

LAW ENFORCEMENT ASSISTANCE ADMINISTRATION (LEAA)

POLICE TECHNICAL ASSISTANCE REPORT

SUBJECT: Law Enforcement Needs and Potential
Cost Impact —

REPORT NUMBER: 76-099/064

FOR:

Coloma Township, Michigan

Police Department —

Population 4,800 (est.)

Police Strength (sworn) 5

(Civilian) 4

Total 9

Square Mile Area 22

AUG 18 1976

CONTRACTOR:

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CONTRACT NUMBER:

J-LEAA-002-76

DATE:

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SECTION I. INTRODUCTION

Situated in southwestern Michigan a short distance north of the Indiana border, and inland a few miles from Lake Michigan is Coloma Township. Local population estimates suggest that approximately 4,800 people now reside in Coloma, up from the official 1970 census figure of 4,370, for a growth of about 9 per cent in the past six years.

The area comprising much of the Township is agricultural with emphasis upon fruit farming, particularly cherries and apples. Tourism also is important because of the presence of Paw Paw Lake, a large lake and recreation spot for tourists and residents. Most of the 4,800 residents reside near Lake Paw Paw or the adjacent smaller lake. Few people live in the outer portions of the Township. Benton Harbor and St. Joseph are nearby (about 10 miles) with a number of manufacturing and food processing plants offering stable employment opportunities. In some respects, Coloma is a "bedroom" community for the two larger cities, particularly as there has been a regular movement of people out of the City of Benton Harbor and into the surrounding communities, including Coloma.

In the past year or two attention of the Township government has turned towards providing improved law enforcement services to its residents while seeking to preserve a relatively low tax structure. This study is an outgrowth of that effort.

Survey Method

The local information which serves as the basis of this report was gathered by the consultant through on-site conversations with the individuals listed below on July 15 and 16, 1976. These interviews were confidential and no person is quoted or otherwise identified in this report. Those aiding in the conduct of this analysis include the following:

Robert P. (Phil) Cottier, Jr.
Chief of Police
Township of Coloma, Michigan

Edwald Eckblom
Township Supervisor
Township of Coloma, Michigan

Robert E. Palmer
Township Treasurer
Township of Coloma, Michigan

The report itself is in three parts—a brief overview of the Coloma Township Police Department, a somewhat more detailed analysis of current patrol needs, and some concluding observations regarding cost implications and record-keeping practices.

Survey Purpose

The Coloma Township Board sought an appraisal of overall law enforcement needs in order to identify the financial impact of such needs upon the community. Financial support for this brief survey was made available by the Law Enforcement Assistance Administration, U.S. Department of Justice.

SECTION II. AN OVERVIEW OF THE COLOMA TOWNSHIP POLICE DEPARTMENT

The Coloma Township Police Department is a small agency organized in 1969 to respond to the needs of the citizens of Coloma. Reportedly, the department was organized by the Township because of general local dissatisfaction with the level of service the community receive from the County Sheriff's department. It was found too that the Michigan State Police could not assume the major responsibility for police service at the desired local level. The establishment of a new police department was selected as the preferred alternative for the Township of Coloma.

The Coloma Police Department consists of five sworn officers, one chief, one sergeant and three officers with an additional officer scheduled to begin training through the State's certified training program within the next few weeks. Once training is completed for that officer, the department will be at its high point of available sworn manpower. Four civilian dispatchers operate the Township's communication system to provide twenty-four hour coverage for the department. The dispatchers wear uniforms identical to the sworn personnel, including the wearing of firearms. A casual visitor to the department would not be able to distinguish between the sworn and civilian personnel.^{1/}

The commitment of the Township to the provision of police service is evident by an examination of Table 1 which shows that over the past five years more than one-half of the total Township budget has been allocated to police service with the exception of one year where the total was about 45 per cent. An examination of Table 2 indicates that nearly 86 per cent of the departmental operating cost stems from personal services (salaries, pay-related benefits, etc), a modest allotment to equipment purchase (except the year two new police vehicles were acquired), and the balance for operating costs (e.g., gasoline, automotive repair). The Township has made good use of CETA funds to provide additional staff for the police agency and reduce overall Township costs. The use of such programs, however, is temporary and the decision to maintain service at the current level with local funds is a crucial decision at the present time.

^{1/} This practice is not recommended. Although dispatchers should perhaps be uniformed the uniform should be distinctive so that mistakes in identify would be less likely. There is no need for civilian dispatchers to be armed.

Michigan law limits the powers of local governments generally and townships specifically. Two types of townships are permitted, charter and general. Coloma Township has selected the latter approach although it could qualify for a charter because it meets the population requirements. The basic difference between the two forms for the purpose of this study is that a charter township has some taxing powers independent of a voter referendum whereas a general township must seek voter approval of any tax increase over the basic one mill permitted by law. Property tax provides about 10 per cent of Coloma's revenues, the balance coming from intergovernmental revenue transfers (e.g., state and federal shared taxes, CETA), fines, township hall rentals and the like.

The governing body of the Township consists of five elected officials; the supervisor (who is the presiding officer), the clerk, the treasurer and two trustees. Together the group constitutes the policy board of the Township. The chief of police is appointed by the Township Board and serves at the Board's pleasure. A police committee consisting of two Township Board members offers general direction to the chief and serves as a buffer between the department and the Board itself. The chief appoints all departmental personnel subject to Board approval.

Located within the borders of the Township of Coloma is the city of Coloma, the latter consisting of one square mile. The City has a population of approximately 1,500 and operates a three-person police department. Another small community, Watervilet, lies on the eastern edge of Coloma Township, as does Watervilet Township. The City of Watervilet has a small police agency and provides some police services to the township of the same name on a contractual basis. The Sheriff's department patrols through the area from time to time but seldom handles specific requests for assistance within Coloma Township. Similarly with the Michigan State Police, although that agency does provide specialized back-up assistance at a crime-scene or other similar situation.

Coloma Township officials approached the Sheriff's department regarding the possibility of having the Sheriff provide dispatching assistance to the Township. The Coloma officials were informed that such an arrangement would not be possible due to previous commitments of the Sheriff's department. The Sheriff does provide limited dispatching for the City of Coloma and some other jurisdictions. No discussions have been held between Coloma Township officials and the Sheriff's department regarding the possibility of contracting for all police services for the Township.

Table 1

Police Service Costs in Relation to
General Government Costs
Coloma Township, Michigan

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Police Protection	\$ 60,000	\$74,000	\$ 99,613	\$ 102,500	\$102,634
Other Township Services	72,130	62,587	77,603	99,551	95,700
Total Township Budget	<u>\$132,130</u>	<u>\$136,567</u>	<u>\$177,216</u>	<u>\$ 202,051</u>	<u>\$198,334</u>
Police as % of Total	45.4	54.2	56.2	50.7	51.7

Table 2

Operating Costs of the Coloma Township, Michigan
Police Department-By General Category

	<u>1973</u>	<u>Per Cent</u>	<u>1974</u>	<u>Per Cent</u>	<u>1975</u>	<u>Per Cent</u>	<u>1976^{*/}</u>	<u>Per Cent</u>
Personal Services	\$64,748	80.4	\$70,506	71.4	\$ 82,653	80.8	94,381	85.7
Equipment & Supplies	4,569	5.7	7,912	8.0	7,075	6.9	2,375	2.2
Other	11,157	13.9	20,425	20.6	12,768	12.5	13,224	12.0
Total	<u>\$80,474</u>	<u>100.0</u>	<u>\$98,843</u>	<u>100.0</u>	<u>\$102,497</u>	<u>99.7</u>	<u>\$110,224</u>	<u>99.9</u>

^{*/} Data in this column not in agreement with Table 1 due to differences in calculating use of CETA funds.

SECTION III. MANPOWER UTILIZATION IN COLOMA TOWNSHIP

Proper allocation of personnel is perhaps the single most important management task for Coloma Township since over 50 per cent of the total Township budget is spent on providing police services. If police personnel are not utilized in the most effective manner possible; if there are too many or too few personnel, then the efforts of the Township are not or cannot be productive.

For years the traditional means to determine the number of police officers needed to provide an adequate level of service for a community was based upon such measures as crime rates or a derived ratio based upon the number of police officers per thousand population, and the like. While such measures are related to questions regarding police performance, there are no universal standards or criteria available for determining what type or level of police service a given community needs. Rather, the appropriate level of patrol officers needed for a particular jurisdiction can only be determined through a careful assessment of the types, levels and extent of requests for police assistance within that jurisdiction. What follows is an application of a recommended approach towards determining proper staffing levels for police service within Coloma Township; an estimate that relies upon locally derived information.

Types and Levels of Requests for Service

In order to determine manpower requirements it is first necessary to know by general category what types of incidents occur within the area served. Included in such a picture for Coloma Township would be both requests for service and those which the officer personally initiates. It is also important to know what portion of the responding officer's time is spent handling each particular incident in order that averages can be determined for each general type.

Since the nature of incidents varies widely from one department to another, it is useful to develop several general categories to illustrate the types of incidents typically confronted in day-to-day work activities. To facilitate this task, a stratified sample was selected from information contained in the department's daily complaint log. Thirty-five days, with equal distribution among the days of the week, were selected through sampling means for the period beginning June 1, 1975 and ending May 31, 1976. The following categories were developed based upon the information found in the logs for those dates:

Type I—Serious crimes including homicide, rape, assault, robbery, burglary, motor vehicle theft.

Type II—Other crimes including vandalism, malicious destruction of property, drunkenness, vice, liquor law violations, etc.

Type III—Service activity including assistance to persons, property checks, lost and found property, etc.

Type IV—Traffic incidents including personal injury and property damage accidents (does not include issuing traffic tickets).

Type V—Assistance to other agencies including assisting other police agencies, fire departments and responding to ambulance calls.

Type VI—Miscellaneous incidents including animal complaints, disturbance calls, serving of warrants, suspicious circumstances, handgun registration, etc.

In the sample survey period (June 1, 1975 through May 31, 1976) the Coloma Township Police Department responded to 359 police incidents. This sample represents approximately ten per cent of the total departmental work load as reflected in the daily complaint log. The incidents included in the sample were distributed among the six types as follows:

<u>Type</u>	<u>Number</u>	<u>Per Cent</u>
I	24	6.7
II	44	12.2
III	90	25.1
IV	37	10.3
V	72	20.0
VI	92	25.6
Total	359	99.9

As can be seen, the major thrust is service and assistance to persons or other agencies, with general complaint and disturbance calls (Type VI) the principal high point. Serious crime (mostly larceney) represents a small work load.

The next step is to determine the total number of minutes, on the average, it takes the officer responding to an incident to complete any necessary field action. Unfortunately, this information is not recorded in any consistent manner by the Coloma Police Department. The only possible manner of seeking to derive such information presently would be to match an officer's daily log with that of the dispatcher-maintained complaint log. Efforts to reconstruct such information were not successful due to individual variations in maintaining such information.

Based upon studies in other jurisdictions, it is possible to make some projections for the average amount of time spent in handling the general types of incidents found in Coloma Township. It should be understood, however, that these are estimates only and do not necessarily reflect specific local practices or tendencies. Generally speaking, the more serious police incidents (i.e., those included in Type I and Type II) will require between one and one-half as much time as the non-serious incidents (i.e., Type III). Accordingly, based upon experiences in other jurisdictions it will be assumed that it takes one full hour to handle Type I incidents, one full hour for Type II incidents, 30 minutes for Type III incidents and 45 minutes for Type IV, Type V and Type VI incidents. Included in the estimated time is the time spent responding to the specific incident. Using these estimated time factors, the following calculations are possible:

<u>Type</u>	<u>Number</u>	<u>Average Time</u>	<u>Total Time</u>
I	24	1.0 hrs.	24.0 hrs.
II	44	1.0	44.0
III	90	.5	45.0
IV	37	.75	27.7
V	72	.75	54.0
VI	92	.75	69.0
<hr/>			
Total	359		263.7 hrs.

Patrol activity encompasses more than simply the time required to respond to and complete handling an incident in the field. Administrative duties such as station service, report writing (particularly in Coloma where an officer must type his or her own report personally), court appearances and time for personal necessities also must be accounted for in determining time spent on individual duty assignments. Additionally, time must be provided for preventive patrol. Consequently, two additional time factors, each equal in time value to the time required to respond to and complete service incidents are employed. Total patrol activity therefore is considered to consist of three separate elements of approximately equal time value; specifically, handling the service incident, administrative time, and preventive patrol. By utilizing this formula it is possible to determine total patrol requirements expressed in terms of man hours:

Service Requirements	263.7 hours
Administrative Needs	263.7 hours
Preventive Patrol	<u>263.7 hours</u>
Total	791.1 hours =====

Manpower Availability

The next step is to determine actual manpower availability. This is accomplished by subtracting the number of work hours absent from duty for each police officer in the Coloma Township Police Department. A review of leave records for all members of the department, including the chief of police, shows the following average usage for the past year:

Days off	832 hours per year
Sick Leave	50 hours per year
Vacation Leave	34 hours per year
On-duty Training	4 hours per year
Discipline	5 hours per year
Total	925 hours per year
	=====

The total time unavailable for work must then be subtracted from the theoretical number of hours worked each year: 8 hours x 365 days = 2,920 hours. This figure is then used to determine the availability factor:

(1) 2,920 hours - 925 hours = 1,995 hours available for work
(2) 2,920 hours
----- = 1.5 persons
1,995 hours

This means that 1.5 police officers are required to staff one position on the Coloma Township Police Department. This figure (1.5) is then used to determine actual manpower requirements.

In order to assess the adequacy of existing manpower scheduling practices incidents should be evaluated as to when, where and at what times they occur in order to ascertain particular patterns and periods of police requirements. Figure 1 and 2 provide the basic support data, based upon a sampling of the Coloma Township Police Department records, to illustrate when and at what times incidents occurred. As can be seen, the department responds to or initiates an average of a little more than 10 incidents per day with peak days occurring (on Wednesdays and Saturdays (Figure 1) and peak hours occurring between 6:00 p.m. and 2:00 a.m. The peak periods on a daily basis, however, do not involve much more than one incident per two hour period. To speak of peak periods, then, is not to suggest that there are a substantial number of calls for service occurring within those periods. Given population concentration in Coloma and the general ease with which one can travel, detail of specific incident locations likely will not be needed in manpower planning. The following overall pattern for activity emerges:

<u>Time Period</u>	<u>Average Incidents</u>	<u>Manpower Required*</u>
0000-0200	1.2	2.6
0201-0400	0.7	1.5
0401-0600	0.6	1.3
0601-0800	0.2	0.4

<u>Time Period</u>	<u>Average Incidents</u>	<u>Manpower Required*</u>
0801-1000	0.6	1.3
1001-1200	0.6	1.3
1200-1400	0.7	1.5
1401-1600	0.9	2.0
1601-1800	1.1	2.4
1801-2000	1.0	2.2
2001-2200	1.3	2.9
2201-2400	0.9	2.0
<hr/>		
Total	9.8	21.4

In an average 24-hour period the Coloma Township Police Department will handle approximately 10 incidents requiring about 22 man-hours to complete, including administrative and preventive patrol time. The total man-hours required to handle the average number of incidents is then multiplied by the availability factor of 1.5 to determine actual manpower requirements and that result (33 hours) is then divided by 8.0 hours since each police officer works an eight hour day. The resulting figure, 4.1, is then rounded to four indicating that four police officers would be required, twenty-four hours a day to handle all calls for services for the Coloma Township Police Department.

This analysis can be checked in the following manner:

1. Estimated incidents annually $(359 \times 10.4\%) = 3734$ incidents
2. Time required (2.2 hours per incident) = 8,215
3. Annual available hours per officer = 1,995
4.
$$\frac{8,215}{1,995} = 4.1$$

Assuming four police officers are available for patrol duty, it is necessary to assign them to schedules consistent with fluctuations in activity levels. Theoretically, one-quarter of the total complement of police officers is available for duty each eight-hour day with one-quarter of the personnel strength always on days off. This means that one police officer should be assigned per eight hour period. The chief's position should be in addition to the four officers.

*"Manpower required" is determined by multiplying the number of incidents by the average amount of time spent in handling an incident, (in this situation 2.2 hours).

Figure 1
Average Calls for Service By Day of Week
Coloma Township, Michigan Police Department

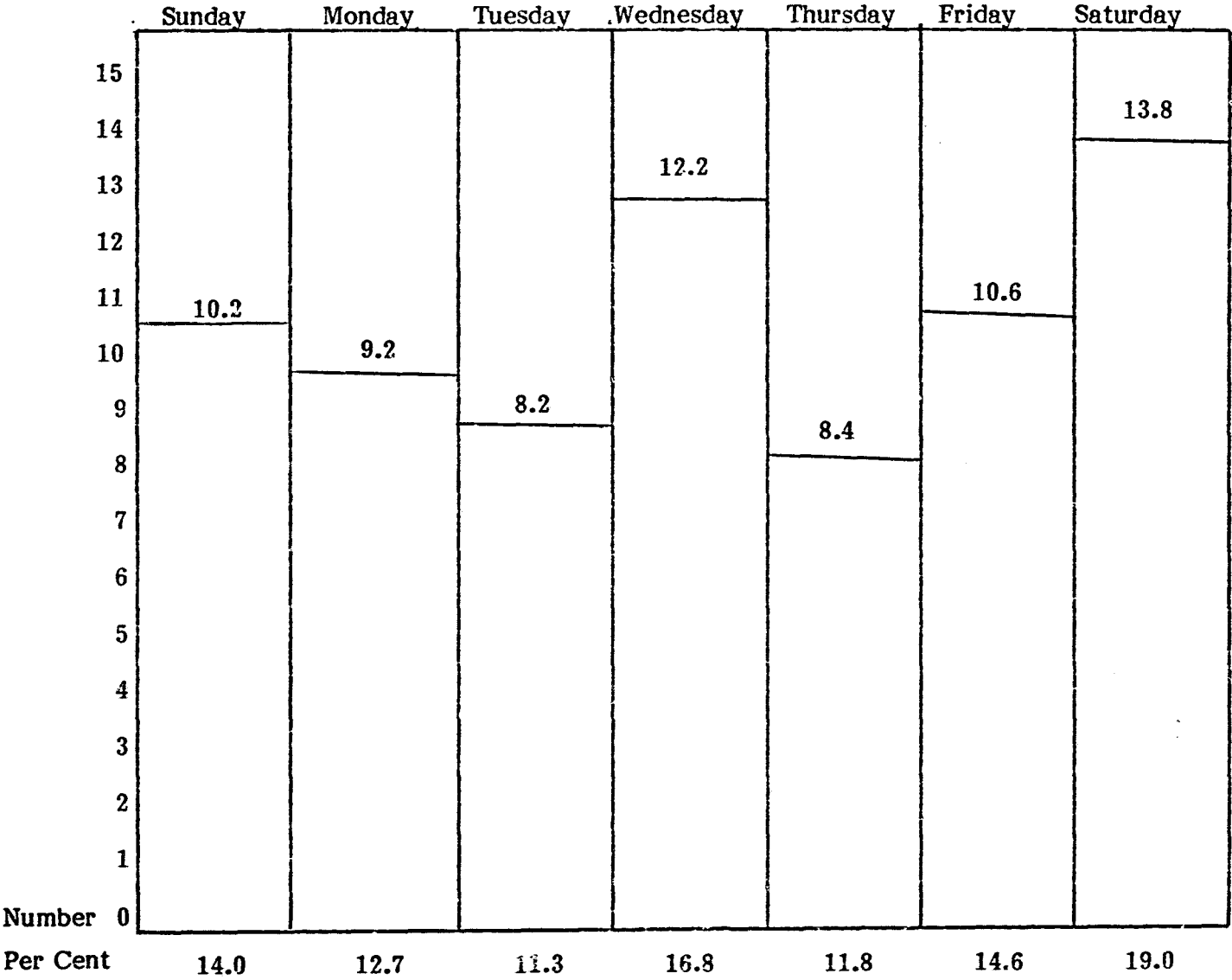
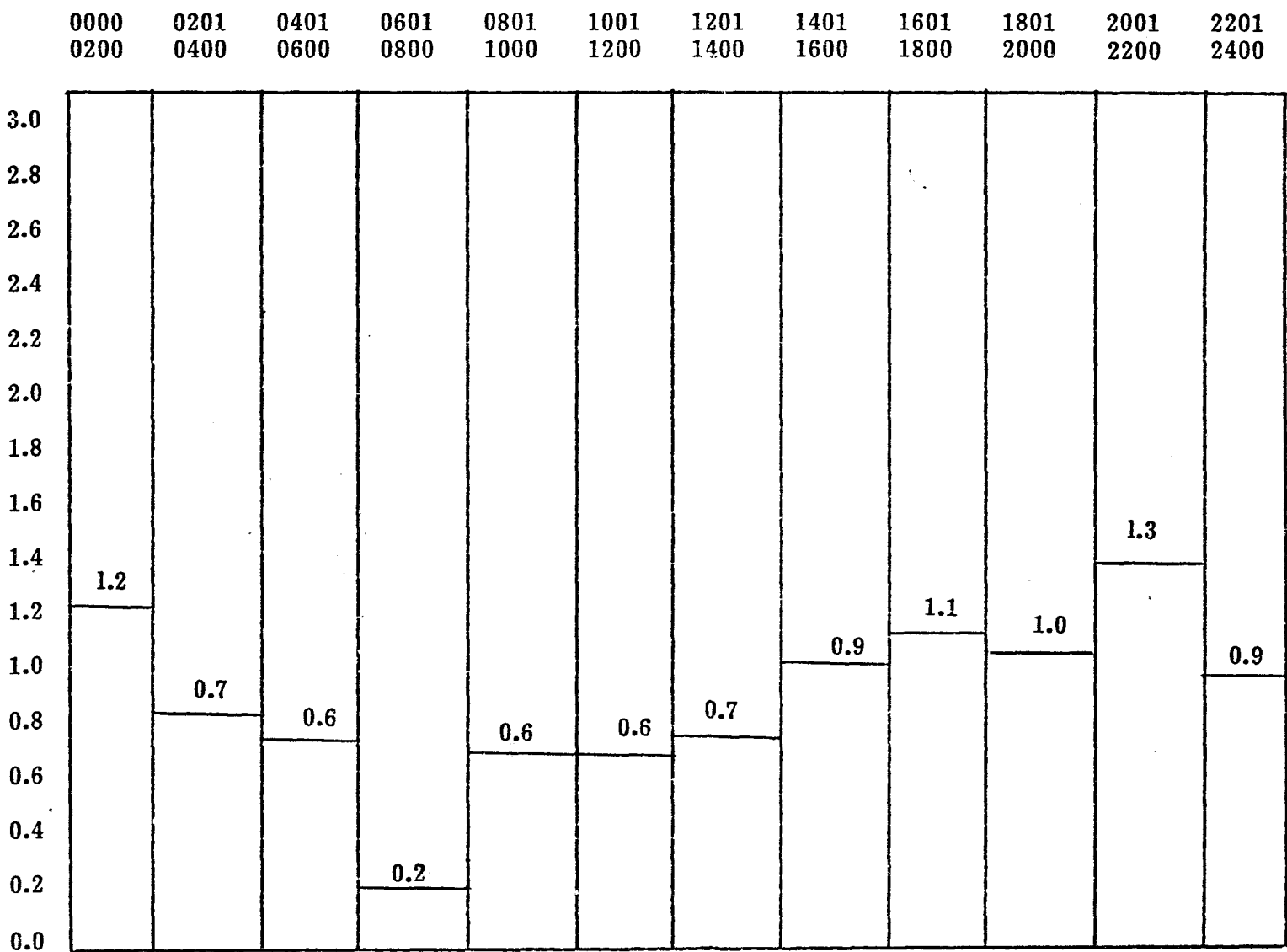


Figure 2
Average Calls for Service by Time of Day,
In Two Hour Increments
Coloma Township, Michigan Police Department



An analysis of the information provided in Figure 2 suggests that the police officer working the period from 0000 hours to 0800 hours will not have a substantial work load whereas the officer working the period from 1600 hours to 2400 hours likely will have slightly more work than one person could perform with ease. The days off schedule should be arranged in such a fashion that all personnel are available for work on Saturdays as that is the heaviest work day during the work week. Two officers (one being the chief) should have scheduled days off on Mondays and Tuesdays. A scheduling arrangement of this type means the chief of police will be on duty during the peak periods of departmental activity and also will be available during portions of the day to handle regular calls for service as is presently the case. This schedule also makes it possible to provide increased coverage during weekend periods when the work load is likely to increase, not diminish.

SECTION IV. GENERAL FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Few observations can be offered regarding modifications in departmental practices which will provide a desirable level of police service with minimal cost to the Township. To maintain an independent police agency is necessarily going to result in increased costs as the service demand grows.

Costs of Police Service

The highest single cost factor in the provision of police service is the cost of staffing the agency. Salaries and pay-related benefits constitute more than 80 per cent of the Coloma Township budget for police service. As demonstrated through the general budget information in Table 1, the commitment by the Township to providing basic police service is a strong one in contrast to other services performed by the Township.

Use has been made of alternative revenue sources by the Township in lieu of increased property tax authorization to provide police service. CETA funds to hire personnel on a temporary basis is one example, the use of federal revenue sharing dollars in the police operating budget is another. The cost of maintaining an independent police agency is considerable to the Township especially when placed into the perspective of the total Township budget. This is particularly true since the CETA program by design is temporary and the revenue sharing program expires soon unless renewed by the federal government.

Analysis of the patrol needs as set forth in the preceding section suggests that a police force of five sworn personnel, one chief and four officers is sufficient to handle current needs. With the recent addition of a sixth officer through CETA funds, the department is perhaps overstaffed by one. Since CETA monies are available for a short period regardless, the net addition of one officer does not materially affect total locally supported costs. That position could be stricken without serious impact upon the ability of the department to perform its assigned tasks. To reduce the force further, however, would impair its ability although the department could function moderately well with only four officers coupled with a high level of assistance from other agencies. It would also mean not assisting other agencies however.

If cost saving measures are being sought, the most appropriate avenue would appear to be in the provision of dispatching service. Approximately \$23,000 is now being spent for dispatching services on a 24-hour basis (salaries and pay related benefits). The Coloma Township Board has approached the Sheriff's Department regarding the possibility of that department providing such service to Coloma but the Sheriff

indicated that such would not be possible due to burdens already placed upon his department's communications facilities. Not fully explored, however, is the possibility of Coloma Township providing dispatching service to the City of Coloma, Watervliet and others in the adjacent area. Such an approach could reduce Coloma Township's costs, but it likely would require a greater expenditure for any participating governments as most now receive dispatching without cost from the Sheriff, or have no service. Joint ventures should be considered in dispatching, perhaps even with the Sheriff's Department by offering a reasonable fee.

Without a reduction in the overall strength of the department below the recommended level of five, and without a cost-sharing dispatch center program, it seems unlikely that any overall cost reductions can be made in the provision of police services to Coloma Township. Indeed, it seems quite likely that a request will need to be made of the voters of Coloma Township to have a special levy beyond the one mill authorized in order to maintain service at the present level. Without such a tax increase, either police services will be curtailed, or, some other Township service will need to be curtailed in order to maintain the present level of police service.

Police Records

To conduct the type of analysis followed in this study requires solid police management information stemming from activities engaged in by the department itself. As was noted, some of this information was not available because data of this type had not previously been required. This is not offered as a criticism of the department but merely to suggest that with a modification in the basic incident log, a full array of information would be available that would enable the department and the Township to have more accurate information regarding staffing needs and activities. The suggested format is contained in Figure 3.

The dispatcher should be in full control of the completion of the Incident Record Form as presented in Figure 3. Items 22 and 23 on the form show the time a request for assistance was received by the department and the time a unit was dispatched to handle the request. Items 20 and 21 relate to the time the responding officer arrived at the scene and the time the officer completed field action on the incident. If more than one officer responded, all of the detail would be summarized in Items 12, 13, 14 and 15 with the totals presented in Item 17. If only one officer responds and handles the incident, the same data should be recorded. The dispatcher should assign a complaint number when such is warranted. In this manner all activities, including traffic stops, will be recorded.

Every police incident should be recorded which means that the dispatcher should be informed at all times of the officer's activities. Too much actual work-related activity presently goes unreported and as a consequence it becomes difficult to document staffing needs. Helpful to the recording of

the data would be the use of a 24-hour clock, one that would automatically stamp the date and time in the appropriate blanks for the control of time as provided in Items 20 through 23.

One other portion of the proposed data recording form requires mention, namely Item 10. A substantial amount of departmental activity presently involves assistance to other agencies. It was difficult to discern from the sample of records examined whether the time commitment (20 per cent of the work load) is warranted or not. Because of the generally small size of the police agencies in the area and the burden that an unexpected absence of an officer may pose, there is likely a great deal of mutual sharing of responsibilities. In any event, the frequency seems heavy enough to merit special attention in the form to ascertain where and what types of assistance normally are rendered. A special log might be maintained as well to note those instances where the Coloma Township Police Department required assistance from other agencies to handle a particular incident.

Figure 3

Proposed Incident Record
Coloma Township, Michigan Police Department

20. Date/Time Arrived	01 Complainant		02 Address		03 Telephone		04 Complaint No		22. Date/Time Received			
	05 Location		06 Incident		07 Incident Code		08 UCR Code					
	09 How Received a. <input type="checkbox"/> Phone b. <input type="checkbox"/> Radio c. <input type="checkbox"/> citizen d. <input type="checkbox"/> On view e. <input type="checkbox"/> Other				10 Assists to Other Agencies a. <input type="checkbox"/> Sheriff b. <input type="checkbox"/> State Police c. <input type="checkbox"/> Ambulance d. <input type="checkbox"/> Fire e. <input type="checkbox"/> City of Coloma f. <input type="checkbox"/> Other							
	11. Disposition a. <input type="checkbox"/> No further action required b. <input type="checkbox"/> unfounded c. <input type="checkbox"/> Case No. _____ d. <input type="checkbox"/> Arrest No. _____											
	12. Officer		13. Time Arrived		14. Time Cleared		15. Time on Call					
21. Date/Time Cleared							Invest	Report	Booking	Other	Total	23. Date/Time Dispatched
16. Case Status		a. <input type="checkbox"/> Open b. <input type="checkbox"/> Closed c. <input type="checkbox"/> Unfounded		17. Total								18. Dispatcher

END