%
Total N	405	125	530	524	462	557	2073

QUESTION 1 and 2 Combined: Annual Miles in Oakland County

Miles	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
3500 or Less	25.0%	29.4%	26.0%	25.6%	20.5%	27.9%	25.2%
3500-7500	33.4%	32.1%	33.1%	35.0%	35.9%	30.4%	33.5%
7500-11,500	24.2%	21.1%	23.5%	20.8%	23.0%	21.9%	22.3%
11,500-15,500	9.2%	8.3%	9.0%	9.4%	12.0%	8.3%	9.6%
15,500-19,500	4.1%	5.5%	4.4%	5.3%	5.4%	5.8%	5.2%
19,500 or More	4.1%	3.7%	4.0%	3.9%	3.2%	5.6%	4.2%
Total N	368	109	477	457	409	480	1823

QUESTION 3: In your opinion, what is the single greatest cause of traffic deaths and injuries in Oakland County?*

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Drinking/drunk drivers	41.6%	49.2%	43.4%	54.8%	64.6%	73.2%	59.1%
Drug-impaired drivers	5.4%	4.9%	5.3%	6.2%	5.1%	7.9%	6.2%
Poor driver attitudes/ability	39.0%	33.6%	37.7%	29.9%	25.1%	18.1%	27.6%
Specific bad driving subgroups	3.1%	4.9%	3.3%	2.3%	2.2%	4.3%	3.1%
Speeding, in a hurry	26.6%	21.3%	25.3%	22.1%	19.3%	10.7%	19.3%
Other specific driver actions	3.4%	5.7%	3.9%	8.0%	2.9%	4.1%	4.8%
Bad roads, inadequate construction/maintenance	5.9%	5.7%	5.9%	4.2%	4.4%	1.7%	4.0%
Inadequate traffic control devices	1.0%	0.8%	1.0%	1.0%	1.3%	1.8%	1.3%
Other	1.3%	0.0%	1.0%	1.9%	3.1%	3.7%	2.4%
Total N	387	122	509	515	455	541	2020

*Multiple response question--percentages add to more than 100%.

QUESTION 4: How likely do you think it is that the average Oakland County driver will be involved in a major or minor traffic accident sometime in the next 12 months? [not asked in 1983]

	Before 4/9/80	After 4/8/80	1980 Total	1981 Total	1982 Total	Total
About 1 in 2	2.0%	0.8%	1.7%	2.1%	2.0%	1.9%
About 1 in 5	6.0%	7.3%	6.1%	2.7%	2.0%	3.7%
About 1 in 10	12.9%	19.4%	14.8%	23.8%	19.7%	19.4%
About 1 in 50	10.0%	6.5%	9.5%	2.5%	2.4%	4.9%
About 1 in 100	23.1%	27.4%	23.6%	30.1%	36.1%	29.6%
About 1 in 500	7.7%	8.9%	8.0%	1.0%	1.3%	3.5%
About 1 in 1000	22.4%	21.0%	22.4%	25.3%	24.6%	24.1%
About 1 in 10,000	13.9%	5.6%	11.6%	11.7%	11.5%	11.6%
About 1 in 100,000	1.5%	3.2%	1.9%	0.4%	0.0%	0.8%
About 1 in 1,000,000	0.5%	0.0%	0.4%	0.6%	0.2%	0.4%
Total N	402	124	526	522	451	1499

QUESTION 5: How likely do you think it is that you yourself will be involved in a major or minor traffic accident sometime during the next 12 months? [not in 1983]

	Before 4/9/80	After 4/8/80	1980 Total	1981 Total	1982 Total	Total
About 1 in 2	2.5%	3.4%	2.7%	2.4%	1.6%	2.3%
About 1 in 5	3.0%	2.6%	2.7%	1.2%	0.9%	1.7%
About 1 in 10	7.1%	10.3%	8.0%	11.8%	10.5%	10.1%
About 1 in 50	6.9%	7.7%	6.8%	2.6%	1.6%	3.8%
About 1 in 100	13.2%	14.5%	13.5%	19.1%	18.7%	17.0%
About 1 in 500	8.1%	8.5%	8.2%	2.4%	2.7%	4.5%
About 1 in 1000	21.3%	26.5%	23.7%	28.7%	26.4%	26.2%
About 1 in 10,000	22.8%	13.7%	20.4%	21.7%	23.7%	21.8%
About 1 in 100,000	6.9%	4.3%	5.7%	1.8%	1.8%	3.2%
About 1 in 1,000,000	8.1%	8.5%	8.2%	8.4%	12.1%	9.4%
Total N	394	117	511	502	439	1452

QUESTION 6: How frequently do you think the average Oakland County driver is likely to be involved in a major or minor traffic accident?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
About 1 in 2 Years	23.2%	29.0%	24.4%	29.2%	36.4%	23.4%	28.0%
About 1 in 5 years	35.7%	26.6%	33.5%	29.4%	29.4%	36.4%	32.3%
About 1 in 10 years	29.9%	26.6%	29.3%	28.6%	25.6%	33.3%	29.4%
About 1 in 50 years	8.2%	12.1%	9.1%	12.3%	8.6%	6.1%	9.0%
About 1 in 100 years	0.2%	1.6%	0.6%	0.4%	0.0%	0.7%	0.4%
About 1 in 500 years	0.7%	2.4%	1.1%	0.0%	0.0%	0.0%	0.3%
About 1 in 1000 years	0.2%	0.8%	0.4%	0.0%	0.0%	0.0%	0.1%
About 1 in 10,000 years	1.2%	0.0%	1.0%	0.2%	0.0%	0.0%	0.3%
About 1 in 100,000 years	0.6%	0.8%	0.6%	0.0%	0.0%	0.0%	0.1%
Total N	401	124	525	521	453	555	2054

QUESTION 7: If police agencies were to more strictly enforce traffic laws, on what type of violation should they concentrate their efforts?*

Miles	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Drunk driving	32.1%	38.8%	33.8%	42.4%	47.7%	59.5%	47.3%
Excessive speeds	49.7%	52.6%	50.4%	48.6%	59.3%	31.6%	43.2%
Under minimum speed	3.6%	4.3%	3.8%	2.7%	1.9%	1.9%	2.6%
Careless/reckless erratic driving	22.0%	21.6%	21.9%	23.3%	15.2%	13.6%	18.9%
Running red lights stop signs	10.4%	6.0%	9.4%	10.7%	8.0%	14.5%	11.0%
Improper turns	3.3%	1.7%	2.9%	2.7%	1.4%	3.7%	2.8%
Defective vehicle equipment	2.7%	1.7%	2.5%	1.0%	2.5%	1.7%	2.0%
High beam lights	0.5%	0.0%	0.4%	0.0%	0.0%	0.8%	0.3%
Other	4.4%	1.7%	3.8%	2.1%	2.7%	5.8%	3.7%
Total N	364	116	480	486	436	516	1918

*Multiple response question--percentages add to more than 100%.

QUESTION 8: About how often would you say you wear your safety belt when you are driving?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Always or almost always	21.2%	15.1%	19.7%	21.6%	22.8%	23.7%	22.0%
More than half the time	7.4%	7.1%	7.3%	6.8%	8.2%	9.4%	7.9%
Less than half the time	18.5%	12.7%	17.1%	18.0%	15.3%	18.0%	17.2%
Never or almost never	53.0%	65.1%	55.8%	53.7%	53.7%	48.9%	52.9%
Total N	406	126	532	529	464	566	2091

QUESTION 9: How do you feel about having a state law that requires all children under 5 to ride in a special car safety seat?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Strongly in favor	42.3%	43.5%	42.6%	49.5%	59.6%	75.1%	57.0%
Somewhat in favor	34.8%	33.9%	34.6%	29.7%	26.1%	17.0%	26.7%
Somewhat opposed	13.7%	11.3%	13.1%	12.2%	9.3%	4.9%	9.8%
Strongly opposed	9.2%	11.3%	9.7%	8.6%	5.0%	3.0%	6.5%
Total N	402	124	526	525	460	566	2077

QUESTION 10: How do you feel about having a state law which requires everybody to wear a safety belt?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Strongly in favor	22.8%	21.4%	22.5%	21.0%	27.5%	28.5%	24.8%
Somewhat in favor	29.2%	31.0%	29.6%	30.3%	29.2%	31.7%	30.3%
Somewhat opposed	22.8%	19.0%	21.9%	23.5%	19.0%	18.6%	20.8%
Strongly opposed	25.2%	28.6%	26.0%	25.2%	24.2%	21.2%	24.1%
Total N	404	126	530	528	462	565	2085

QUESTION 11: How do you feel about keeping the present 55 mph speed limit on the nation's highways?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Strongly in favor	62.2%	55.5%	60.6%	45.7%	53.8%	43.7%	50.8%
Somewhat in favor	19.0%	22.7%	19.9%	22.0%	21.8%	21.5%	21.3%
Somewhat opposed	9.6%	13.3%	10.5%	18.0%	13.6%	21.9%	16.2%
Strongly opposed	9.1%	8.6%	9.0%	14.2%	10.6%	12.9%	11.7%
Total N	405	128	533	527	463	567	2089

QUESTION 12: Out of every 100 traffic accidents in which someone is killed, how many would you guess involve a driver who has drunk too much alcohol for safety driving?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Under 20%	12.4%	17.5%	13.6%	11.3%	9.7%	7.5%	10.5%
20-39%	17.9%	17.5%	17.8%	15.0%	13.7%	8.6%	13.7%
40-59%	30.1%	24.6%	28.8%	30.4%	27.3%	31.6%	29.6%
60-79%	28.1%	26.2%	27.7%	28.3%	28.9%	34.6%	30.0%
80% up	11.4%	14.3%	12.1%	15.0%	20.5%	17.6%	16.2%
Total N	402	126	528	520	454	557	2059

QUESTION 13: In Oakland County how likely do you think it is that the average drunk driver would be arrested on a trip about 10 miles long?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
About 1 in 2	0.5%	0.8%	0.6%	1.2%	0.7%	1.2%	0.9%
About 1 in 5	1.5%	2.4%	1.5%	0.2%	0.2%	1.1%	0.8%
About 1 in 10	10.3%	11.3%	10.5%	11.1%	11.8%	17.1%	12.8%
About 1 in 50	7.5%	11.3%	8.6%	4.6%	4.2%	4.5%	5.5%
About 1 in 100	22.1%	23.4%	22.4%	31.5%	31.3%	31.2%	29.1%
About 1 in 500	10.1%	5.6%	9.0%	2.5%	1.1%	1.2%	3.5%
About 1 in 1000	24.4%	28.2%	25.3%	31.3%	32.2%	29.9%	29.6%
About 1 in 10,000	15.8%	12.9%	15.1%	14.0%	14.9%	11.2%	13.7%
About 1 in 100,000	4.3%	4.0%	4.2%	1.0%	0.9%	1.1%	1.8%
About 1 in 1,000,000	3.5%	0.0%	2.7%	2.7%	2.8%	1.4%	2.4%
Total N	398	124	522	521	457	561	2061

QUESTION 14: If you yourself drank enough alcohol to be considered legally under the influence and then drove somewhere, how likely do you think it is that you would be arrested on a trip about 10 miles long?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
About 1 in 2	3.9%	7.0%	4.6%	3.9%	5.3%	4.1%	4.4%
About 1 in 5	1.3%	3.5%	1.6%	1.6%	0.7%	2.0%	1.5%
About 1 in 10	10.5%	10.5%	10.5%	12.7%	13.2%	18.4%	13.8%
About 1 in 50	8.5%	7.0%	8.2%	4.9%	3.1%	3.5%	5.0%
About 1 in 100	18.3%	19.3%	18.7%	23.3%	26.8%	26.8%	23.8%
About 1 in 500	6.7%	3.5%	6.0%	3.1%	1.0%	1.3%	2.9%
About 1 in 1000	22.1%	28.9%	23.7%	28.2%	26.1%	24.9%	25.7%
About 1 in 10,000	15.2%	14.0%	14.9%	14.5%	16.7%	12.8%	14.6%
About 1 in 100,000	4.6%	2.6%	4.2%	0.8%	1.2%	2.4%	2.2%
About 1 in 1,000,000	9.0%	3.5%	7.8%	7.1%	6.0%	3.7%	6.1%
Total N	389	114	503	490	418	538	1949

QUESTION 15: Have you happened to see or hear anything about a special program in Oakland County to reduce accidents caused by drunk drivers?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Yes	10.5%	28.3%	14.9%	37.4%	43.0%	41.5%	34.1%
No	89.5%	71.7%	85.1%	62.6%	57.0%	58.5%	65.9%
Total N	371	120	491	500	458	511	1960

QUESTION 15a: Please describe any of the activities of this program which you remember. (asked only of respondents answering "Yes" to Question 15)*

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Special/additional police concentration on high accident roads	0.0%	41.2%	17.8%	33.2%	24.9%	20.3%	25.0%
Sheriff Patrols specifically	0.0%	2.9%	1.4%	2.1%	2.5%	12.7%	5.5%
Coordination of county-wide enforcement	7.7%	8.8%	8.2%	1.6%	1.5%	3.3%	2.8%
Special alcohol school for drunk drivers	43.6%	0.0%	16.4%	4.8%	5.1%	7.1%	6.9%
Public education by mass media	20.5%	2.9%	12.3%	19.3%	19.8%	28.8%	21.7%
Public education by speeches and movies	2.6%	5.9%	4.1%	1.1%	3.6%	7.5%	4.2%
Special holiday crackdown	0.0%	0.0%	0.0%	2.1%	2.5%	6.6%	4.2%
Other	7.7%	0.0%	4.1%	3.7%	7.1%	13.7%	7.9%
Nothing relevant mentioned	23.1%	23.5%	23.3%	20.9%	31.5%	26.4%	26.0%
Total N	39	34	73	187	197	212	669

*Multiple response question--percentages may add to more than 100%.

QUESTION 15b: Please describe any themes of this program which you remember. (asked only of respondents answering "Yes" to Question 15)*

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Extra police enforcement activities (general)	2.6%	14.7%	8.2%	15.0%	11.2%	5.2%	10.0%
Drunk drivers lose their license	10.3%	0.0%	5.5%	1.1%	0.5%	2.8%	1.9%
Drunk drivers go to jail	10.3%	2.9%	6.8%	9.6%	14.2%	6.1%	9.6%
Never drive after drinking	2.6%	0.0%	1.4%	4.3%	2.5%	6.1%	4.0%
Know your limits	10.3%	5.9%	8.2%	0.5%	0.0%	3.8%	2.2%
Party's over for drunk drivers	0.0%	0.0%	0.0%	10.7%	12.2%	19.8%	13.5%
Drunk driver not tolerated in Oakland County, crackdown, etc.	0.0%	0.0%	0.0%	11.8%	9.1%	19.3%	11.7%
Know when and where drunk drivers are driving, watching certain roads, etc.	0.0%	0.0%	0.0%	6.4%	9.6%	12.7%	8.5%
Other	23.0%	5.9%	15.1%	9.1%	18.3%	16.0%	14.6%
Nothing relevant mentioned	64.1%	64.7%	64.4%	42.8%	33.0%	35.4%	39.9%
Total N	39	34	73	187	197	212	669

*Multiple response question--percentages may add to more than 100%.

QUESTION 15c: Where did you get this information?* (Asked only if respondents answered "Yes" on Question 15.)

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Newspaper	30.7%	73.5%	50.7%	55.1%	53.3%	47.6%	51.7%
Radio	33.3%	39.4%	31.5%	32.6%	32.5%	36.8%	33.8%
Television	43.6%	52.9%	47.9%	47.1%	57.4%	63.7%	55.5%
Billboard	17.9%	2.9%	10.9%	29.9%	31.5%	36.8%	30.5%
Bumper Sticker	10.3%	5.9%	8.2%	6.4%	11.7%	17.0%	11.5%
Pamphlet	15.4%	0.0%	8.2%	4.3%	9.6%	11.8%	8.7%
Meetings	5.1%	2.9%	4.1%	1.1%	3.6%	3.8%	3.0%
Talking	41.0%	35.3%	38.4%	23.0%	25.9%	29.7%	27.6%
Other	15.4%	2.9%	9.6%	3.7%	4.1%	14.2%	7.8%
Total N	39	34	73	187	197	212	669

*Multiple response variable--percentages add to more than 100%.

QUESTION 16: During the past year have you taken any action to prevent someone from driving in a situation where he or she had been drinking a lot? [not asked in 1983]

[If YES]

QUESTION 16a: What actions did you take?*

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	Total
Respondent drove instead of drinking person	25.1%	33.1%	27.0%	27.8%	27.4%	27.4%
Respondent had friend drive drinking person	3.4%	2.5%	3.1%	3.2%	3.2%	3.2%
Respondent let someone else drive him/her	2.6%	0.0%	2.0%	0.0%	0.6%	0.9%
Respondent prevented drinking person from leaving	8.0%	3.3%	6.9%	4.5%	3.9%	5.1%
Respondent had drinking person stay to sleep	5.2%	2.5%	4.5%	7.3%	5.4%	5.7%
Respondent tried to persuade drinker not to drive	3.6%	1.7%	3.1%	2.6%	1.7%	2.5%
Respondent told driver to drive carefully/drink less	0.8%	0.8%	0.8%	0.2%	0.6%	0.6%
Tried to sober person up, cut off drinking	0.0%	0.0%	0.0%	2.8%	1.5%	1.4%
Other	0.0%	0.0%	0.0%	0.9%	1.5%	0.8%
None	56.3%	60.3%	57.3%	56.9%	58.5%	57.5%
Total N	387	121	508	464	467	1439

*Multiple response variable--percentages add to more than 100%.

QUESTION 17: In what year were you born? (Recoded to age the previous Dec. 31)

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
15-17	2.5%	4.7%	3.0%	5.6%	1.7%	5.3%	4.0%
18-20	5.7%	10.9%	6.9%	10.4%	7.1%	7.2%	7.9%
21-24	9.9%	11.7%	10.3%	8.5%	8.8%	10.9%	9.7%
25-34	22.0%	26.6%	23.1%	22.8%	20.9%	25.4%	23.2%
35-44	20.2%	15.6%	19.1%	18.3%	20.0%	18.7%	19.0%
45-54	16.8%	14.8%	16.3%	13.7%	18.3%	12.7%	15.1%
55-64	13.6%	11.7%	13.1%	10.5%	13.8%	10.8%	12.0%
65 up	9.4%	3.9%	8.1%	10.2%	9.3%	9.0%	9.1%
Total N	405	128	536	531	464	567	2095

QUESTION 19: What is your sex?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Male	46.6%	43.0%	45.7%	46.6%	47.2%	51.3%	47.8%
Female	53.4%	57.0%	54.3%	53.4%	52.8%	48.7%	52.2%
Total N	406	128	534	524	466	567	2091

QUESTION 20: What is your marital status?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Never married	17.5%	27.3%	19.9%	27.0%	21.3%	26.7%	23.8%
Married	73.6%	54.7%	69.1%	63.1%	66.7%	61.7%	65.0%
Divorced or separated	3.7%	14.8%	6.4%	5.3%	8.2%	7.8%	6.9%
Widowed	5.2%	3.1%	4.7%	4.5%	3.9%	3.9%	4.3%
Total N	406	128	534	529	465	566	2094

QUESTION 21: What is the highest level of education you have completed?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Didn't finish high school	8.9%	13.4%	9.9%	13.0%	13.1%	13.8%	12.5%
Finished high school	30.5%	33.9%	31.3%	28.9%	28.0%	27.5%	28.9%
Some college	33.5%	35.4%	34.0%	33.3%	32.0%	34.0%	33.4%
Finished 4-yr college	16.5%	11.8%	15.4%	15.3%	15.5%	13.9%	15.0%
Received graduate degree	10.6%	5.5%	9.4%	9.5%	11.4%	10.8%	10.2%
Total N	406	127	533	529	465	567	2094

QUESTION 22: How would you describe your current consumption of alcoholic beverages?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Total abstainer	17.0%	16.5%	16.9%	18.4%	19.0%	23.1%	19.4%
Very light drinker	45.8%	40.9%	44.8%	42.3%	43.5%	36.5%	41.7%
Fairly light drinker	17.5%	19.7%	18.0%	20.9%	17.5%	19.3%	18.9%
Moderate drinker	18.0%	19.7%	18.4%	16.5%	18.8%	18.0%	17.9%
Fairly heavy drinker	1.5%	3.1%	1.7%	1.9%	1.3%	2.9%	2.0%
Very heavy drinker	0.2%	0.0%	0.2%	0.0%	0.0%	0.2%	0.1%
Total N	406	127	533	527	464	550	2074

QUESTION 23: During the past year have you ever driven a motor vehicle after drinking enough that you might be considered legally under the influence?

	Returned Before 4/9/80	Returned After 4/8/80	1980 Total	1981 Total	1982 Total	1983 Total	Total
Once	6.4%	3.9%	5.8%	6.3%	7.2%	8.3%	6.9%
Twice	6.9%	4.7%	6.4%	9.7%	3.9%	6.5%	6.7%
3-5 times	5.0%	4.7%	4.9%	4.0%	7.8%	6.1%	5.6%
6-10 times	3.7%	5.5%	4.1%	3.2%	3.3%	2.2%	3.2%
11-25 times	1.0%	2.4%	1.3%	2.1%	1.7%	2.0%	1.8%
26-250 times	2.2%	2.4%	2.3%	1.7%	2.4%	2.3%	2.2%
None	74.8%	76.4%	75.1%	73.0%	73.7%	72.7%	73.6%
Total N	404	127	531	526	460	556	2073