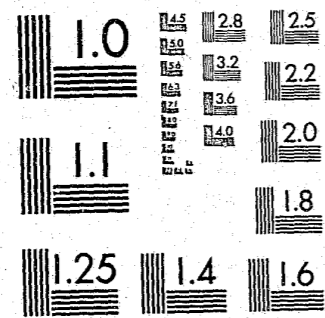


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OFFICE OF CRIMINAL JUSTICE  
DEPARTMENT OF MANAGEMENT AND BUDGET

96901

✓  
**SECONDARY ROAD PATROL**  
**ACT 416, PUBLIC ACTS OF 1978**  
**ANNUAL REPORT**  
**AND**  
**EVALUATION**

**STATE OF MICHIGAN**  
 DEPARTMENT OF MANAGEMENT & BUDGET  
 OFFICE OF CRIMINAL JUSTICE  
 2ND FLOOR, LEWIS CASS BLDG.  
 LANSING, MICHIGAN 48909

APRIL 1, 1984

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## SECONDARY ROAD PATROL EVALUATION

### INTRODUCTION

Public Act 416 of 1978, as amended, requires the Office of Criminal Justice to submit to the legislature two reports and they are:

1. An impact and cost effectiveness study due April 1 of each year.
2. An annual report containing the recommendations of the Office of Criminal Justice on methods of improving the coordination of local and state law enforcement agencies in the state, improvement of law enforcement training programs and improving the communications systems of law enforcement agencies, and a description of the role alcohol played in the incidences of fatal and personal injury traffic accidents in the state. This report is due May 1 of each year.

This year the requirements of the two reports are being combined into a single document. The information in this report was obtained from semi-annual activities reports and Initial Reports submitted by the sheriffs. A summary of Act 416 of the Public Acts of 1978, its amendments and the funding history follows:

#### A. Summary of Act No. 416, Public Acts of 1978

1. The sheriff's department is the primary agency responsible for providing certain services on the county primary and local roads that are outside the boundaries of cities and villages. The sheriff also provides these services on any portion of any other highway or road within the boundaries of a county park.
2. The following services are to be provided:
  - a. Patrolling and monitoring traffic violations.
  - b. Enforcing the criminal laws of the state which are observed by or brought to the attention of the sheriff's department while providing the services required by the act.
  - c. Investigating accidents involving motor vehicles.
  - d. Providing emergency assistance to persons on or near a highway or road patrolled as required by the act.
3. The sheriff can provide these services on secondary roads within a city or village, if the legislative body of the local unit of government passes a resolution requesting the services.
4. How the funds can be spent:
  - a. Employing additional personnel.
  - b. Purchasing additional equipment.

- c. Enforcing laws in state and county parks.
- d. Providing traffic safety information and education programs that are in addition to those provided before the effective date of the act, October 1, 1978.

5. How the funds are to be allocated under the act:

Counties are to receive the same proportion of the total of Act 416 funds they receive of the road maintenance funds under Section 12 of P.A. 51, less funds designated for snow removal and engineers.

6. The counties are required to maintain their local financial effort.

A county is required to maintain expenditures and the level of services it was providing prior to the enactment of this bill unless, due to economic conditions, the county is required to reduce general services. If reductions become necessary, the county is required to obtain a concurrent resolution adopted by a majority vote by the Senate and House of Representatives.

7. The counties are required to enter into the following contractual arrangement.

The Act specifies that counties must enter into a contract with the Department of Management and Budget to receive the funds.

B. Subsequent amendments to the bill have resulted in the following changes:

1. The program administration was changed.

OCJ was given the responsibility and authority to enter directly into contract with the sheriffs.

2. An additional activity was authorized.

Sheriffs could provide selective motor vehicle inspection programs.

3. The maintenance of local effort (MOE) clause was amended.

If a county found it necessary to reduce expenditures or the level of service they provided prior to October 1, 1978, they are required to report this to OCJ who will determine if the reduction meets the requirements of the act. (Authority to resolve MOE issues was originally with the legislature.)

4. Program evaluation was added.

OCJ will submit an annual impact and cost effectiveness study to the Senate and House Appropriations Committees by April 1 of each year.

C. Funds appropriated to the program over a five fiscal year period:

Table I  
Funds Appropriated And Expended

Fiscal Year	Appropriation	Available to Counties <sup>1</sup>	Amount Expended By Counties
1978-79	\$8,700,000	\$8,700,000	\$7,400,299 <sup>2</sup>
1979-80	\$8,700,000	\$8,613,000	\$7,865,792
1980-81	\$6,400,000	\$6,336,000	\$5,780,021
1981-82	\$6,500,000	\$6,435,000	\$6,236,537
1982-83	\$6,500,000	\$6,435,000	\$5,597,485 <sup>3</sup>
	\$36,800,000	\$36,519,000	\$32,880,134

- 1. After FY 78-79 1% was deducted for administrative costs of the program.
- 2. Five counties did not apply for funds.
- 3. Final expenditures were not available at the time of report preparation.

PART I

Sheriff's Views on Status of Law Enforcement;

- Coordination
- Training, and
- Communications

OCJ Recommendations for Improvement

I. SHERIFF'S REPORT

A. Coordination of Law Enforcement Agencies:

Law enforcement coordination methods range from formal written agreements that identify primary responsibility for specific functions and areas of service to informal verbal agreements. These informal agreements usually establish operational procedures for requesting back-up support between participating agencies. All counties have law enforcement plans developed in cooperation with the State Police. Several sheriff departments have mutual aid agreements with local city and township police agencies. Forty-three sheriffs indicate involvement in county and area law enforcement associations or councils and fifty-seven sheriffs report that they provide or participate in a centralized communications system, which is another form of coordination between law enforcement agencies and with other public safety and emergency service providers.

B. Law Enforcement Training:

Nearly all sheriff departments signified that they are engaged in some type of on-going training. However, budgetary constraints continue to hamper their efforts to upgrade and improve their training programs. Major areas of concern center around keeping officers abreast with new laws and judicial decisions (40); accident investigation training (47); improved criminal investigation techniques (32); firearms training (27), plus the need for radar and breathalyzer training. For the northern tier of counties in particular, there are few training sites. Throughout the state community colleges remain an important source of criminal justice training.

C. Communication Systems:

Most sheriffs report there are basic levels of communications available for emergency response. However, 54 departments indicate their systems need upgrading. Much of the radio equipment has been in service for its projected life and counties are being asked to replace it.

All sheriff departments have access to Law Enforcement Information Network (LEIN) terminals. There are 69 departments that have their own terminal and 14 that utilize either a Michigan State Police Post terminal or one belonging to a local police agency. A few sheriffs reported they do not maintain a 24 hour assignment because of the prohibitive terminal and personnel costs.

II. OFFICE OF CRIMINAL JUSTICE RECOMMENDATIONS

A. Recommendations for Improving Law Enforcement Coordination:

Under P.A. 416, county sheriffs must establish law enforcement plans with the State Police for unincorporated areas of the county. This requirement results in coordination on a formal basis for a significant proportion of a county's law enforcement services, particularly the more rural counties with few township or city police departments.

Forty-four counties are participating in coordinating councils and organizations in the criminal justice system. These councils contribute to a comprehensive and unified approach to enforcement problems and crime prevention efforts. It is recommended that the remaining sheriff departments establish local and regional associations to strengthen their individual endeavors.

B. Recommendations for Improving Law Enforcement Training:

Acts 301 and 302 in 1982 and their implementation during 1983 are a major step toward answering the training needs of Michigan law enforcement. With staff assistance from the Office of Criminal Justice, the Justice Training Commission has distributed \$1,992,036 in the sixty percent funds to law enforcement agencies and arranged for the disbursement of the forty percent funds in thirty grant awards. These grants were made to agencies that provide a wide cross section of criminal justice services. It is recommended that law enforcement administrators, in regional and area councils, identify common training needs and coordinate the delivery to their mutual benefit.

Public Acts 310 and 311 of 1982, providing for preliminary breathalyzer tests in the field have been implemented. To prevail against legal challenges, all officers performing the field tests must be skilled in the use of breathalyzers. The acts assign the Michigan Department of State Police the responsibility for providing training to instructors who will in turn provide breathalyzer training to field officers. Sheriff departments needing breathalyzer training for their deputies should contact the applicable State Police district headquarters to take advantage of the available service.

C. Recommendations for Improving Law Enforcement Communications:

The Police Communications and Data Access Plan is the guideline for police radio frequency assignments in Michigan. This plan provides an opportunity for consolidating police communications services. Technically, centralized police dispatching can be achieved in each mobile radio district defined in the plan. By consolidating communications services for the reception of requests from the public, and the dispatch of police and other emergency services from a common center, response time can be reduced. It is also generally more cost effective than individual dispatch centers. Consequently, central dispatch offers many advantages and should be initiated wherever possible.

Many sheriff departments have indicated deficiencies in their communications capabilities. These include the need to: replace equipment that has become too costly to maintain, improve mobile and portable capability for reliable countywide communications, and add control equipment to implement or expand centralized dispatching. Most of the radio equipment purchased during the implementation of the police communications plan has reached or exceeded its life expectancy. Many communities have not budgeted for equipment replacement, system updating, or improvement. Therefore, these police agencies will experience continual communication system degradation in the near future.

Only eight sheriffs reported being part of a 9-1-1 system in their county, but since this is a multi-cooperative effort by a number of communities and the various telephone companies, it is inevitable that these complexities will take some time to resolve. The Office of Criminal Justice has long supported the 9-1-1 concept in the interest of easy citizen access to emergency response and decreased duplication of effort.

Approximately one-third of Michigan's population can request emergency services by dialing 9-1-1. Because of inconsistent boundaries between telephone company exchanges and political jurisdictions no county has 9-1-1 access for all its citizens. The problems which limit universal development include high initial costs, sparsity of population in many areas, and the large number of telephone companies and political entities involved.

The Office of Criminal Justice supports legislation allowing local governments to implement 9-1-1 systems with installation and line costs charged to telephone subscribers in the service area. The Office of Criminal Justice continues to support: implementation of a statewide 9-1-1 system for emergency call reception, regional central dispatch systems involving all policing agencies, including the Michigan State Police, continual evaluation of Law Enforcement Information Network system to keep it responsive to needs, statewide implementation of the Michigan Emergency Public Safety System, and consideration of updating the Communications and Data Access Plan due to changing population trends.

## PART II

### Status of Secondary Road Patrol Program

- Activities Conducted
- Impact on Accidents
- Effects of Alcohol on Accidents
- Cost Effectiveness

## I. EVALUATION BACKGROUND INFORMATION

### A. Number of Counties Included In The Evaluation

Tables showing the number of deputies employed with P.A. 416 funds, the maintenance of effort chart showing the number of county funded deputies and the accident data includes all 83 counties. The activities data includes only 77 counties, or 93 percent of the counties.

Data for all the variables used to report activities were not available for all the counties. The decision was made to exclude the counties where all the activities information was not on file. The counties not included in the report are:

Berrien	Kalamazoo
Grand Traverse	Kent
Isabella	Sanilac

### B. Data Collection and Definitions

#### 1. Data Collection

The activity data were requested from all 83 counties, however, only 77 counties submitted data for the full 1982 calendar year. The data for 10 randomly selected counties were validated to be sure sheriffs understood what data were being requested and that the counts were accurate. Citations is the only area where there was a misunderstanding. This was because the requirements were not completely defined. Most sheriffs reported only moving violations and the previous evaluations also included citations for defective safety equipment.

#### Data Definitions

Following are definitions for the variables used in this report and sources if other than the sheriff's department:

- Citations** - All violations of either a state law or local ordinance, i.e., moving violations, improperly maintained safety equipment, improper drivers license or lack of registration and/or proof of insurance and alcohol related offenses. This includes tickets issued to drivers of automobiles, trucks or motorcycles.
- Arrests** - Criminal arrests, either felony or misdemeanor.
- Accident Investigation** - Response to reported accidents, initial investigation and evidence collection.
- Criminal Complaint Responses** - The response to any situation where a citizen reports that a crime (felony or misdemeanor) was committed or is in progress, the initial investigation and the discovery of crime.
- Law Enforcement Assistance** - Assisting a law enforcement officer of a

different department (state and local) or of the same department. This includes Department of Natural Resources officers, Liquor Control Commission personnel, etc.

- f. **Motorist Assistance** - Assisting citizens who need help. This is primarily where an automobile becomes inoperative and the citizen is stranded.
- g. **Crime** - Felony and misdemeanor crimes that have been reported to the Michigan State Police Uniform Crime Reporting System by state, county, and city as substantiated crimes.
- h. **Accidents** - Motor vehicle accidents that have been reported to the Michigan State Police by state, county, and local law enforcement.
- i. **Alcohol Related Accidents** - One or more of the drivers involved in the accident had been drinking. Information obtained from the accident data reported to the Michigan State Police.
- j. **Vehicle Registration** - The number of registered vehicles reported by the Michigan Secretary of State. This includes automobiles, trucks and motorcycles.
- k. **Traffic Accidents** - Accidents that occurred in townships and jurisdictions of less than 1,000 population that were investigated by Michigan State Police, Sheriff's Department, or Township Police.

#### C. Evaluation Goals

1. To ascertain whether the counties are continuing to maintain the support of their county supported road patrol at a level comparable to or greater than the base-line period, October 1, 1978.
2. To determine if the Secondary Road Patrol Program has maintained its high level of productivity.
3. To find out whether the secondary roads had the same accident trend as the other roads of the state during 1982 or was higher or lower than the others.

## II. SECONDARY ROAD PATROL PERSONNEL AND ACTIVITIES ANALYSES

### A. Services Provided

When the program began, a number of counties used some of the funds for vehicle inspection and traffic safety education programs. The number of these programs has declined considerably and the main focus has become traffic law enforcement. The vehicle inspection program has been replaced by stopping cars where it is obvious that certain safety equipment is in need of repair and issuing a repair and report citation. In most counties, the citation is voided when the owner returns with the vehicle and can prove the defective equipment has been repaired or replaced.

### B. Personnel

The largest expenditure of PA 416 funds was for personnel and automobile expenses, as would be expected. The percentage of total secondary road patrol expenditures in FY 80/81 for personnel was 88 percent and for automobile operation 8 percent. The automobile expenditure represents purchasing gasoline, repairs and replacement vehicles.

Table 2 shows the number of deputies employed by the program each fiscal year from FY 78/79 through FY 82/83. These deputies represent new hires. Strong measures have been taken by OCJ to assure that secondary road patrol funds are used to supplement, not supplant (or replace) county funding. Counties participating in the Secondary Road Patrol Program are forbidden by law to reduce the level of their county supported road patrol effort unless they can prove economic hardship and are forced to reduce general services. Act No. 94 Public Acts of 1981, Sec. 77, Paragraph (1)"...An agreement entered into under this section shall be void if the county reduces its expenditures or level of road patrol below that which the county was expending or providing immediately before October 1, 1978, unless the county is required to reduce general services because of economic conditions and is not merely reducing law enforcement services." This provision is referred to as "maintenance of effort."

Counties are required to report the number of deputies they have at the beginning of each funding year and the previous year's expenditures. These figures are compared with those reported for October 1, 1978. If the county has fewer county supported deputies, they must either replace the personnel, prove economic hardship, or be denied funds.

Since October 1, 1978, ten counties have reduced their county road patrol and have pled economic hardship. Nine of these counties have been approved for funding and one is pending. The first county to use this provision was Genesee County. The entire county supported road patrol, 21 deputies, was eliminated. Under Act No. 416 Public Acts of 1978, Sec. 77, prior to amendment, counties that reduced their county supported effort had to receive a concurrent resolution adopted by a majority vote of the Senate and House of Representatives. Genesee County documented its case and received a concurrent resolution.

Wayne County also eliminated its road patrol and was able to substantiate a 44 percent reduction in general funds. The other seven counties that were approved had reduced the road patrol manpower below the 1978 level, but did not eliminate their road patrols.

Table 3 shows the number of road patrol deputies in three population categories, all counties with less than 300,000 population, have increased since 1978. The only category where a reduction has occurred is counties of over 300,000 population and this is due to the cuts in Genesee and Wayne Counties.

The data show that counties have not used the PA 416 money to replace their funds. The secondary road patrol program is an additional statewide policing initiative that probably would not be possible without PA 416 funds.



TABLE 2  
SECONDARY ROAD PATROL DEPUTIES

Number of Deputies Employed with Secondary Road Patrol Funds

N = 83 Counties

Fiscal Year	Program Year	Number of Deputies
78/79	1st	287
79/80	2nd	291.3
80/81	3rd	215.4
81/82	4th	208.6
82/83	5th	200.7

TABLE 3  
MAINTENANCE OF EFFORT

County Supported Road Patrol Strength

N = 83 Counties

Population Category	Number of County Supported Deputies*	
	FY 78-79	October, 1982
0 - 30,000	177.5	230.5
30 - 100,000	303.5	361.5
100 - 300,000	354.0	429.0
300,000 - Over	288**	232
Total State	1,123**	1,253

\* Includes only county funded certified road patrol deputies  
 \*\*Reductions were authorized for Genesee County (21 deputies) and Wayne County (37 deputies).

C. Activities

Sheriffs primarily use the Secondary Road Patrol to patrol county local and primary roads, monitor for traffic law violations, and investigate accidents. However, a deputy observing a criminal law violation while patrolling, will make an arrest; a deputy may take a criminal complaint if the sheriff's department brings to his attention a crime in the patrol area. Also, deputies help motorists, assist other law enforcement officers and patrol in county and state parks. A few of the larger sheriffs' departments have written directives that prohibit secondary road patrol deputies to respond to crime scenes or assist other law enforcement officers unless they are in the immediate area.

The following data were reported by the sheriff's relative to the various major activities of the road patrol deputies:

1. Citations

It is evident that citation writing is the highest priority of the Secondary Road Patrol. The limitations placed on the utilization of Secondary Road Patrol deputies makes it possible for them to spend a large portion of their time monitoring speed and the condition of safety equipment on automobiles.

Compared with the County Supported Road Patrol, the Secondary Road Patrol officers wrote 294 percent more citations per officer. However, the data show the Secondary Road Patrol officers spent more time patrolling. The Secondary Road Patrol Officers averaged 25,711 miles on patrol in 1981, while the County Supported Road Patrol had only 19,118 miles per officer. The Secondary Road Patrol officers drove 34 percent more miles than the County Supported Road Patrol. Table 4 shows the citations per officer for both Secondary Road Patrol and County Supported Road Patrol for each population category and Table 5 shows the mileage. Figure 1 gives a comparison of the citations per officer and Figure 2 compares the percentage of total deputies the Secondary Road Patrol represents and the contrasting percentage of total citations.

TABLE 4

AVERAGE CITATIONS PER OFFICER 1982

County Supported Deputies and Secondary Road Patrol

N = 77 Counties

Population Category	Number of Counties	County Supported Deputies Citations Per Officer	Secondary Road Patrol Deputies Per Officer
0 - 30,000	38	62	109
30,000 - 100,000	24	101	351
100,000 - 300,000	11	103	516
300,000 - Over	4	115	624
Total	77	94	370

TABLE 5

AVERAGE MILES DRIVEN ON PATROL PER OFFICER 1982

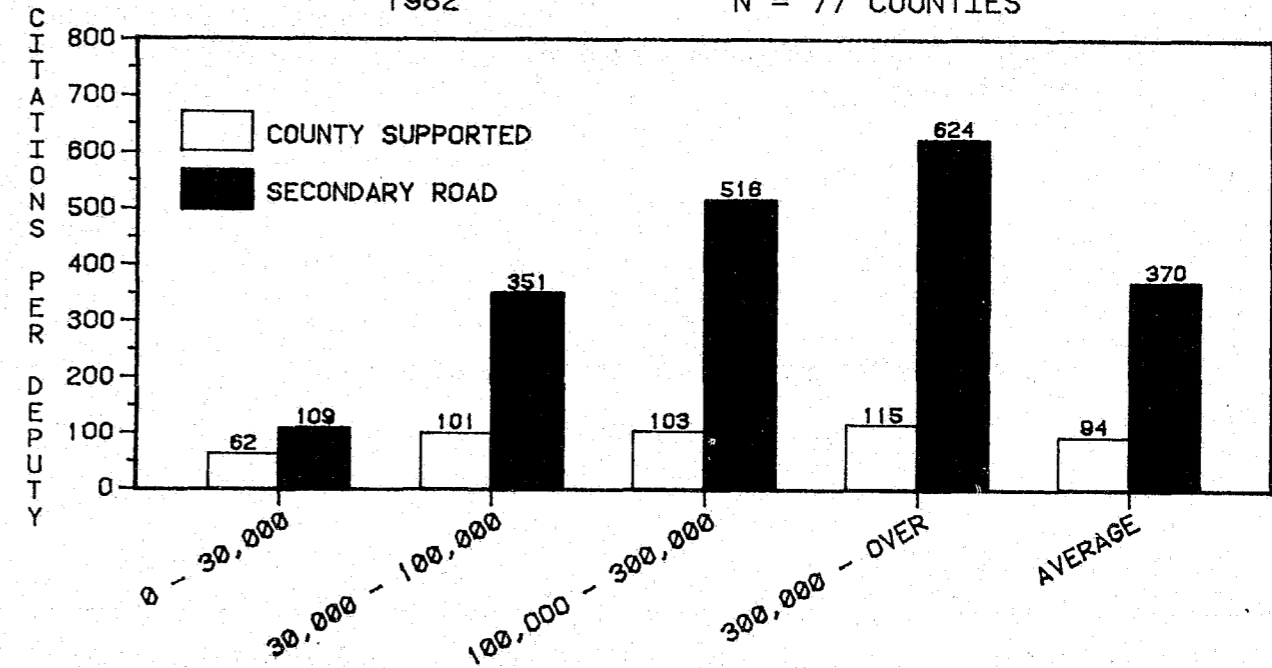
County Supported Deputies and Secondary Road Patrol

N = 77 Counties

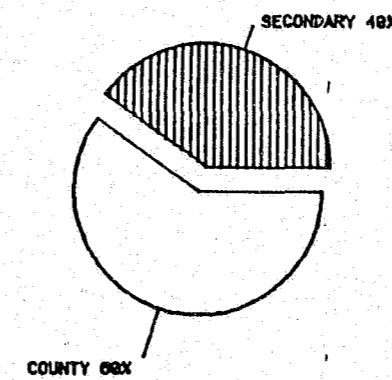
Population Category	Number of Counties (Number)	County Supported Deputies (Average)	Secondary Road Patrol Deputies (Average)
0 - 30,000	38	19,697	27,526
30,000 - 100,000	24	22,557	24,906
100,000 - 300,000	11	14,712	26,722
300,000 - Over	4	22,178	23,168
Total	77	19,118	25,711

FIGURE 1

AVERAGE CITATIONS PER DEPUTY  
COUNTY SUPPORTED AND SECONDARY ROAD PATROLS COMPARED  
1982  
N = 77 COUNTIES

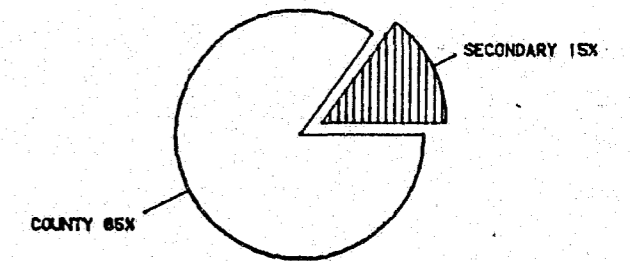


PERCENTAGE OF TOTAL CITATIONS  
N=77 COUNTIES



1982 ACTIVITIES

PERCENTAGE OF TOTAL DEPUTIES  
N=77 COUNTIES



1982

2. Accidents Investigated

Secondary Road Patrol deputies investigate accidents that occur on county local and primary roads (secondary roads) but not all of them. The County Supported deputies investigate the largest percentage of accidents investigated by the sheriff's department. The data show all population categories except 300,000 and over increased the percentage of accidents investigated and the total average per officer increased 12 percent.

TABLE 6

ACCIDENTS INVESTIGATED BY SECONDARY ROAD PATROL

Comparison of 1981 and 1982  
(Average Per Deputy)

1981 N = 17 Counties		1982 N = 77 Counties			
Year	0-30,000	30,000-100,000	100,000-300,000	300,000-Over	Total
Average Per Deputy					
1981	48	72	86	62	69
1982	55	87	121	51	77
% Change	15%	21%	41%	-18%	12%
Actual Data					
1982 Accidents Investigated	3,091	4,521	4,717	1,999	14,328
Number of Deputies	56	52	39	39	186

3. Motorist Assistance

Secondary Road Patrol deputies offer their assistance when they come upon motorists who are stalled, off the road, or in need of some other kind of aid. An average of 43 persons per deputy were helped in 1981. Table 7 gives the number of motorists assisted per officer for the population categories.

TABLE 7

MOTORISTS ASSISTED BY SECONDARY ROAD PATROL

Comparison of 1981 and 1982  
(Average per Deputy)

1981 N = 17 Counties		1982 N = 77 Counties			
Year	0-30,000	30,000-100,000	100,000-300,000	300,000-Over	Total
Average Per Deputy					
1981	38	92	42	15	41
1982	28	59	43	42	43
% Change	-26%	-36%	2%	180%	5%
Actual Data					
1982 Motorists Assists	1,579	3,063	1,676	1,644	7,962
Number of Deputies	56	52	39	39	186

4. Law Enforcement Assists

Secondary Road Patrol deputies may be called upon to assist other officers from their own department, a local township or village, the State Police, Natural Resources Department, Liquor Control Commission, etc. In 1982, the average number of assists per deputy was 54. See Table 8 below for a breakdown by population.

TABLE 8  
LAW ENFORCEMENT ASSISTS BY SECONDARY ROAD PATROL  
Comparison off 1981 and 1982  
(Average Per Deputy)

Year	1981 N = 17 Counties				1982 N = 77 Counties					
	0-30,000	30,000-100,000	100,000-300,000	300,000-Over	Total	0-30,000	30,000-100,000	100,000-300,000	300,000-Over	Total
Average Per Deputy										
1981	19	44	119	24	53					
1982	37	72	53	56	54					
% Change	95%	64%	-55%	133%	2%					
Actual Data										
1982										
Number Assists	2,053	3,761	2,067	2,203	10,084					
Number of Deputies	56	52	39	39	186					

5. Operating A Vehicle Under The Influence Arrests

Secondary Road Patrol deputies made 2,082 arrests for operating a vehicle under the influence in 1982, or an average of 11 per officer. The 77 sheriffs included in this evaluation reported to the Uniform Crime Reporting system that all deputies of their departments made a total of 7,097 arrests. This means that the Secondary Road Patrol deputies made 29 percent of the arrests. Table 9 gives a breakdown of the arrests per officer for each population category.

TABLE 9  
DRUNK DRIVING ARRESTS PER OFFICER FOR 1982  
Secondary Road Patrol

Year	1982 N = 77 Counties				
	0-300,000	30,000-100,000	100,000-300,000	300,000-Over	Total
Average Per Deputy					
1981	8	12	25	13	15
1982	8	14	8	14	11
Percent Change	--	17%	-68%	8%	-27%
Actual Data					
1982					
Number of Arrests	469	742	312	559	2,082
Number of Officers	56	52	39	39	186

6. Crime Related Activities

Act 416 states that one of the functions of the Secondary Road Patrol is enforcing the criminal laws of the state, violations of which are observed by or brought to the attention of the sheriff's department while patrolling and monitoring. Sheriffs in larger counties consider crime response as a low priority for the Secondary Road Patrol because in the majority of cases it results in only filing a report. The Secondary Road Patrol does respond if a crime is in progress in its patrol area. However, in smaller population counties the Secondary Road Patrol does respond because there is only one deputy (either a County Supported or a Secondary Road Patrol deputy) in any section of the county. If the Secondary Road Patrol deputy did not respond, it would result in many extra miles of travel for the County Supported Patrol deputies and would result in a section of the county not being covered.

The crime related activities include taking criminal complaints and making criminal arrests.

a. Crime Complaint Reports

Table 10 shows the average number of crime reports taken per deputy by Secondary Road Patrol deputies in 1982 and compares this with 1981. The average number of complaints taken per deputy by the Secondary Road Patrol decreased from 108 in 1981 to 86 in 1982, -20 percent.

TABLE 10

CRIME COMPLAINT REPORTS HANDLED BY SECONDARY ROAD PATROL DEPUTIES

Comparison of 1981 and 1982 Average Complaints Per Deputy

Year and Patrol Unit	1981 N = 17 Counties				1982 N = 77 Counties	
	0-30,000	30,000-100,000	100,000-300,000	300,000-Over	Total Sample	
Average Per Deputy						
Secondary Road Patrol						
1981	125	215	126	39	108	
1982	86	89	156	10	86	
Percent Change	-31%	-59%	-24%	-74%	-20%	
Actual Data 1982						
Number of Crime Complants	4,790	4,652	6,095	381	15,918	
Number of Officers	56	52	39	39	186	

b. Criminal Arrests

The Secondary Road Patrol increased the average number of arrests per deputy by 50 percent in 1982.

TABLE II  
SECONDARY ROAD PATROL  
Comparison 1981 and 1982  
(Average Arrests Per Deputy)

Year	1981 N = 17 Counties				Total Sample
	0-30,000	30,000-100,000	100,000-300,000	300,000-Over	
Average per Deputy					
1981	23	35	62	23	36
1982	18	22	192	10	54
Percent Change	-22%	-37%	210%	-57%	50%
1981	Actual Data				
Number Arrests	1,033	1,166	7,499	407	10,105
Number Deputies	56	52	39	39	186

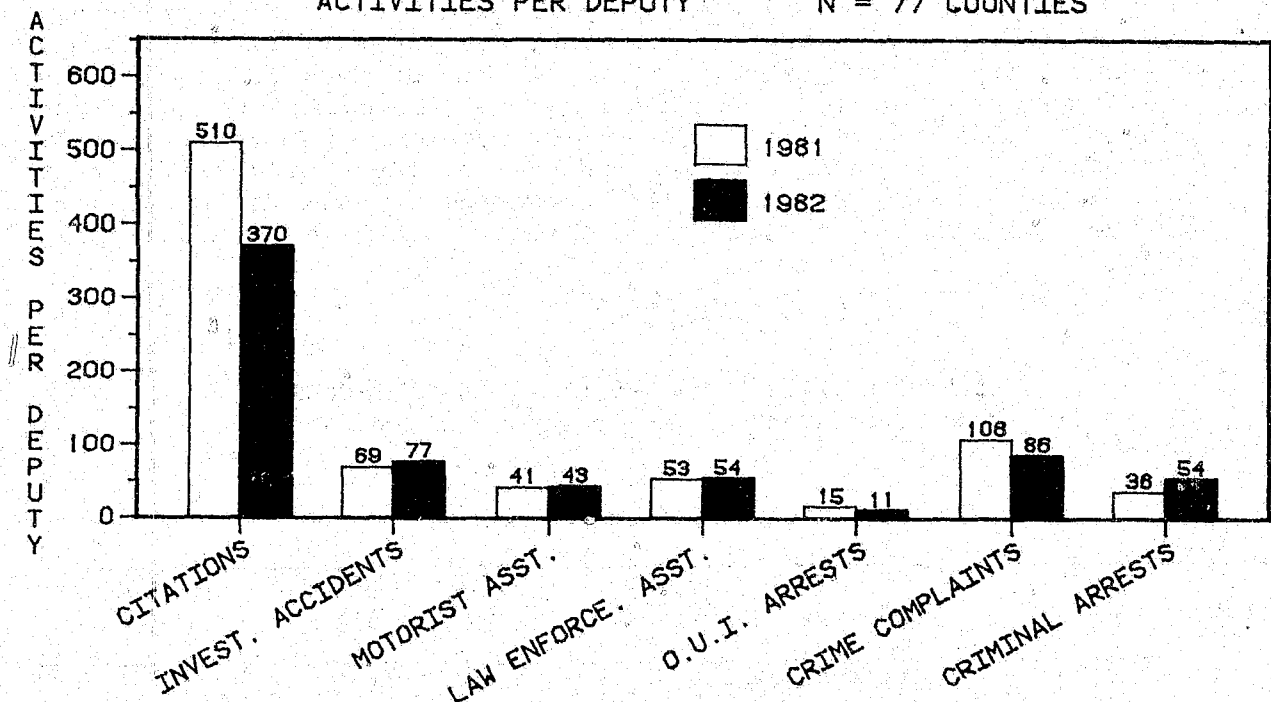
D. Secondary Road Patrol Activities Summary

The activity with the highest volume for Secondary Road Patrol deputies is the issuance of traffic citations. They issued 68,775 citations in 1982, 370 per deputy. Compared with the County Supported Road Patrol average number of citations per officer, 94, the Secondary Road Patrol deputies wrote over 294 percent more citations. The concentration on citation writing is consistent with the objective of Act 416 to patrol secondary roads (county local and primary roads) to reduce accidents.

Activities that increased in average number per deputy over 1981, were motorist assists, 5 percent increase; law enforcement assists, 2 percent; accident investigations 12 percent, and criminal arrests, 50 percent. Figure 3 shows a comparison of activities between 1981 and 1982.

FIGURE 3

SECONDARY ROAD PATROL ACTIVITIES  
COMPARISON OF 1981 AND 1982  
ACTIVITIES PER DEPUTY N = 77 COUNTIES



Regarding activities where Secondary Road Patrol could be compared with the County Supported Road Patrol, the Secondary Road Patrol deputies had a higher average volume than the County Supported deputies. As pointed out in the last evaluation, this can be accounted for partly by the fact that County Supported Road Patrol Deputies have additional duties. They must transport jail prisoners, provide backup support for jail personnel, and serve warrants and subpoenas.

During the evaluation, several sheriffs in counties which are in the 0-30,000 population category said their officers were patrolling as they have in the past but are not seeing as many violations. One sheriff said he has monitored the traffic speeds on the secondary roads and found the average speed is down. He attributes this to the presence of his officers and the number of tickets they (County Supported and Secondary Road Patrol) have issued over the past three years. It is evident the officers were patrolling because the mileage data show a high number of patrol miles per officer (see Table 5).

It appears that drivers prone to violate the traffic laws, and who realize more citations are given know the roads are being patrolled and respond properly. The citation data show the smaller counties have a higher ratio of licensed vehicles being ticketed; as the population size increases the ratio decreases. It is possible smaller counties with a high citation rate may have reached the peak number of citations per officer.

The number of citations per registered vehicle for the year 1982 was analyzed. The citation figure used for this analysis is the combined number of citations for County Supported and Secondary Road Patrol. A comparison was made across population categories of the rate per 100 registered vehicles. This calculation makes the assumption that during the year each registered vehicle had equal exposure to a sheriff's deputy; each vehicle received only one ticket during the year; and only county residents traveled these roads. Of course, none of these assumptions are true. However, the rate does give a feel for the potential impact the volume of tickets have had on the given population. In reviewing the citations we found that a high percentage of those ticketed in most counties were residents. It must be remembered that the PA 416 deputies have been writing a large number of tickets each year for a four-year period.

TABLE 12

NUMBER OF CITATIONS PER 100 REGISTERED VEHICLES  
(Includes Secondary Road And County Supported Patrols)

1982  
N = 77 Counties

Item	Citations Per 100 Registered Vehicles				Average
	0-30,000	30,000-100,000	100,000-300,000	300,000 Over	
Rate Per 100 Vehicles					
1981	6.2	5.2	5.2	2.2	3.2
1982	4.7	5.2	4.6	1.4	3.0
Actual Data					
Registered Vehicles	461,672	934,037	1,291,174	2,972,796	5,659,679
Total Citations	21,865	49,008	59,043	41,770	171,686

III. SECONDARY ROAD ACCIDENTS

A. General Accident Trends

The analyses of secondary road accidents will cover a five-year period. Table 14 gives the number of accidents and percent change 1981-82 and 1978-82. Figure 4 shows the total accidents for the state, secondary roads and trunklines and a seven-year trend for each. This portion of the evaluation and the balance of the analyses include all 83 Michigan Counties.

TABLE 14

TOTAL ACCIDENTS 1978-1982

Total State - Secondary Roads - Rural Trunklines

N-83 Counties

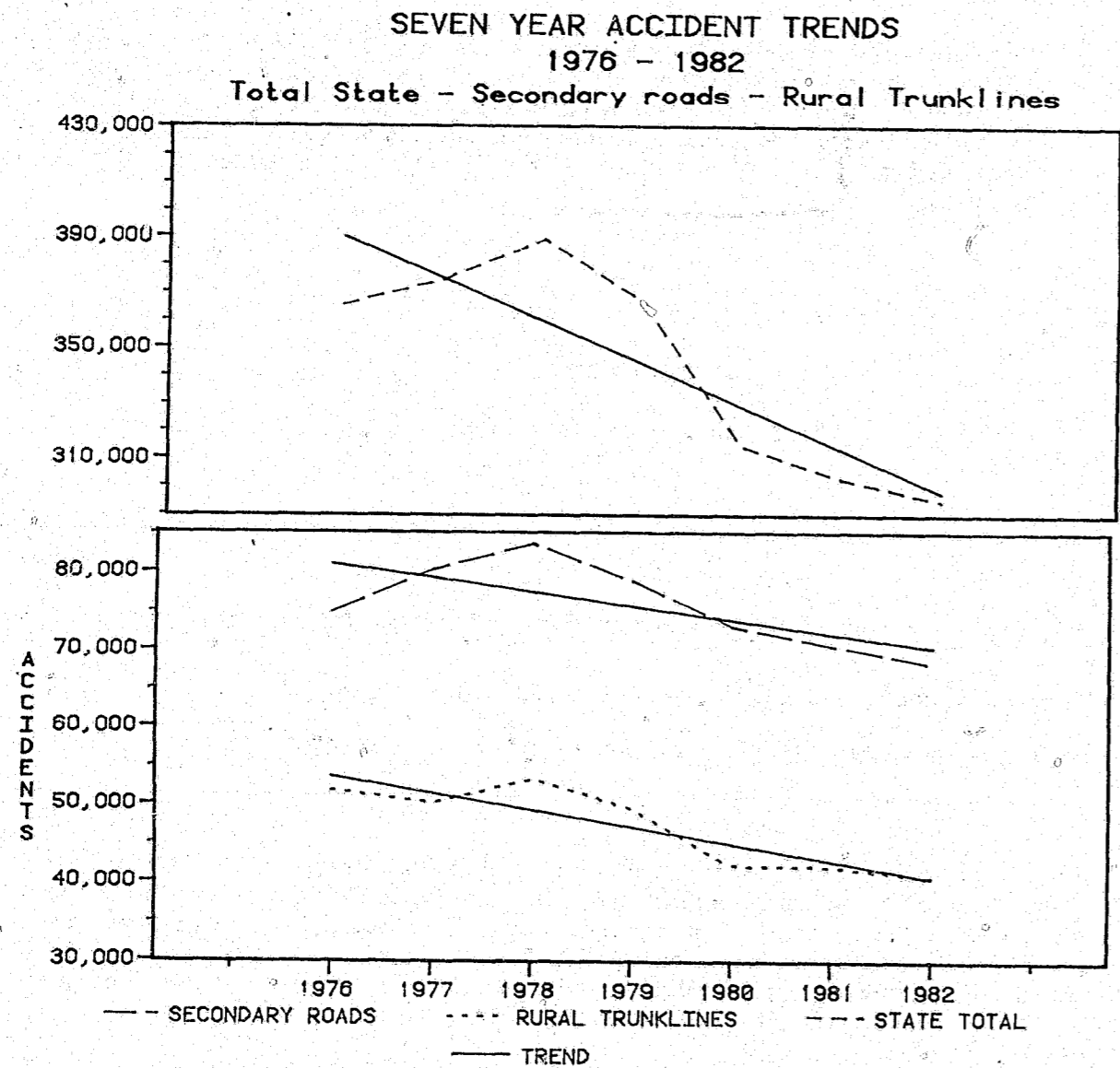
Road Type	1978	1979	1980	1981	1982	% Change	
						81/82	78/82
Total State	389,193	366,435	314,594	302,831	294,971	-2.5%	-24.2%
Secondary Roads	83,663	78,847	73,053	70,549	68,215	-3.3%	-18.5%
Rural Trunklines	53,200	49,443	42,166	42,022	40,672	-3.2%	-23.5%

Table 14 shows 1982 secondary road accidents decreased by 3.3 percent from 1981, which was .8 percent greater than the reduction in total state accidents, 2.5 percent. The rural trunkline accidents were down about the same amount as secondary roads, 3.2 percent. This year accidents can not be adjusted by vehicle miles driven because mileage estimates are not available from the Department of Transportation for all the road types.

The accident trend from 1978 to 1982 shows secondary roads had the lowest percentage of decrease, 18.5 percent, compared to a decrease of 16 percent for all roads statewide and 23.5 percent for rural trunklines.

Figure 4 shows the seven-year accident trend, 1976 to 1982, for total state, rural trunklines and secondary roads. The seven-year trend was calculated by the "least squares" method, a reliable method for determining a trend. It will be noted that 1982 accidents on the secondary roads were 2.9 percent below the seven-year trend, while rural trunkline 1982 accidents were .2 percent above the line and total state 1982 accidents were only 1 percent below.

FIGURE 4



B. Fatal, Personal Injury and Property Damage Accidents

1. Five-year Trend

Table 16 displays the five-year data for fatal, personal injury and property damage accidents for total state, rural trunklines and secondary roads.

Comparing 1982 with 1981, secondary roads had a larger percentage reduction in fatal and personal injury accidents than did total state or rural trunklines. However, secondary roads and total state had smaller reduction in property accidents than did rural trunklines. Secondary roads had the smallest decrease in all accident types from 1978 to 1982.

TABLE 16

FATAL - PERSONAL INJURY - PROPERTY DAMAGE ACCIDENTS  
Total State - Rural Trunklines - Secondary Roads  
1977-1981

Road and Accident Type	1978	1979	1980	1981	1982	% Change	
						81-82	78-82
<b>Total State</b>							
Fatal	1,833	1,662	1,582	1,453	1,281	-12	-30
Personal Injury	112,259	108,569	96,763	91,388	87,384	-4	-22
Property Damage	275,101	256,204	216,249	209,990	206,306	-2	-25
<b>Secondary Roads</b>							
Fatal	645	594	560	533	460	-14	-29
Personal Injury	25,805	25,005	23,518	21,911	20,802	-5	-19
Property Damage	57,213	53,248	48,975	48,105	46,953	-2	-18
<b>Rural Trunklines</b>							
Fatal	509	461	427	373	348	-7	-29
Personal Injury	16,032	15,075	12,726	12,329	11,904	-3	-19
Property Damage	36,659	33,907	29,013	29,320	28,420	-3	-18

2. Accident Types Percent of Total Accidents

Table 17 gives the percentage of total state accidents that rural trunklines and secondary roads represent. Table 18 shows what percentage fatal, personal injury and property damage accidents are of total accidents for the designated road type.



Secondary roads decreased their proportion of the total state's accidents in all categories from 1981 to 1982. The data show secondary roads' proportion of total accidents increased as did all other categories from 1978 to 1982. However, the percentage of increase over 1978 is smaller in 1982 than in 1981. The rural trunklines increased their proportion of fatal and personal injury accidents but decreased in the proportion of total accidents and property damage from 1978 to 1982.

Review of Table 18 shows the proportion of fatal accidents from 1978 to 1982 on secondary roads decreased 12.5 percent. There was a small decrease, 1 percent, in personal injury accidents and a increase, 6 percent, in property damage accidents. Total state fatal accidents decreased 20 percent from 1978 to 1982, but personal injury accidents increased 2.8 percent and property damage accidents decreased by 1 percent. However, rural trunklines showed a 10 percent decrease in the proportion of fatals, a 2.7 percent decrease in the proportion of personal injury accidents, and a 1.5 percent increase in the proportion of property damage accidents, which was almost the same as the period 1978-1982.

TABLE 17

FATAL - PERSONAL INJURY - PROPERTY DAMAGE ACCIDENTS

Rural Trunklines and Secondary Roads  
As Proportion of Total State Accidents  
1978-1982

Road and Accident Type						% Change	
	1978	1979	1980	1981	1982	81-82	78-82
<b>Secondary Roads</b>							
Total Accidents	21.5	21.5	23.2	23.3	23.1	-0.9	+7.4
Fatals	35.2	35.7	35.4	36.7	35.9	-2.2	+2.0
Personal Injury	23.0	23.0	24.3	24.0	23.8	-0.8	+3.5
Property damage	20.8	20.8	22.6	22.9	22.8	-0.4	+9.6
<b>Rural Trunklines</b>							
Total Accidents	13.7	13.5	13.4	13.9	13.8	-0.7	+0.7
Fatals	27.8	27.7	27.0	25.7	27.2	+5.8	-2.2
Personal Injury	14.3	13.9	13.2	13.5	13.6	+0.7	-4.9
Property Damage	13.3	13.2	13.4	14.0	13.8	-1.4	+3.8

TABLE 18

FATAL - PERSONAL INJURY - PROPERTY DAMAGE ACCIDENTS

Percent of Road Type Total Accidents  
Total State - Rural Trunklines - Secondary Roads  
1978-1982

Road and Accident Type						% Change	
	1978	1979	1980	1981	1982	81-82	78-82
<b>Total State</b>							
Fatal	.5	.5	.5	.5	.4	-20.0	-20.0
Personal Injury	28.8	29.6	30.8	30.2	29.6	- 2.0	+ 2.8
Property Damage	70.7	69.9	68.7	69.3	69.9	- 0.9	- 1.1
<b>Secondary Roads</b>							
Fatal	.8	.8	.8	.8	.7	-12.5	-12.5
Personal Injury	30.8	31.7	32.2	31.1	30.5	- 1.9	- 1.0
Property Damage	68.4	67.5	67.0	68.2	68.8	+ 0.9	+ 6.0
<b>Rural Trucklines</b>							
Fatal	1.0	.9	1.0	.9	.9	--	-10.0
Personal Injury	30.1	30.5	30.2	29.3	29.3	--	- 2.7
Property Damage	68.9	68.6	68.9	69.8	69.9	+ 0.1	+ 1.5

Totals of the percentages for a year within an accident type may not total 100% due to rounding.

### 3. Alcohol Related Accidents

Alcohol related accidents on the secondary roads decreased 12.5 percent, 1981 to 1982. Alcohol related fatalities were down 15.5 percent, the largest reduction of the three road types. Personal injury was down 12.4 percent and property damage down 12.4 percent. The rural trunkline alcohol related accidents were down 13.8 percent, fatalities were down only 2.9 percent, the smallest decrease of the three road types.

TABLE 19

#### ALCOHOL RELATED ACCIDENTS 1978-1982

Total State - Secondary Roads - Rural Trunklines

Road and Accident Type	1978	1979	1980	1981	1982	% Change	
						81-82	78-82
Total State	58,636	58,127	54,148	49,042	42,554	-13.2	-27.4
Fatal	933	901	900	814	712	-12.5	-23.7
Personal Injury	25,294	25,872	24,331	22,109	19,212	-13.1	-24.0
Property Damage	32,409	31,354	28,917	26,119	22,630	-22.8	-30.2
Secondary Roads	16,076	15,734	16,031	14,394	12,600	-12.5	-21.6
Fatal	346	347	328	323	273	-15.5	-21.1
Personal Injury	7,280	7,402	7,539	6,650	5,828	-12.4	-19.9
Property Damage	8,450	7,985	8,164	7,421	6,499	-12.4	-23.1
Rural Trunklines	8,972	8,604	7,554	7,120	6,141	-13.8	-31.6
Fatal	259	260	246	207	201	- 2.9	-22.4
Personal Injury	4,039	3,987	3,509	3,333	2,874	-13.8	-28.8
Property Damage	4,674	4,357	3,799	3,580	3,066	-14.4	-34.4

Figure 5 compares the proportion of total accidents that were alcohol related for each of the road types. Secondary roads consistently had the highest rates of alcohol related accidents. Figure 6 shows the proportion of total fatal, personal injury and property damage accidents that were alcohol related for 1978, 1981 and 1982. Again, in each accident category, secondary roads had a slightly higher proportion than the other roads. The data clearly show that the probability of being killed or injured is higher for the drinking driver who has an accident than for the non-drinker, particularly on the secondary roads. Statewide 14 percent of the total accidents were alcohol related in 1982. Alcohol related accidents account for 56 percent of the fatalities, 22 percent of the personal injury accidents, and 11 percent of the property damage accidents. The secondary roads were even worse. Alcohol related accidents were 18 percent of the total accidents, 59 percent of the fatalities and 28 percent of the personal injury accidents.

FIGURE 5

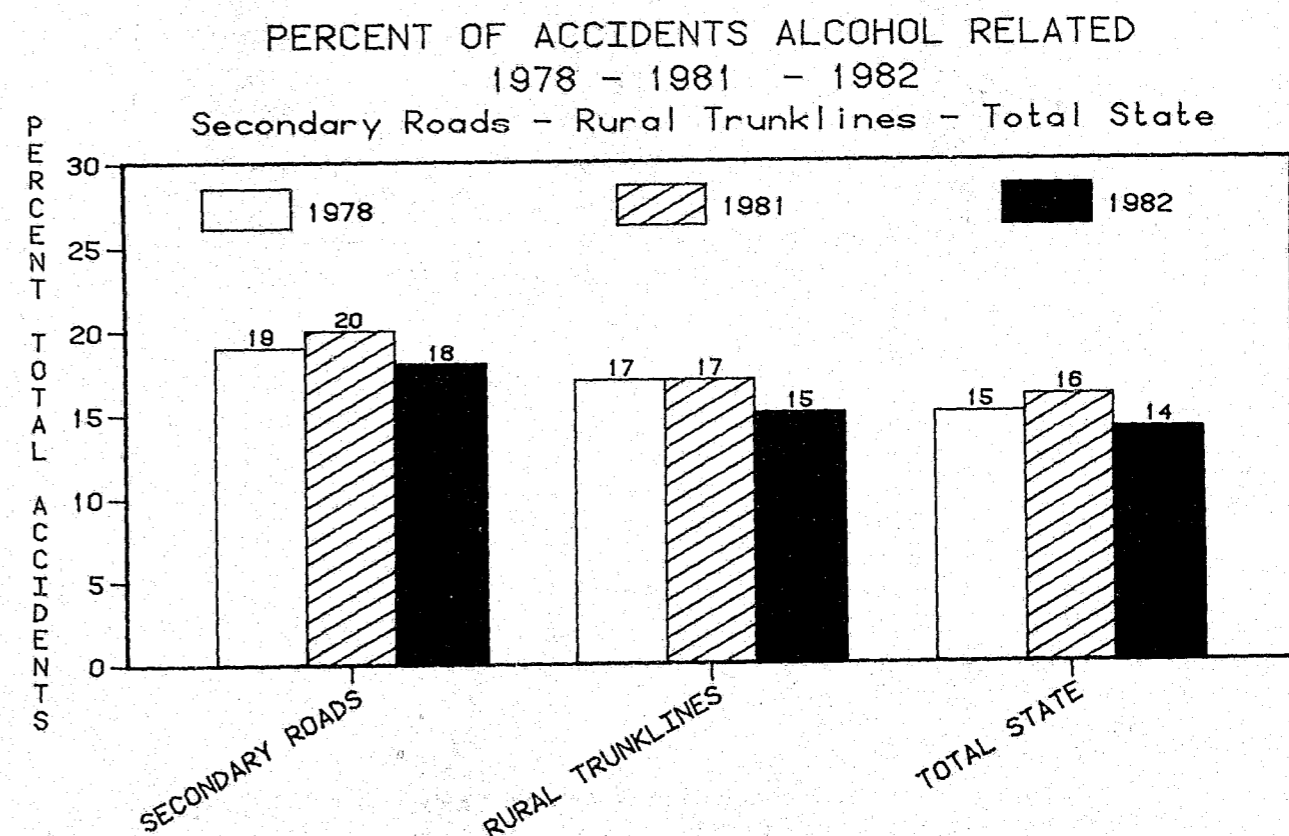
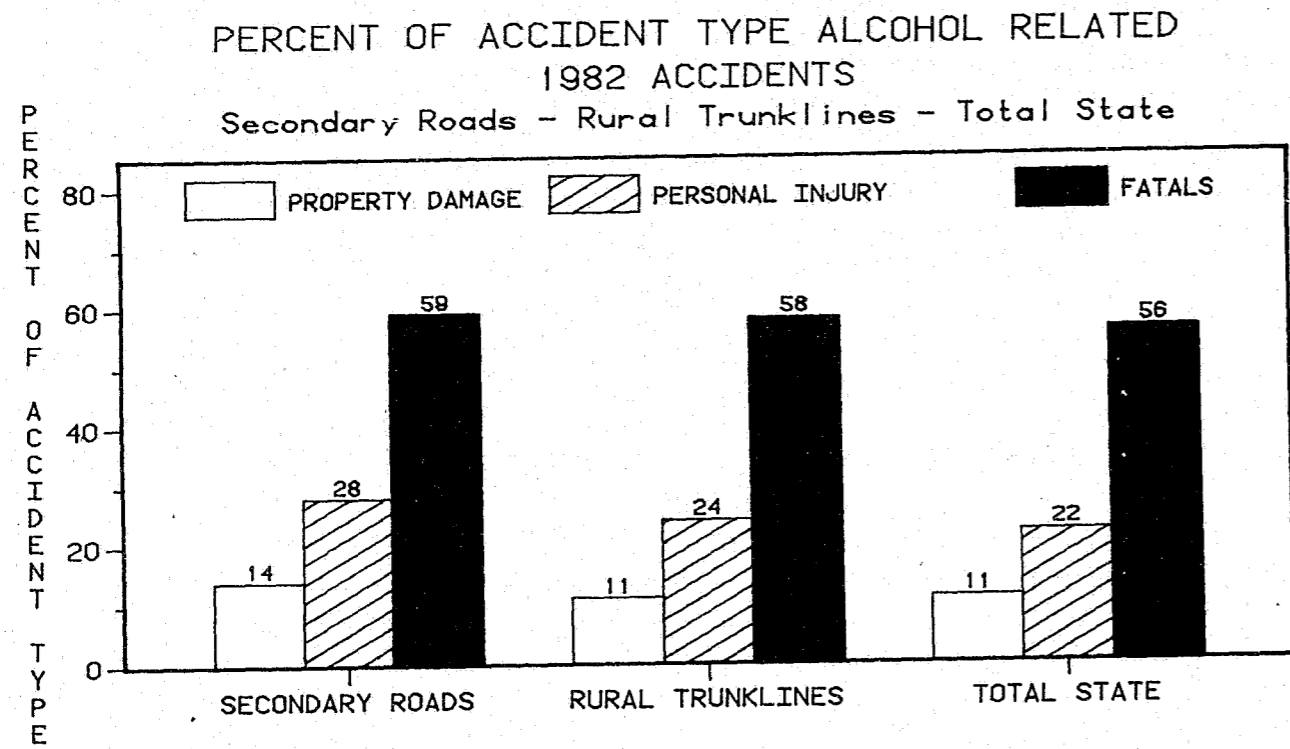


FIGURE 6



4. Summary

In volume, total traffic accidents on the secondary roads were down 3.3 percent in 1982 from 1981, which was greater than the state average decrease of 2.5 percent. The secondary road decrease was slightly larger than the rural trunkline decrease of only 3.2 percent.

FIGURE 6A

1982 FATAL ACCIDENTS  
ALCOHOL RELATED VS NON-ALCOHOL RELATED  
PERCENT OF TOTAL ACCIDENTS FOR ALCOHOL TYPE ACCIDENTS

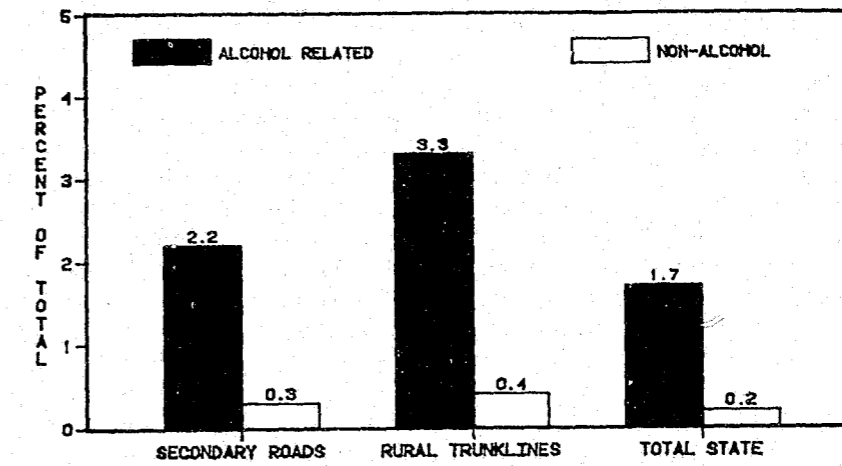


FIGURE 6B

1982 PERSONAL INJURY ACCIDENTS  
ALCOHOL RELATED VS NON-ALCOHOL RELATED  
PERCENT OF TOTAL ACCIDENTS FOR ALCOHOL TYPE ACCIDENTS

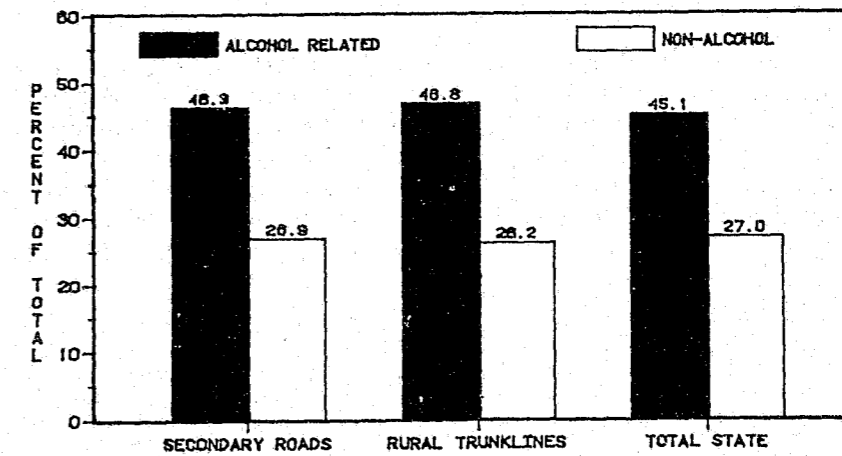
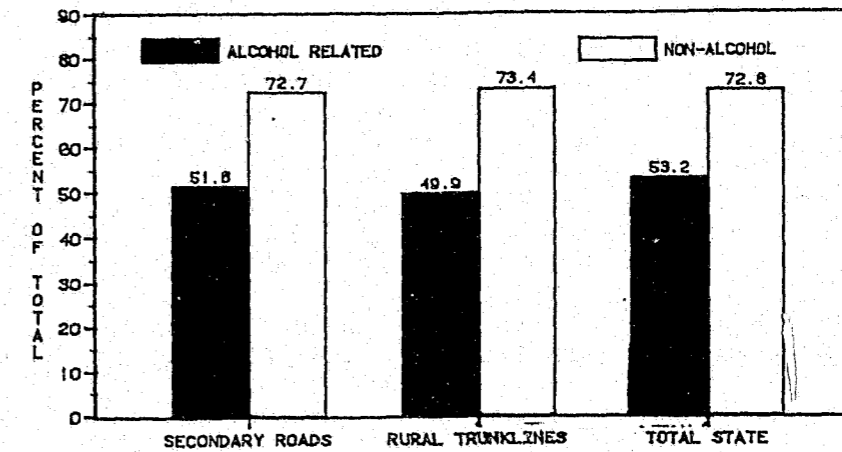


FIGURE 6C

1982 PROPERTY DAMAGE ACCIDENTS  
ALCOHOL RELATED VS NON-ALCOHOL RELATED  
PERCENT OF TOTAL ACCIDENTS FOR ALCOHOL TYPE ACCIDENTS



Between 1981 and 1982 secondary roads had a larger decrease than the total state average and rural trunklines, even though the decrease is only slightly larger than that of the rural trunklines.

Fluctuation in the number of accidents on the secondary roads is best compared with rural trunklines, by examining trends. Between 1977 and 1981, the two sets of roads followed the same trend for four of those five years. In the fifth year, secondary roads went down while the rural trunklines had a slight increase, but in 1982 the two road types again had the same trend. However, rural trunklines and secondary roads are not totally comparable. The secondary roads are not always as well repaired or engineered as the trunklines. This tends to make them more dangerous than the trunklines, if drivers attempt the same speed on them as on the trunklines.

Evidence suggests that the secondary roads are either traveled by more drinking drivers or drinking drivers have a more difficult time negotiating the roads. Secondary roads, over the period, 1978-1982, had a higher percentage of total accidents that were alcohol related than either the state average or the rural trunklines. Eighteen percent of the 1982 accidents on the secondary roads were alcohol related, compared to a state average of 14 percent, and 15 percent on the rural trunklines.

Secondary roads had a higher percentage of decrease in total accidents, fatalities, (but not personal injury accidents) than did either the total state or rural trunklines. However, it cannot be determined if this is the direct result of the Secondary Road Patrol Program. The volume of citations written by Secondary Road Patrol deputies and County Supported deputies might be having some effect on driving behavior.

#### IV. COST EFFECTIVENESS

Last year an intensive study was made regarding the cost of a secondary road patrol officer compared with a county supported deputy. It was found the average secondary road patrol deputy cost about 13 percent less than a county supported deputy and their productivity exceeded that of the county supported patrol. They wrote 404 more citations per officer and averaged 5,638 more patrol miles.

A review of the 1982 facts showed that an intensive study of the issue would not lead to any different conclusion than last year. The facts are:

1. Secondary road patrol officers wrote 276 more citations per officer than the county supported patrol and drove 6,593 more patrol miles.
2. When the state allocation of funds, \$6,435,000, is divided by the number of secondary road patrol deputies, 208.6, the allocation per officer is \$30,849. In 1981, the average cost of a county deputy with fringes, employment taxes, benefits, supervision, and transportation costs was \$39,300 and this cost would probably be higher in 1982.

Whether the program is producing results is another issue. There is no way to prove that the reduction of accidents on the secondary roads

has anything to do with the extra patrolling. However, it has always been difficult to prove the effectiveness of prevention programs. No one knows what the situation would be had the program not been funded. Accidents have been coming down since the funding of the program, but statewide accidents have also been declining.

#### V. EVALUATION FINDINGS AND CONCLUSIONS

- A. Most counties have maintained the same number of county supported deputies they had in 1978 or increased the number, but ten counties reduced their county supported road patrol. These counties pled economic hardship as provided for in the act. The case of each county was carefully reviewed by OCJ, and nine counties were approved for funding. The case of one county is still pending.

In FY 78-79 there were 1,123 county supported deputies, and in FY 81-82, there were 1,253 deputies. The FY 81-82 figure does not include 21 Genesee County deputies that are shown in the FY 78-79 data. The added Secondary Road Patrol deputies represent new hires and not the shifting of County Supported deputies to state grant funding.

- B. The 83 counties had a total of 215.4 Secondary Road Patrol deputies in FY 80-81 and 208.6 in FY 81-82.
- C. The Secondary Road Patrol maintained a high level of productivity in most activities.
  1. The Secondary Road Patrol officers in the 77 counties participating in the evaluation averaged 370 citations. This reflects the high priority on citation writing consistent with the goal of reducing accidents on the secondary roads. Secondary Road Patrol represents 15 percent of the deputies in the evaluation, but 40 percent of the total citations.
  2. The number of accidents investigated by the Secondary Road Patrol increased from 69 per officer in 1981, to 77 per officer in 1982.
  3. Motorists assisted increased from 41 per officer in 1981 to 43 in 1982, a 5 percent increase.
  4. The number of times Secondary Road Patrol deputies were called upon to assist other law enforcement officers increased 2 percent, from 53 per officer in 1981 to 54 per officer in 1982.
  5. The drunk driver arrests made by Secondary Road Patrol deputies represented 11 per officer which was down 27 percent from the 1981, 15 per officer.
  6. The number of crime complaints taken by Secondary Road Patrol deputies decreased from 108 per officer in 1981, to 86 in 1982, a 20 percent reduction. However, it was noted that in 1981, the Secondary Road Patrol handled 12 percent of the complaints received by the sheriff departments but in 1982 this was 13 percent.

7. Criminal arrests were up in 1982, to 54 per officer from 36 in 1981. However, the Secondary Road Patrol accounted for 19 percent of the arrests made by the sheriffs' departments in the sample in 1981 while the comparable figure for 1982 was 42 percent.

E. Secondary road accidents decreased by 3.3 percent between 1981 and 1982. The average for the state in 1982 was down 2.5 percent from 1981. The rural trunklines had a decrease of 3.2 percent. An analysis of the seven-year trend for 1976-1982 shows that while the rural trunklines were slightly above, .2 percent, the trend line in 1982, the secondary roads were below, 2.9 percent. The total state 1982 accidents were one percent below the seven year trend.

The secondary roads had the largest reduction in fatalities. Statewide fatalities were reduced 12 percent in 1982, rural trunklines 7 percent; and secondary road fatalities came down 14 percent. Also, secondary roads had the largest decrease, 5 percent, in personal injury accidents. The state was down 4 percent and rural trunklines 3 percent.

Secondary roads had about the same size reduction of alcohol related accidents as did the state and rural trunklines. Secondary road alcohol related accidents were down 13 percent, the statewide reduction was 13 percent and the rural trunklines 14 percent. Secondary roads had the largest reduction in alcohol related fatalities, 16 percent. The reduction was 13 percent statewide and 3 percent on rural trunklines.

Secondary roads had the smallest percentage of total accident reduction between 1978 and 1982. Secondary road accidents decreased 19 percent while the state total accidents went down 24 percent. Rural trunkline accidents declined by 24 percent.

#### F. Conclusion

As stated last year, the Secondary Road Program has evolved from being viewed as a funding replacement program for the 83 counties to a fully accepted accident prevention program. Most of the sheriffs believe the program is important and they have high expectations for the Secondary Road Patrol deputies. Fewer sheriffs see the program only as a funding mechanism.

The data cannot prove a conclusive relationship between accident reductions and the activities of the Secondary Road Patrol Program. Accidents have been declining steadily on all types of roads and highways. More action is being taken to prevent secondary road accidents than ever before. However, those judging the program must be careful not to set expectations too high. There are still relatively few deputies being funded in relation to the large area of Michigan traversed by county secondary roads.

Sheriffs must increasingly recognize that personnel limitations requires targeting the Secondary Road Patrol resources to those segments of secondary roads where the accidents occur disproportionately. Some targeting is occurring, but unfortunately there are still sheriffs' departments that are not selectively deploying their Secondary Road Patrol deputies.

#### APPENDIX A.

#### STATE

Pop. 9,227,345

#### -----ALL ACCIDENTS-----

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>83,663</b>	<b>78,847</b>	<b>73,053</b>	<b>70,549</b>	<b>68,215</b>	<b>-18.5%</b>
Fatal	645	594	560	533	460	-28.7%
Personal Injury	25,805	25,005	23,518	21,911	20,802	-19.4%
Property Damage	57,213	53,248	48,975	48,105	46,953	-17.9%
Policed by MSP	18,196	16,842	14,943	15,070	13,862	-23.8%
Policed by Sheriff	46,728	44,595	41,894	38,389	35,871	-23.2%

#### Trunklines (I,US,M) 1978 1979 1980 1981 1982 % CHANGE 78-82

<b>TOTAL</b>	<b>53,200</b>	<b>49,443</b>	<b>42,166</b>	<b>42,022</b>	<b>40,672</b>	<b>-23.5%</b>
Fatal	509	461	427	373	348	-31.6%
Personal Injury	16,032	15,075	12,726	12,329	11,904	-25.7%
Property Damage	36,659	33,907	29,013	29,320	28,420	-22.5%
Policed by MSP	16,804	16,266	13,169	13,891	13,357	-20.5%
Policed by Sheriff	25,190	22,681	20,140	19,303	18,445	-26.8%

#### -----ALCOHOL-RELATED ACCIDENTS-----

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>16,076</b>	<b>15,734</b>	<b>16,031</b>	<b>14,394</b>	<b>12,600</b>	<b>-21.6%</b>
Fatal	346	347	328	323	273	-21.1%
Personal Injury	7,280	7,402	7,539	6,650	5,828	-19.9%
Property Damage	8,450	7,985	8,164	7,421	6,499	-23.1%
Policed by MSP	3,982	3,969	3,840	3,541	2,990	-24.9%
Policed by Sheriff	9,060	8,898	9,125	7,742	6,656	-26.5%

#### Trunklines (I,US,M) 1978 1979 1980 1981 1982 % CHANGE 78-82

<b>TOTAL</b>	<b>8,972</b>	<b>8,604</b>	<b>7,554</b>	<b>7,120</b>	<b>6,141</b>	<b>-31.6%</b>
Fatal	259	260	246	207	201	-22.4%
Personal Injury	4,039	3,987	3,509	3,333	2,874	-28.8%
Property Damage	4,674	4,357	3,799	3,580	3,066	-34.4%
Policed by MSP	2,866	2,912	2,356	2,445	2,040	-28.8%
Policed by Sheriff	4,332	4,006	3,668	3,158	2,697	-37.7%

0-30,000 POPULATION GROUP

Pop. 579,862

ALL ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>9,346</b>	<b>8,752</b>	<b>8,686</b>	<b>8,889</b>	<b>8,248</b>	<b>-11.7%</b>
Fatal	74	74	75	64	55	-25.7%
Personal Injury	2,617	2,504	2,429	2,304	2,143	-18.1%
Property Damage	6,655	6,174	6,182	6,521	6,050	-9.1%
Policed by MSP	3,143	2,927	2,662	2,827	2,584	-17.8%
Policed by Sheriff	6,045	5,689	5,905	5,920	5,547	-8.2%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>8,451</b>	<b>7,857</b>	<b>7,088</b>	<b>7,804</b>	<b>7,238</b>	<b>-14.4%</b>
Fatal	104	79	74	73	66	-36.5%
Personal Injury	2,057	1,989	1,784	1,769	1,669	-18.9%
Property Damage	6,290	5,789	5,230	5,962	5,503	-12.5%
Policed by MSP	3,575	3,463	2,952	3,316	3,159	-11.6%
Policed by Sheriff	4,824	4,344	4,083	4,442	4,039	-16.3%

ALCOHOL-RELATED ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>1,938</b>	<b>1,873</b>	<b>1,951</b>	<b>1,800</b>	<b>1,525</b>	<b>-21.3%</b>
Fatal	47	42	40	48	39	-17.0%
Personal Injury	852	863	916	806	680	-20.2%
Property Damage	1,039	968	995	946	806	-22.4%
Policed by MSP	744	713	721	665	552	-25.8%
Policed by Sheriff	1,169	1,136	1,206	1,105	951	-18.6%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>1,466</b>	<b>1,346</b>	<b>1,198</b>	<b>1,254</b>	<b>1,063</b>	<b>-27.5%</b>
Fatal	55	42	39	39	40	-27.3%
Personal Injury	614	616	543	573	457	-25.6%
Property Damage	797	688	616	642	566	-29.0%
Policed by MSP	619	592	501	548	485	-21.6%
Policed by Sheriff	839	746	689	699	568	-32.3%

30,000-100,000 POPULATION GROUP

Pop. 1,605,984

ALL ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>23,851</b>	<b>22,399</b>	<b>21,508</b>	<b>20,734</b>	<b>19,477</b>	<b>-18.3%</b>
Fatal	223	195	178	180	148	-33.6%
Personal Injury	7,302	6,904	6,585	6,223	5,722	-21.6%
Property Damage	16,326	15,300	14,745	14,331	13,607	-16.7%
Policed by MSP	7,383	6,873	6,167	6,041	5,534	-25.0%
Policed by Sheriff	15,377	14,562	14,383	13,565	12,204	-20.6%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>15,518</b>	<b>14,278</b>	<b>12,709</b>	<b>12,738</b>	<b>12,217</b>	<b>-21.3%</b>
Fatal	167	176	143	129	113	-32.3%
Personal Injury	4,497	4,107	3,447	3,476	3,351	-25.5%
Property Damage	10,854	9,995	9,119	9,133	8,753	-19.4%
Policed by MSP	6,033	5,717	4,749	5,015	4,838	-19.8%
Policed by Sheriff	8,792	7,947	7,352	7,146	6,848	-22.1%

ALCOHOL-RELATED ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>4,887</b>	<b>4,765</b>	<b>4,864</b>	<b>4,352</b>	<b>3,676</b>	<b>-24.8%</b>
Fatal	122	120	117	110	81	-33.6%
Personal Injury	2,272	2,312	2,312	2,066	1,711	-24.7%
Property Damage	2,493	2,333	2,435	2,176	1,884	-24.4%
Policed by MSP	1,625	1,605	1,490	1,307	1,085	-33.2%
Policed by Sheriff	3,018	2,937	3,146	2,779	2,370	-21.5%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>2,619</b>	<b>2,395</b>	<b>2,189</b>	<b>2,051</b>	<b>1,755</b>	<b>-33.0%</b>
Fatal	88	95	87	76	58	-34.1%
Personal Injury	1,136	1,146	1,014	969	822	-27.6%
Property Damage	1,395	1,154	1,088	1,006	875	-37.3%
Policed by MSP	1,012	955	794	814	660	-34.8%
Policed by Sheriff	1,474	1,330	1,275	1,142	995	-32.5%

100,000-300,000 POPULATION GROUP

Pop. 2,150,570

ALL ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>27,004</b>	<b>25,405</b>	<b>23,033</b>	<b>21,739</b>	<b>20,314</b>	<b>-24.8%</b>
Fatal	186	187	163	162	136	-26.9%
Personal Injury	8,279	7,915	7,492	6,860	6,259	-24.4%
Property Damage	18,539	17,303	15,378	14,717	13,919	-24.9%
Policed by MSP	5,191	4,781	4,013	3,903	3,718	-28.4%
Policed by Sheriff	15,168	14,277	13,007	12,069	11,077	-27.0%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>16,067</b>	<b>14,832</b>	<b>12,544</b>	<b>12,215</b>	<b>12,119</b>	<b>-24.6%</b>
Fatal	151	122	119	87	100	-33.8%
Personal Injury	4,952	4,637	3,892	3,771	3,662	-26.1%
Property Damage	10,964	10,073	8,533	8,357	8,357	-23.8%
Policed by MSP	4,922	4,646	3,698	3,787	3,769	-23.4%
Policed by Sheriff	6,961	6,064	5,336	4,990	4,874	-30.0%

ALCOHOL-RELATED ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>4,968</b>	<b>4,839</b>	<b>5,044</b>	<b>4,479</b>	<b>3,692</b>	<b>-25.7%</b>
Fatal	99	116	101	99	73	-26.3%
Personal Injury	2,245	2,200	2,377	1,993	1,691	-24.7%
Property Damage	2,624	2,523	2,566	2,387	1,928	-26.5%
Policed by MSP	1,097	1,115	1,057	977	879	-19.9%
Policed by Sheriff	2,883	2,794	2,881	2,495	1,996	-30.8%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>2,574</b>	<b>2,585</b>	<b>2,204</b>	<b>2,050</b>	<b>1,738</b>	<b>-32.5%</b>
Fatal	73	74	67	45	57	-21.9%
Personal Injury	1,216	1,180	984	937	804	-33.9%
Property Damage	1,285	1,331	1,153	1,068	877	-31.8%
Policed by MSP	822	846	656	699	567	-31.0%
Policed by Sheriff	1,163	1,121	978	832	709	-39.0%

300,000 & OVER POPULATION GROUP

Pop. 4,890,929

ALL ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>23,462</b>	<b>22,291</b>	<b>19,826</b>	<b>19,187</b>	<b>20,176</b>	<b>-14.0%</b>
Fatal	162	138	144	127	121	-25.3%
Personal Injury	7,607	7,682	7,012	6,524	6,678	-12.2%
Property Damage	15,693	14,471	12,670	12,536	13,377	-14.8%
Policed by MSP	2,479	2,261	2,101	2,299	2,026	-18.3%
Policed by Sheriff	10,138	10,067	8,599	6,835	7,043	-30.5%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>13,164</b>	<b>12,476</b>	<b>9,825</b>	<b>9,265</b>	<b>9,098</b>	<b>-30.9%</b>
Fatal	87	84	91	84	69	-20.7%
Personal Injury	4,526	4,342	3,603	3,313	3,222	-28.8%
Property Damage	8,551	8,050	6,131	5,868	5,807	-32.1%
Policed by MSP	2,274	2,440	1,770	1,773	1,591	-30.0%
Policed by Sheriff	4,613	4,326	3,369	2,725	2,684	-41.8%

ALCOHOL-RELATED ACCIDENTS

Secondary Roads	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>4,283</b>	<b>4,257</b>	<b>4,172</b>	<b>3,763</b>	<b>3,707</b>	<b>-13.4%</b>
Fatal	78	69	70	66	80	+2.6%
Personal Injury	1,911	2,027	1,934	1,785	1,746	-8.6%
Property Damage	2,294	2,161	2,168	1,912	1,881	-18.0%
Policed by MSP	516	536	572	592	474	-8.1%
Policed by Sheriff	1,990	2,031	1,892	1,363	1,339	-32.7%

Trunklines (I,US,M)	1978	1979	1980	1981	1982	% CHANGE 78-82
<b>TOTAL</b>	<b>2,313</b>	<b>2,278</b>	<b>1,963</b>	<b>1,765</b>	<b>1,585</b>	<b>-31.5%</b>
Fatal	43	49	53	47	46	+7.0%
Personal Injury	1,073	1,045	968	854	791	-26.3%
Property Damage	1,197	1,184	942	864	748	-37.5%
Policed by MSP	413	519	405	384	328	-20.6%
Policed by Sheriff	856	809	726	485	425	-50.4%

APPENDIX B.

MICHIGAN OFFICE OF CRIMINAL JUSTICE  
 STATISTICAL ANALYSIS CENTER  
 P.A. 416 SEMI-ANNUAL PROGRAM REPORT ANALYSIS

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CALANDER YEAR 1982 ACTIVITY

COUNTY	AVERAGE NO. P.A. 416 OFFICERS	AVERAGE NO. CITATIONS PER 416 OFFICER	AVERAGE NO. MILES DRIVEN PER 416 OFFICER	AVERAGE NO. OUI ARRESTS PER 416 OFFICER
ALCONA	1.0	71	33,002	0
ALGER	1.0	255	23,372	6
ANTRIM	1.7	39	21,964	6
ARENAC	1.0	365	39,797	11
BARAGA	1.0	123	25,684	4
BENZIE	1.0	183	110,617	15
CHARLEVOIX	0.1	500	59,600	30
CHEBOYGAN	1.5	291	43,982	27
CHIPPEWA	3.0	8	23,122	3
CLARE	1.0	162	23,172	16
CRAWFORD	2.0	91	102,272	4
DICKINSON	2.0	30	20,250	2
EMMET	12.3	13	3,539	1
GLADWIN	2.0	101	14,979	3
GOGEBIC	1.0	50	23,643	22
IOSCO	2.0	140	20,100	31
IRON	1.0	71	28,605	5
KALKASKA	1.0	329	22,099	11
KEWEENAW	0.7	70	24,171	7
LAKE	2.0	207	26,095	15
LEELANAU	1.0	193	31,105	28
LUCE	1.0	78	14,420	1
MACKINAC	1.0	189	28,499	42
MANISTEE	1.0	67	41,942	2
MASON	1.0	122	31,572	12
MENOMINEE	2.0	108	39,164	9
MISSAUKEE	1.0	223	29,691	10
MONTMORENCY	1.0	269	32,283	3
OCEANA	2.0	20	21,480	7
OSHEWA	1.0	199	23,757	4
ONTONAGON	0.9	54	25,526	13
OSCEOLA	1.0	153	38,315	8
OSCODA	1.0	197	26,204	9
OTSEGO	1.0	149	20,406	13
PRESQUE ISLE	1.0	79	29,664	2
ROSCOMMON	1.0	50	17,632	3
SCHOLCRAFT	1.0	229	31,116	8
WEXFORD	1.0	175	28,219	2
POPULATION GROUP 0-30,000	58.2	107	8,686	8

MICHIGAN OFFICE OF CRIMINAL JUSTICE  
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CALANDER YEAR 1982 ACTIVITY

COUNTY	AVERAGE NO. P.A. 416 OFFICERS	AVERAGE NO. CITATIONS PER 416 OFFICER	AVERAGE NO. MILES DRIVEN PER 416 OFFICER	AVERAGE NO. OUI ARRESTS PER 416 OFFICER
ALLEGAN	3.0	393	22,184	47
ALPENA	2.0	145	47,314	15
BARRY	2.0	93	21,724	17
BRANCH	2.0	312	31,334	4
CASS	2.0	232	33,244	28
CLINTON	1.4	224	35,182	12
DELTA	2.0	128	27,478	12
EATON	3.0	598	24,140	38
GRATIOT	2.0	490	25,437	0
HILLSDALE	2.0	123	14,732	31
HOUGHTON	2.0	80	8,882	13
HURON	2.0	86	31,070	1
IONIA	2.0	212	10,597	9
LAPEER	2.0	901	23,087	0
LENAWEE	3.0	514	23,261	16
MARQUETTE	3.0	547	17,919	0
MECOSTA	1.5	427	18,231	15
MIDLAND	1.5	601	26,353	6
MONTCALM	3.0	186	27,738	10
NEWAYGO	2.0	205	17,404	9
SHIAWASSEE	3.0	382	25,670	10
ST. JOSEPH	2.0	256	24,269	7
TUSCOLA	2.0	764	31,441	10
VAN DUREN	2.0	244	30,106	13
POPULATION GROUP 30,000-100,000	52.4	157	5,632	14
BAY	2.0	1,880	30,698	4
CALHOUN	4.0	77	14,641	1
INGHAM	5.0	100	25,029	2
JACKSON	3.0	668	9,679	9
LIVINGSTON	3.0	611	22,897	6
MONROE	2.5	366	20,451	6
MUSKEGON	3.0	153	103,956	22
OTTAWA	4.0	193	21,854	11
SAGINAW	5.0	578	19,246	4
ST. CLAIR	2.0	1,348	22,344	11
WASHTENAW	5.0	790	21,598	15
POPULATION GROUP 100,000-300,000	38.5	3	1,095	8



MICHIGAN OFFICE OF CRIMINAL JUSTICE  
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CALENDAR YEAR 1982 ACTIVITY

COUNTY	AVERAGE NO.		AVERAGE NO.		AVERAGE NO.	
	P.A. 416 OFFICERS	CITATIONS PER 416 OFFICER	MILES DRIVEN PER 416 OFFICER		QUI ARRESTS PER 416 OFFICER	
GENESEE	5.0	459	28,127		10	
MACOMB	7.0	702	20,353		19	
OAKLAND	10.0	886	35,591		21	
WAYNE	17.0	487	15,560		10	
POPULATION GROUP OVER 300,000	39.0	111	23,168		14	
STATEWIDE	188.1	47	3,968		0	

**END**