EVALUATION OF COMMUNITY CRIME/ PROBLEM RESOLUTION THROUGH POLICE DIRECTED PATROL FINAL REPORT

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CHAPTER 1

LITERATURE REVIEW

AND PROBLEM STATEMENT

INTRODUCTION

The police service is changing. It is moving from just handling incidents to a problem-oriented approach (Goldstein, 1979; Eck and Spelman, 1987). It is trying to establish closer relationships to communities (Skolnick and Bayley, 1988). And it is trying bottom-up decisionmaking (Brown, 1988; Couper and Lobitz, 1988; Wadia and Kolender, 1988). Early research focused on patrol management. Building on ideas stemming from these studies, later research efforts focused on problem-oriented policing. This follows this historical development by first describing the patrol management studies and their findings, then looking at the development of a problem-oriented approach.

PATROL MANAGEMENT

Until recently, patrol effectiveness rested on two assumptions: that marked patrol cars deter criminals, and that rapid response catches them. The Kansas City preventive patrol experiment (Kelling, et. al., 1974) questioned the first assumption. The study also showed that the public was unaware of the level of patrol coverage. Though some people have questioned the methods used in this study (Larson, 1976; Feinberg, et. al., 1980), other studies came to the same conclusions (Dahman, 1975; Schnelle, et. al., 1975; Schnelle, et. al., 1977; Lewis, et. al., 1977; and Wagner, 1978).

Researchers also attacked the response time assumption. The first research supported the widespread use of rapid response (Isaacs, 1967), but biased data formed the basis for the findings. Spelman and Brown (1984) estimated that there was little chance that the data used was representative of all crime calls.

In 1980, the Kansas City Police Department conducted the first research on the entire response time continuum -- from the moment a citizen could report a crime, to the operators receiving the call, to the dispatchers sending a police car, until a patrol officer arrived and contacted the complainant. The results showed that rapid response made little or no difference in catching offenders (Kansas City Police Department, 1980). Spelman and Brown (1984) confirmed these conclusions in four other cities. Finally, Pate (1976) demonstrated that response time, in and of itself, does not affect citizen satisfaction. Instead, satisfaction depends on the difference between the actual response time and the caller's expectation of how soon an officer will arrive (McEwen, et. al., 1986).

These studies led some police managers to look for ways of improving effectiveness. They found three complementary methods:

- Direct patrol efforts;
- Analyze crime patterns; and,
- Manage calls for service.

If random patrol produced little, directing patrol efforts might produce more. With directed patrol programs, supervisors could tell their officers to pay close attention to areas where they could deter offenders or apprehend them.

To give these directions, managers must have information about patterns of criminal behavior. Police managers took increasing interest in using crime analysis units to look for these patterns. The units would locate areas where many crimes occurred in a short span of time. They would also detect patterns

that could identify offenders. If managers provided officers with this information, the officers might catch more criminals in the act of committing offenses.

Officers needed time to carry out directed patrol assignments. Managers, therefore, had to wrest control of patrol workloads from dispatchers and 911. The response time research helped them. It implied that rapid responses were not needed for most calls. In fact, reports on many minor incidents could be taken over the telephone without jeopardizing citizen satisfaction. Patrol workload could be reduced significantly by establishing telephone report units.

Further, for many calls where a personal response was needed or requested, call-takers could set citizens' expectations of when an officer would arrive. Slower police responses to nonemergency calls would satisfy citizens if call-takers told citizens an officer would not arrive right away. Delaying responses could help managers organize officers' time into useful blocks. Officers could use these blocks of time to conduct directed activities.

Managers could create even more directed patrol time by having nonsworn employees handle non-crime incidents. For example, non-sworn employees could be used to help motorists locked out of their cars or to investigate minor traffic accidents. In short, by creating differential response policies, police managers were able to capture and manage time.

Together, the three methods could make patrol officers more effective. Police managers would free up time with differential response policies. Crime analysis units would detect patterns. Supervisors would use this information to direct officers activities toward high crime areas and specific offenders. But

these methods would only increase effectiveness to the extent that they departed from existing practice and did not merely formalize what police had been doing informally for years.

These methods also would force changes in the management structure of patrol work and focus attention on crime. The methods would shift the control of officers from radio dispatchers to shift supervisors and middle managers. Office-bound analysts would support the supervisors and managers. Managers and analysts would direct officers' actions toward crimes and away from other calls. As a result, officers would become more enforcement-oriented.

Next we will look at these three methods in greater detail, see how they were implemented, and review their effectiveness.

DIFFERENTIAL RESPONSE

In most U.S. cities, anyone can call for police help, for almost any reason, and get an officer. These constant interruptions, most of which were for relatively minor events, may have kept officers from fighting crime, their principle mission. Further, calls for service were increasing annually. The police could no longer provide rapid service to all calls. At the same time, local governments became increasingly concerned about raising taxes, and the need for the police to control costs became critical.

Jacob and Lineberry (1982) studied rising crime and government actions in 10 cities. They found that the number of police per capita remained roughly constant from 1948 through 1978. During this time, calls for service increased substantially. The number of officers hired by the cities sometimes kept pace with the calls, but could not keep up with crime increases. During the same period, the ratio of officers to property crimes dropped from .11 to .03 and the

ratio of officers to violent crimes plummeted from 3.22 to .5. In this environment, improving the efficient management of calls was of primary importance. Increasing effectiveness was of lesser concern than trying to handle increasing workloads without adding more officers.

"Doing more with less" thus became the primary rationale for adopting differential response measures. Many departments began diverting selected non-emergency calls from immediate mobile response units to alternatives, including telephone report units and delayed patrol responses. These differential response methods became some of the first changes brought on by the patrol research. Today they have become almost a standard part of policing.

Even in times of fiscal restraint, some departments made attempts to improve their effectiveness. In Wilmington, police and researchers tried two approaches to achieve this. The first approach was an explicit attempt to improve crime control effectiveness. The department split the patrol force into two groups. One group continued to handle calls. The second group prevented crime by focusing on high crime areas and offenders. A crime analysis unit supported the second group (Tien, et. al., 1978).

To support this effort, the police department changed some dispatch procedures. It created a priority system for handling calls and allowed delayed responses to non-critical calls. It also increased the number of single officer cars. These changes increased arrests, and may have reduced crime (Tien, et. al., 1978).

In some ways, a split force is only a small break with tradition. Managers find a special patrol problem and create a separate tactical unit to deal with it. The remainder of the patrol force continues to handle calls and the special

unit conducts proactive activities. The Wilmington study broke ground, however, by explicitly separating the police call handling function from the crime control function.

Although these tactics may have increased effectiveness, police managers and researchers continued to focus on efficiency, for the fiscal reasons cited earlier. They tried to keep the same level of output (for example, arrests) by reducing the time spent on call handling. The second approach tested in Wilmington attempted to do this by managing the demand for police service. Wilmington police used several means: delayed responses, mail and walk-in reporting of incidents, and specialist officers to take reports at an appointed time. The evaluation showed that many calls could be diverted from immediate patrol responses. Further, these time saving measures did not reduce citizen satisfaction (Cahn and Tien, 1981).

At the same time, Farmer (1981) compiled a list of differential response methods. He used data from a national survey of police agencies and surveys of the public. Working with the Birmingham Police Department, he outlined a system of alternatives for handling calls. With this system, police managers could set response policies based on two criteria: the degree of injury or loss, and the time between the event and the call. Dispatchers would apply alternative responses to minor events that occurred a long time before the caller notified the police. Serious events that were in progress or had ended recently would get a quick patrol response.

McEwen, Connors, and Cohen (1986) evaluated an implementation of differential response methods in Charlotte, North Carolina; Toledo, Ohio; and Garden Grove, California. The DPR methods tested were not identical to Farmer's model. Each agency applied several differential response methods to varying call types. The

evaluators found that these tactics could save patrol time and maintain citizens' satisfaction with the police. Telephone report taking for incidents saved the most time. Mail-in reporting was one of the least useful methods. Delayed responses did not save time, but this tactic did help manage the time available.

Many police agencies have differential response policies, although types of responses and types of calls receiving these alternatives vary. The need to cope with an increasing workload may be the principle reason for police acceptance of these tactics.

CRIME ANALYSIS AND DIRECTED PATROL

To improve their ability to control crime, many departments turned to directed patrol efforts. From the first, crime analysis supported these efforts (see for example, Kansas City Police Department, 1974). The Wilmington split force study (Tien and Larson, 1978) combined differential response, crime analysis, and directed patrol. Through the federally-funded Integrated Criminal Apprehension Program (ICAP), directed patrol and crime analysis concepts spread throughout policing.

Crime Analysis

Directing patrol officers to crime-prone areas or people is hard to do without information highlighting productive targets. Crime analysis units were to supply this information (Reinier, et. al., 1976). These units focused on crimes, but only some crimes. Typically, analysts tracked only such offenses as burglaries, robberies, sexual assaults, and car thefts.

Crime analysis units worked primarily from official police records. Crime reports, arrest reports, field interrogation forms, and other routine paper work were their primary data sources. Analysts tabulated crimes by time-of-day and

day-of-week to find trends. They mapped offenses to find patterns and attempted to find individual offenders by linking similar crimes. They reported the results of their efforts to patrol supervisors.

The evaluation results of ICAP were surprising--crime analysis in support of patrol contributed little to making arrests (Gay, et. al., 1984). There were a number of reasons for this finding.

Crime analysis has some inherent difficulties. By limiting the focus of these units to a few crime types, police managers ignored other serious problems. For example, a unit might track robberies but miss drug dealing. Crime analysts reviewed official police reports to pinpoint targets but seldom attempted to find other sources of information, inside or outside the police department. For example, analysts did not talk to citizens in neighborhoods with crime problems. Officers who worked the streets felt they knew of developing crime patterns before the analysts, and "patrol supervisors and their commanders provided no operational support even when they received crime predictions based upon sound analysis" (Gay, et. al., 1984).

Possibly the biggest problem of crime analysis units was there was little demand for the information they supplied. As Gay and his colleagues (1984) pointed out, most patrol supervisors do not see a need for information they feel is often out of date, misleading, and limited. To make crime analysis useful, supervisors and officers must believe the information provided is critical to their work.

Directed Patrol

Directed patrol has been the subject of a number of studies. All of them suggest that officers can increase arrests if managers give them the opportunity to do more than handle calls. However, only one study has reported a decrease in crime in connection with directed efforts, and the authors are not sure the crime decrease was due to directed patrol.

The New Haven Police Department attempted one of the first directed patrol experiments. Using crime data and maps, crime analysts created very specific routes for officers to follow. Further, officers were to take these routes at precise times during their shifts (Gay, et. al., 1977). The rigidity of this program led to its abandonment (Sweeney, 1977). As in many similar efforts, managers did not conduct a systematic evaluation.

In 1976, Pate and others reported on an attempt to use crime analysis information to focus attention on criminals. The Kansas City police took three approaches to increasing arrests. A special unit watched locations frequented by criminals. Another special unit watched criminals. A special analysis unit supplied both of these units and regular patrol officers with information on suspects. The most cost effective approach, in hours of work per arrest, was giving the information to patrol officers.

In the Wilmington split force experiment, managers separated part of the patrol force to attack crime. Again, crime analysis helped direct officers' attention to crime-prone areas and people. Officers produced many arrests, and may have reduced crime (Tien, et. al., 1978).

Finally, Connors and McEwen (1984) evaluated a directed patrol effort in Garden Grove, California. This effort also yielded a significant increase in arrests. The evaluators did not look at the impact on crime.

Fennessy (1983) found that almost three-fourths of the police agencies serving 100,000 or more people had some form of directed patrol. Most agencies reported that officers were on directed patrol for an average of one hour per shift. Fennessy reported a large variation in these programs, however. Some were formal programs with established procedures, while others were conducted on an "as needed" basis.

From these directed patrol studies we learned that officers have the capability to increase arrests. We have learned little about whether these efforts can address crime problems or other problems. One reason we know so little about the crime control capabilities of directed patrol is that evaluators seldom tried to measure it.

PATROL MANAGEMENT CONCLUSIONS

Studies of police efforts to change patrol operations have yielded useful results. Differential response studies showed that managers can efficiently manage calls for service. Officers did not have to be at the mercy of 911. Crime analysis did little to improve effectiveness, but it did introduce many police agencies to the use of data analysis to support patrol operations. Directed patrol efforts showed police managers that officers can be productive when they are not handling calls.

This line of inquiry--differential response, crime analysis, and directed patrol--had three shortcomings. First, it focused on crime. Although crime reduction was the implicit objective of these programs, there is little evidence that the programs reduced it. No one showed what the increases in arrests

achieved. Further, the tactics used to address crime problems were almost always arrest-oriented. The studies report no systematic efforts to look for other ways to handle problems.

Second, crime analysis units studied only police reports to determine crime problems and appropriate tactics. Managers seldom worked with the public and other agencies to identify problems and devise solutions. In general, police did not handle community problems unless they fit the police definition of a problem.

Finally, managers, supported by office-bound analysts, told supervisors and officers what to work on. Managers seldom built systems to tap officers' knowledge of what was occurring on the streets. As a result, management attempts to impose crime analysis and directed patrol on patrol supervisors often met with failures.

To deal with these difficulties, police managers needed a different approach to the police function. Specifically, they needed to reconsider effectiveness.

PROBLEM-ORIENTED POLICING

Effectiveness measures describe how well organizations achieve their missions. In the United States, police have adopted the principle mission to control crime and maintain order. Most believe they can best carry out this mission through legal systems such as traffic courts, criminal courts, the juvenile justice system, and others (Fogelson, 1977). The performance measures administrators use to assess effectiveness -- how fast officers get to victims, the numbers of arrests made, and the percent of cases cleared, for example -- derive in part from the police focus on the legal system to control crime and disorder (Goldstein, 1979).

Throughout the 1950s and 1960s, scholars and researchers questioned this view of police work. They noted that police officers do not apply the law in all cases to which they could apply it (Goldstein, J., 1960). In short, scholars discovered "police discretion." Their findings led to a debate over the nature, role, and control of police discretion. Some scholars proposed that police administrators develop policies to guide officers' actions (Davis, 1975; Goldstein, 1977). This idea stimulated managers' interest in policies, leading in turn to the establishment of the Commission for Accreditation of Law Enforcement Agencies (Mastrofski, 1986).

To help officials clarify the actions their officers should take in various circumstances, Herman Goldstein (1979) looked at the meaning of police effectiveness. He proposed that the nature of the police mission is to handle problems of concern to the public. Many of these problems are crime-related, but many others are not.

Police officials, Goldstein (1979) argued, define effectiveness by the means they use to address crime problems. Instead of seeing law enforcement as one of many means for achieving police ends, police view law enforcement as an end in itself. Goldstein called this the "means over ends syndrome." One symptom of this confusion is that police officials measure effectiveness by response time, arrests, clearance rates, and other statistics that describe activities. Because of the "means over ends syndrome," police officials do not use alternatives to the legal systems that might help them handle problems.

To find the most appropriate methods for handling problems, police managers need to conduct thorough studies of problems. Managers should look at the behavioral characteristics of problems -- specific actions people take -- instead of relying on legal definitions. To do this, they will need to expand their

information sources. Goldstein (1979) specifically advocated tapping the knowledge of street officers and community members. This would assure that managers understood the perspectives of the people with a stake in the problem.

Goldstein called this "a problem-oriented approach to policing." Because he saw it as a means for developing useful policies to structure discretion, he described it as a management function (Goldstein, 1979).

Goldstein and Susmilch (1982) conducted the first test of this theory in Madison, Wisconsin. Members of the police department, assisted by the study team, addressed two city-wide problems: drunk driving and sexual assaults. The study showed that police managers could learn much from problem analysis, and this knowledge was useful for policy formation. It also revealed that a problem-oriented approach may be difficult to achieve.

A study conducted by the London Metropolitan Police led to similar conclusions (Hoare, et. al., 1984). London police officials wanted to "evaluate the feasibility of adopting the 'Problem Oriented Approach.'" They decided to pilot test the approach on four neighborhood problems: Asian gangs, auto thefts, thefts from shoppers, and prostitution. Police managers assigned one or more line officers to analyze these problems. Additionally, headquarters created a team to study the problem-solving process and make recommendations to the Commissioner. The team made its report before solutions to these problems became apparent. Even so, the study team felt that problem-oriented policing was a strategy the agency should pursue.

London police placed problem analysts in division stations. At the time of the London pilot tests, a division had roughly as many constables as Madison had officers. Consequently, in both places there was still too much distance between problem analysts and the street.

In Baltimore County, the police department created the Citizen Oriented Patrol Enforcement (COPE) project, with three units of 15 officers each. These units worked with communities to solve fear of crime problems.

Cordner (1985) evaluated COPE and found that community members were less fearful after COPE officers had addressed their problems than they were before COPE had intervened. Furthermore, reported crime in problem neighborhoods dropped after most of these efforts.

Cordner also looked at the way COPE officers addressed problems and their impact on problems. At first, COPE officers relied on saturation motorcycle patrols and citizen surveys. Cordner found that this was frustrating for the officers and their problem-solving efforts were only slightly effective. When COPE then added more emphasis on providing crime prevention information, the effectiveness of the problem-solving efforts increased. Finally, the department tried a problem-oriented approach. COPE officers designed tailored solutions to neighborhoods' problems by seeking the assistance of other county agencies as well as citizens. Cordner (1985) reported that operating in this manner, COPE became even more effective.

COPE changed the nature of problem-oriented policing. Baltimore County was the first police agency to routinize this approach. It also continued the trend, begun with the London tests, of making problem-oriented policing a part of line operations.

In 1984, the Newport News Police Department began an effort to apply problem-oriented policing agency-wide as its standard police strategy. The department developed a problem-solving process that could be used by anyone in the department on any problem. The process had four stages (Eck and Spelman, 1987):

- **Scanning**, the detection of problem circumstances;
- **Analysis**, gathering information about the problem;
- **Response**, developing and implementing a solution; and,
- **Assessment**, evaluating the response's effectiveness.

In Newport News, information identifying problems came from many sources. These sources included officers' experience, crime analysis, citizen complaints, repeat calls, citizen meetings, and others. Officers' analysis of problems showed similar diversity, but during this stage officers were more systematic about the data they collected. They also relied heavily on other city agencies and private organizations. The department encouraged officers to be creative in the solutions they selected and to look further than novel methods of enforcing the law. Some officers did look beyond traditional approaches, but others did not. Finally, officers were supposed to collect information to determine whether their responses were effective. Again, a few officers did try to evaluate their responses (Eck and Spelman, 1987).

Patrol officers and detectives were able to address problems as part of their assignments, but they needed first-line supervisors' encouragement and supportive department policies.

Further, patrol officers and detectives were effective at solving problems. They substantially reduced several seemingly intractable problems that had existed for many years. For example, they reduced thefts from vehicles in a large set of parking lots by 55 percent, cut robberies in a prostitution zone by 40 percent, and reduced burglaries in an apartment complex by 35 percent. Officers also got rid of or reduced a number of smaller problems. Problems ranged from minor disorders to burglary and robbery. Some involved neighborhoods only, while others affected the entire city. To solve problems, officers asked for and received help from neighborhood residents, city agencies, businesses, and other groups (Eck and Spelman, 1987).

The Newport News study showed that implementing problem-oriented policing is not simple. To be successful, a department must provide an infrastructure that supports and encourages problem-solving efforts. Agency administrative procedures such as shift schedules, call priorities, goals and objectives systems, and beat integrity all influence officers' abilities and motivations to engage in this type of work. Departments must train supervisors and managers in problem-solving methods. Mid-level managers must actively promote these efforts by making sure that officers identify and carefully analyze problems. The department must encourage the use of multiple information sources for problem analysis. Similarly, the agency needs to encourage officers and supervisors to work with citizens and other agencies to develop solutions. Finally, problem evaluations should become part of agency performance measurement (Eck and Spelman, 1987).

Problem-oriented policing has been linked to community policing. Both emphasize police/citizen cooperation. Problem-oriented policing addresses the mission of police agencies: the services they deliver. The unifying feature of community policing and problem-oriented policing is the value police put on becoming closer to the public they serve. These are complementary viewpoints, and both views have influenced one another. Skolnick and Bayley (1988) describe the relationship between these two police strategies this way:

> Quite obviously problem-oriented policing can and often does incorporate elements of community policing, especially when it involves close interaction with local residents or flexible use of resources by area commanders. But problem-oriented policing is not necessarily community-oriented, as, for example, if electronic bank teller fraud were to be identified as a problem deserving special attention. Correspondingly, community-policing does not necessarily involve a "problem" focus.

> In terms of encouraging reform of policing, "problem-oriented policing" may be a better rallying cry than "community policing." "Problem-oriented policing" connotes more than an orientation and the taking up of a particular stance. It implies a program, suggesting what the police need to do.

PROBLEM-ORIENTED POLICING CONCLUSIONS

Though it has been discussed for over ten years, researchers and practitioners have conducted few studies of problem-oriented policing. Those which have been conducted indicate that it can improve the effectiveness of police handling of crime and non-crime problems. The Newport News study suggests that this approach to police work can be carried out by department members assigned to patrol and investigative functions. However, officers must have sufficient time, support, and direction. They are being asked to not only solve problems between handling calls and performing other duties, but to place greater importance on problems identified by the community, whether or not these problems are directly related to crimes. The Newport News experience and the literature suggest a strong role for patrol management in this process. Specifically, there is a need to explore how differential response, crime analysis, and directed patrol efforts can assist officers address problems.

CHAPTER 2

PROJECT OVERVIEW AND BACKGROUND ON THE STUDY SITE

INTRODUCTION AND PROJECT OVERVIEW

The Baltimore County Police Department is a large department with a mix of urban and suburban policing problems. The department is well known for its use of innovative police practices and specialized units. The COPE unit has received nationwide recognition for using a problem-oriented approach to solve fear of crime and other community problems. After several years experience with COPE, department administrators were strongly committed to integrating problem-solving into the patrol function.

One of the findings from the Newport News study on problem-oriented policing was that differential response, crime analysis, and directed patrol can assist a police agency implement a problem-oriented approach (Eck and Spelman, 1987). Differential response methods can lessen the call handling load of officers so they have time to address problems. Crime analysis can assist problem-solving by providing information at the scanning, analysis, and assessment stages.

Directed patrol can also assist problem-solving, if its objectives and range of tactics are expanded. Instead of focusing only on crimes, officers on directed patrol assignments, if encouraged to do so, could address a broader array of citizens' concerns. Instead of relying only on crime analysis information, supervisors could use information from other sources, inside and outside the police agency. And instead of applying standard police tactics only, directed patrol efforts could employ traditional and non-traditional tactics.

The National Institute of Justice funded the Institute for Law and Justice (ILJ) and the Police Executive Research Forum (the Forum) to link differential response, crime analysis, and directed patrol. Project objectives were to increase the amount of patrol officers' uncommitted time, develop a *problem* analysis capability, and direct the use of uncommitted patrol time more efficiently and effectively.

Problem-solving was introduced in the three precincts that comprise the department's patrol Area I. The study was conducted between January 1987 and August 1988.

All Area I patrol officers and supervisors first received training in the problem-solving process. In Woodlawn precinct, police service officers (PSOs) were introduced to free up officer time for problem-solving while on directed patrol. Woodlawn supervisors could also "set up" cars; that is, tell communications a car was available for emergencies only so the officer could work on a problem-solving project. Garrison precinct was also authorized to set up cars but had no PSO's. Wilkens precinct had neither PSOs nor the ability to set up cars. Comparisons among the three precincts were made to determine whether time, management, or direction had the strongest influence on problem-solving.

The rest of this chapter first presents demographic information on Baltimore County and the police department. It then provides background information on the department's computer aided dispatch (CAD) and differential response systems. Also included are descriptions of several special units that either played a role in this project, or have the potential to assume a stronger role in problem-solving in the future.

Chapter 3 describes the project objectives, evaluation design, and major tasks. Chapter 4 presents our findings on the time patrol officers had available for problem-solving while on directed patrol.

Chapter 5 contains a detailed explanation of the problem-solving process in Area I, including comparisons among the three precincts on how problems were addressed. Chapter 6 contains 11 case studies of problem-solving projects. The case studies are not a representative sample of projects but, rather, were selected to illustrate various aspects of the problem-solving process (problem identification, analysis, response, and assessment).

Chapter 7 presents a summary of findings and conclusions about time, leadership, problem analysis support, and the types of problems appropriate for directed patrol problems-solving. In Chapter 8, we offer some recommendations for other departments interested in organizing department-wide problem-solving by officers on directed patrol.

DESCRIPTION OF THE STUDY SITE

Baltimore County borders the City of Baltimore on three sides. It extends north to Pennsylvania, east to the Chesapeake Bay, and west to Carroll County, a total of 610 square miles. The 1987 census figures show a population of 677,600.

The characteristics of the county range from urban and industrial in the east to rural and agrarian in the west and north. In addition, there are 173 miles of waterfront along the Chesapeake Bay. The county is accessible by four major interstate highways, and the Metropolitan Transit Authority operates a subway system with three stations in the county.

In 1988, the Baltimore County Police Department had 1513 sworn officers and 483 civilian and paraprofessional employees (Baltimore County Police Department Statistical Profile, May 1988). Field services in the department included nine precincts under three patrol areas, as follows:

Area I	Area II	Area III
Wilkens	Towson	Essex
Woodlawn	Cockeysville	Northpoint
Garrison	Parkville	
	White Marsh	

The project was implemented in the three precincts that comprise Area I. Wilkens (precinct 1), Woodlawn (precinct 2), and Garrison (precinct 3) are located on the western side of the county and include both suburban and rural areas. Both Garrison and Woodlawn have experienced some residential development in recent years, and all three county subway stations are in Garrison precinct. Wilkens, however, is characterized by older, established neighborhoods. All three precincts share boundaries with Baltimore City.

About one-third of the patrol officers in field services, or approximately 350 officers, are assigned to Area I. Although Area I comprises about 35 percent of the county's total land area and population, it has the highest levels of crime and workload in the county. In 1987, 52 percent of all robberies, 40 percent of all burglaries, and 53 percent of all auto thefts occurred in Area I. Of the total Part I crimes reported in 1987, about 41 percent occurred in Area I.

Each patrol area is headed by a major who reports to the field services commander (a colonel) at headquarters in Towson. The precinct commanding officer is a captain who reports to the patrol area major. The patrol officers at the

precincts are divided into four shifts, each with one lieutenant and two or three sergeants, a total of about 20 to 25 personnel per shift. The shifts rotate weekly.

In recent years, the department has pilot-tested alternatives to weekly shift rotation. In addition, the chief of police will allow individual precincts to adopt different work schedules if a majority of personnel agree on a reasonable alternative (no such change occurred during this project). As might be expected, weekly rotation required shift supervisors to make temporary adjustments in some officers' schedules so they could follow through on certain problem-solving activities.

CAD SYSTEM

Before the study began, a new CAD system was installed. Beginning in November 1987 and for the next seven months, there were technical problems with the system and department personnel were not able to retrieve certain data. The effect this problem had on various aspects of the project are mentioned throughout this report. Fortunately, many of the technical problems were resolved by July 1988. By the end of the study, we were able to use CAD data to make reliable calculations on unit utilization and the probability of officers having free time between calls.

DIFFERENTIAL POLICE RESPONSE (DPR)

The department has implemented a DPR system throughout the precincts and maintains a DPR task force under the command of the Area I major. DPR activities are divided into specific sections, each the responsibility of a captain. The task force meets frequently to assess progress and plan strategies for improving personnel management.

Telephone Report Unit

The department implemented a Telephone Report Unit (TRU) several years ago to reduce the time officers spent gathering information about nonemergency incidents. Calls for service are screened according to written guidelines and diverted to the TRU when appropriate. A report is then taken by telephone rather than dispatching a mobile unit.

According to the department, the TRU has met with some success, but requires further evaluation. During the study, there was some concern that the call screening instrument was too limiting and that additional calls might be appropriate for alternative responses. The department was not able to resolve this issue during the project because it lacked enough data on calls for service, a result of difficulties with the new CAD system.

Delayed Response

This concept was implemented to better manage patrol officer time by delaying the response to certain nonemergency calls for service. According to a survey conducted for this project, most officers and supervisors support the delayed response concept.

A key to appropriate delayed response management is call screening. The department conducted a survey to determine the extent to which calls for service were delayed, and found that fewer calls than expected were considered appropriate for this response. At the end of our study, the department was conducting an assessment to determine if additional responses could be delayed.

Calls for Service Response Analysis Group

To effectively implement DPR, the department also has a calls for service response analysis group. The group reviews all categories of calls to which patrol officers respond and determines whether the response is appropriate, or whether the calls could be better handled by another procedure or agency.

A potentially valuable tool for problem-oriented policing, the analysis was hampered during the study due to insufficient CAD data. The analysis resumed after the CAD system problems were addressed.

SPECIAL UNITS

Citizen Oriented Police Enforcement (COPE)

COPE was implemented in July 1982 as an experimental policing strategy to identify and reduce fear of crime in the county. The department's Operations Order 1-87 defines COPE's mission as "the identification and reduction of citizens' fear by closely interacting with the community and engaging in crime prevention, criminal apprehension, and other activities which might reduce fear in the target area."

COPE's main objectives are: (a) to identify, through a problem-oriented approach, the apparent underlying causes of fear and community instability from both a police and citizen perspective, (b) to stabilize troubled communities by creating a highly visible police presence or by using other order maintenance techniques, and (c) to alleviate the causes of fear and community instability by initiating appropriate actions, either through the government or the private sector.

There are three COPE units, one assigned to each patrol area under the direct supervision of the patrol area commander. A total of 39 police officers, three sergeants, and three lieutenants were assigned to COPE in 1987.

The department has received numerous awards as a result of COPE's work. In 1984, COPE received the Outstanding Achievement Award from the National Association of Counties (NACo) and the Maryland Governor's Certificate of Merit. The Baltimore County Executive awarded COPE with an Executive Citation in 1985. In 1987, the National Organization for Victim Assistance recognized COPE's outstanding performance in the aftermath of a tragic train crash in the county.

Department policymakers consider COPE a "springboard" for implementing the problem-oriented approach to policing throughout the department. A department document describing COPE includes a statement about the unit's role over the next five years, "to serve as a facilitator in the transition of other police functions to substantive problem-solving."

It is clear that COPE enjoys the support of department administrators and that many managers are committed to the concept of problem-solving, at least as far as COPE is concerned. In keeping with the facilitator role, a COPE officer was assigned to conduct problem-solving training for patrol officers in Area I as part of this study.

Although COPE has been operational for about six years and is considered successful, the department recognizes areas of concern. The same document that lists COPE's awards also discusses the unit's weaknesses. A number of these critical statements are relevant to department-wide problem-solving:

- Personnel in traditional police functions (patrol) regard COPE's problem-oriented approach as reducing police personnel availability to handle calls for service and the performance of enforcement activities.

- Acceptance of COPE's philosophy by long-standing police operations, particularly patrol, has been slow.
- Poor problem-identification skills, limited mostly to crime analysis or some vague referral, greatly reduces COPE's chances of thoroughly identifying communities in fear before incidents occur.

Some of the evaluation results contained in this report are consistent with these statements, and indicate that the weaknesses have not been completely addressed. When the study began, the evaluators were aware that COPE had not achieved a high level of acceptability with patrol. We were concerned that patrol officers might reject the problem-solving concept because of its association with COPE, or because of a perception that problem-solving is "COPE's job." Thus, a number of steps were taken to make officers aware that, although COPE uses problem-solving to reduce fear of crime, the same techniques can be used to solve a variety of crime and community problems.

Crime Analysis

The department approaches crime analysis from two perspectives. First, there is a crime analysis unit at headquarters, where analysts are assigned to the project management and analysis section of the planning and research division. Second, a crime analyst is assigned to each precinct. This analyst reports to the precinct commander through the chain of command.

The headquarters crime analysis unit began operation in 1984. The unit's objectives as stated in Special Order 7-84 are:

- To provide timely crime pattern bulletins from which field forces can be deployed to make on-scene apprehensions or disperse the crime.
- To provide timely investigative leads by furnishing a list of suspects whose methods of operation (M.O.) match current offenses which may lead to arrest or identification of the suspects responsible.

- To correlate the M.O. of arrested suspects to other current offenses which may lead to multiple clearances of these cases.
- To identify crime patterns in which directed patrol and crime prevention techniques could have a positive impact.

These objectives are applied in a county-wide format and information is forwarded to the precincts.

The crime analysts assigned to the precincts perform in a similar manner on a precinct-wide basis. However, in addition to their crime analysis duties, they are responsible for a variety of administrative tasks. These may include: producing daily attendance reports, ordering precinct supplies, maintaining adequate stock of precinct forms, maintaining all precinct equipment in good working order, attending budget meetings, preparing annual budget requests, coordinating quarterly line inspections, and completing bi-monthly petty cash reports.

Frequently, these administrative tasks consume as much as 70 percent of the precinct analysts' time. In addition, these analysts did not have all the tools they needed to assist with problem-solving, since the CAD and POSSE systems were not fully operational during the study. Thus, the precinct crime analysts' role in the experiment was much more limited than originally anticipated.

An exception to this was Wilkens precinct analyst, who installed a personal computer that was independent of the department's system. The analyst, working closely with the Wilkens crime prevention officer, developed programs to track crimes and create other reports. Many of the problem-solving projects at Wilkens were initiated as a result of this analyst's work.

Community Relations and Crime Prevention

One crime prevention officer and one community relations officer are assigned to each precinct. Their involvement with the study was minimal except at Woodlawn precinct; however, their duties make them a potential resource for the problem-oriented approach. According to department memos, the community relations officer:

- Provides a link between area citizens and the police department for information and interpretation of laws.
- Provides information on the function of other agencies to assist citizens as needed.
- Meets with community groups to address problems that concern the police department.
- Coordinates information between shifts on recurrent crime and community problems.
- Provides services when crime trends or community problems occur.
- Provides services to citizens with minor complaints about the police department.
- Provides seminars to area citizens on personal and home safety.

The crime prevention officer, in addition to handling the neighborhood watch and "McGruff" programs, has responsibilities for the following:

- Attending community meetings.
- Performing security surveys for the public and businesses.
- Providing anti-crime seminars to businesses.
- Organizing and attending block meetings.

The crime prevention officer and community relations officer, like the crime analyst, are also assigned a variety of administrative duties.

CHAPTER 3

PROJECT OBJECTIVES, EVALUATION DESIGN, AND MAJOR TASKS

INTRODUCTION

This project tested the theory that one of the most efficient and effective strategies to reduce crime is to (1) broaden traditional crime analysis to include identifying community and business problems; and (2) implement strategies to solve these problems by making more effective use of the existing patrol force through directed patrol.

The critical project elements included freeing-up as much patrol time as possible by expanding the use of alternative means to handle calls for service, modifying the crime analysis function to include problem analysis, training field patrol personnel in problem-solving, and requiring patrol officers to use problem-solving strategies while on directed patrol.

PROJECT OBJECTIVES

The NIJ research program goal, simply stated, is to gain and distribute knowledge about improving police performance. This project sought to determine whether performance would be improved by making more efficient and effective use of patrol officers' time, and by increasing patrol's responsiveness to community and business problems. The project objectives and major tasks are explained below:

- **Increase the amount of patrol officers' uncommitted time by expanding the department's alternatives for handling calls for service.**

This objective was accomplished when the department employed four police service officers (PSOs) to handle routine calls and other duties that did not require the efforts of sworn officers. As explained in Chapter 2, the

department's differential police response (DPR) task force met regularly to review other call-handling alternatives, but did not make any changes during the study that had a significant impact on patrol workloads.

- **Develop an analytical capability that enables patrol to identify and resolve community and business problems and crimes.**

Developing analytical tools for patrol included obtaining computer runs of repeat calls for service by address; developing forms and procedures to document problem-solving efforts; training Area I supervisors, crime analysts, and patrol officers in the problem-solving approach; encouraging an expanded role for crime analysts as "problem analysts;" and meeting regularly with project personnel to resolve difficulties and monitor progress.

- **Develop a manageable system to direct the use of uncommitted patrol time more efficiently and effectively.**

To translate theory into practice, the department needed a coordinated system for managing all project resources. The following additional objectives were developed to clarify what we expected this system to accomplish:

- Increase the productivity of patrol officers when they are not handling calls for service (efficient use of time).
- Increase the number of crime and community problems solved by requiring officers on directed patrol to solve problems in a systematic way (effective use of time).
- Improve patrol management's ability to control and monitor officers' activities and assure that resources are directed toward department objectives (management control).

Most of the tasks during the planning phase were devoted to developing procedures to accomplish these objectives. During implementation, the daily responsibility for managing officer time and problem-solving projects fell to the shift lieutenants and sergeants. The next section discusses the hypothetical outcomes tested during the study.

PROJECT EVALUATION DESIGN

Hypotheses about Management and Problem-Solving

Three hypotheses were tested with respect to the influence of patrol management on problem-solving:

1. **Time-effectiveness:** To solve problems in the field, officers' call workloads need to be reduced to give them time to accomplish the required tasks. Without reducing patrol workload, little or no problem-solving can take place.

2. **Management-effectiveness:** Except for peak call periods, officers generally have sufficient time for problem-solving, but the available time must be more effectively managed and blocked together by supervisors.

3. **Direction-effectiveness:** Top management must stress the importance of patrol officer problem-solving if the philosophy is to succeed. With the exception of supporting the specialized COPE unit, top management had not effectively pursued problem-solving by patrol. If department executives prioritize patrol problem-solving, it will be implemented.

We realized it was unlikely that only one hypothesis would be correct. Clearly, time is needed and this time needs to be managed. Further, little in a police agency, or any other organization, can be accomplished without strong direction, especially when the activity is based on a relatively new approach. More likely, all three hypotheses would be true, but to varying degrees. This study was designed to show the relative importance of the three hypotheses within the context of one police agency.

Interventions Common to All Three Precincts

To ensure that all Area I supervisors understood what problem-solving was and knew how to carry it out, sergeants and lieutenants from all three precincts received training. The training was similar to that conducted in Newport News as a part of the Forum's Problem-oriented Policing Project. The Area I commander addressed each training session to express his commitment to the problem-solving project and to demonstrate that this was a department

priority. Throughout the project, department executives, the Area I major, and the three Area I precinct captains were expected to communicate this message to patrol officers and supervisors.

Testing the Time-effectiveness Hypothesis in Woodlawn

To test this hypothesis, four police service officers (PSOs) were assigned to the Woodlawn precinct. To cover the precinct's high workload periods, they worked Tuesday through Saturday on both the day and evening shifts.

The PSOs were to relieve patrol officer workload in two ways. First, they were to perform many of the nonemergency, noncriminal calls that patrol officers perform. Second, they were to perform much of the administrative work that had been required of sworn officers. This included staffing the precinct desk, acquiring and serving meals for prisoners in temporary detention, and making interdepartmental mail and car relay runs.

To capitalize on the time freed up by the PSOs, Woodlawn patrol supervisors were also authorized to "set up" cars; that is, they could tell communications that an officer was on a directed patrol assignment and was available only for emergency calls. Directed patrol assignments were to be used for problem-solving.

In Woodlawn, therefore, time could be both freed-up and managed, making it possible to assess the impact of these interventions on problem-solving.

Testing the Management-effectiveness Hypothesis in Garrison

PSOs were not assigned to Garrison precinct, so officer workload could not be reduced by this alternative; but Garrison supervisors did have the authority to set up cars for problem-solving activities. This enabled us to measure the impact of patrol management on problem-solving.

Testing the Direction-effectiveness Hypothesis in Wilkens

No PSOs were assigned to Wilkens precinct, and supervisors were not authorized to set up cars for directed patrol assignments related to problem-solving. As noted earlier, Wilkens officers were to receive the same training and direction interventions as the other two precincts. If problem-solving activities were as significant in Wilkens as in Woodlawn and Garrison, then we could conclude that direction was more important than time or management.

Comparisons

Comparisons among the three precincts would indicate whether time, management, or direction had the strongest influence on problem-solving. Exhibit 3-1 summarizes the interventions in each precinct and the hypotheses that were tested. Exhibit 3-2 shows six possible outcomes that we anticipated at the beginning of the project. They represent a comparison of the relative amount of problem-solving that might occur in the three precincts.

EXHIBIT 3-1

INTERVENTIONS IN THREE PRECINCTS AND HYPOTHESES TESTED

Precinct	Intervention	Hypothesis
Woodlawn	4 PSOs Setting up cars Direction to solve problems	Time-effectiveness
Garrison	Setting up cars Direction to solve problems	Management-effectiveness
Wilkens	Direction to solve problems	Direction-effectiveness

EXHIBIT 3-2

PROBLEM-SOLVING EFFORTS IN EACH PRECINCT AND RELATIVE IMPORTANCE OF EACH HYPOTHESIS

	MOST PROBLEM-SOLVING FOUND IN		
SECOND MOST PROBLEM-SOLVING FOUND IN	Woodlawn	Garrison	Wilkens
Woodlawn		Management Time Direction	Direction Time Management
Garrison	Time Management Direction		Direction Management Time
Wilkens	Time Direction Management	Management Direction Time	

In Exhibit 3-2, the possible levels of problem-solving effort are indicated by the columns (most problem-solving) and rows (second most problem-solving). The hypotheses in each cell are listed in descending order of importance based on the level of effort that occurs.

For example, if the most problem-solving is found in Woodlawn (first column) and the second most is found in Garrison (second row), then time is more important than management, because additional time is the only intervention not shared by both precincts. On the other hand, if Wilkens (third column) has the most problem-solving and the second most is found in Woodlawn (first row), then direction is more important than time.

The success of this design depends on our ability to measure (1) the degree to which the planned interventions were implemented, and (2) the level and effectiveness of problem-solving activities in each precinct. The process and impact measures used are discussed in the sections that follow.

Measuring the Interventions

This section describes how the project interventions -- time, management, and direction -- were measured. Exhibit 3-3 summarizes the measures and data sources used to determine the relative importance of the three hypotheses.

EXHIBIT 3-3

PRIMARY MEASURES AND DATA SOURCES

Concept being Measured	Measure	Data Source
Interventions		
Additional time	Officers' workloads PSO activities	Communications records PSO activity logs Surveys
Workload management	Setting up cars	Communications records Special forms
Departmental direction	Knowledge Attitudes Understanding	Surveys, Interviews Surveys, Interviews Surveys, Interviews
Impact Measures		
Problem-solving activities	Potential problems Problems addressed	Computer records Project files Surveys Interviews and observations
Problem-solving effectiveness	Reduction of problems	Computer records Project files Department records Interviews and observations

■ **Time.** CAD records were the main data source used to determine whether officers had enough time for problem-solving. We first calculated the average number of units fielded in each precinct for each day of the week during a "typical" month. The next step was to calculate unit utilization for each precinct. This gave us information on percent of time spent answering calls.

Other department records and information from command personnel were used to account for time not captured by the CAD system (for example, time on assists). Finally, a queuing theory model was used to determine the probability of having uninterrupted blocks of time between calls. Our methods are described in greater detail in Chapter 4.

We also needed to determine the degree to which the four Woodlawn PSOs freed up officer time. We planned to examine both the CAD data and PSO activity logs. Because of problems with the CAD system, we could not obtain reliable data on the number of calls for service officers handled before and after PSOs started work. Instead, we used data from daily time and activity logs the PSOs maintained for nine months. The logs had the advantage of capturing data on both calls and other work (for example, administrative tasks) that relieved officer workload. Project staff also interviewed the PSOs and their supervisors, who reviewed the data analysis and gave their perspectives on various aspects of the PSO job.

If PSOs responded to calls or handled other tasks that officers used to handle, then we could reasonably conclude that PSOs provided officers with additional time. On the other hand, if PSOs performed work that officers did not handle before, and officer workload did not decrease, we could be certain that officers did not gain additional time.

- Management. To determine whether supervisors set up cars for problem-solving, we relied primarily on the reports officers prepared for individual problem-solving projects. These reports were approved by shift supervisors. Included was a "progress report" form on which officers logged the time spent on directed patrol for problem-solving. When necessary, this information was clarified through interviews with shift supervisors.

If our data showed that cars were set up frequently, especially for significant blocks of time, then we could be certain that the management treatment was used. If few supervisors set up cars, this would indicate that the management treatment was not applied.

- **Direction.** The impact of direction on officers and supervisors was assessed primarily by analyzing two confidential surveys administered to all Area I field patrol officers and supervisors. These surveys were conducted at the beginning and end of the implementation phase. Results that showed an awareness of management's emphasis on problem-solving and an understanding of the concept would indicate that direction had been given. Confusion, lack of awareness, antagonism, or poor understanding of the problem-solving concept would indicate that direction had not been given or had little impact. Internal memoranda, interviews, and observation of training and planning meetings also provided information on direction.

Impact Measures

The measures described below were used to determine the impact of the project interventions (time, management, and direction) on the problem-solving that occurred from July 1987 through June 30, 1988. We examined and compared both the level of problem-solving activities in the three precincts, and to the extent possible, the effectiveness of those activities.

- **Level of Problem-solving Activity.** In general, the measures used to assess the level of problem-solving activity were:
  - Number of problem-solving projects initiated.
  - Types of problems addressed (e.g., order maintenance, property crimes, traffic problems, personal crimes, administrative problems, etc.).

- Amount and type of effort expended to identify, analyze, and respond to individual problems.
- Evidence that supervisors assessed the results of officers' problem-solving efforts.

It was also important to identify any unusual or unanticipated events that affected individual projects. During one project, for example, the complainants moved from the area. In another, a retail mall manager was not willing to follow police recommendations. In still others, new problems were uncovered that were different from or more serious than the original problems identified.

To gather information on the level of activity, we first reviewed files maintained on each problem-solving project. The degree of detail included in these files varied from precinct to precinct and project to project. Many of the officers' reports captured general background information, a statement of the problem, an action plan, major activities, personnel involved, time on activities, and results. Files on more complex projects included correspondence, data on citizen surveys, and other documentation.

Site visits by ILJ and Forum staff were also needed to obtain information not recorded in the reports, and to observe changes in conditions whenever possible. The evaluators spent an average of one day per week on site during the implementation phase.

Together, these data sources provided (1) an accurate list of problems addressed, and (2) sufficient detail to determine and compare methods of problem identification, types of problem, types of responses, and other factors.

We also wanted to be certain there were enough problems in Area I that police could address using the problem-solving approach. To do this, we compiled two lists of possible problems. First, we used 1986 CAD data to

print lists of repeat call addresses in each of the three precincts. Second, as part of our first survey, we asked officers and supervisors to identify specific problems and their locations. We then provided each precinct with lists of problems based on the CAD runs and survey results.

■ **Effectiveness of Problem-solving Activities.** In theory, a quasi-experimental design could have been used to measure the effectiveness of most problem-solving initiatives. In practice, this would have been cumbersome for several reasons:

- Many mini-experiments would have been needed, each requiring a set of measures appropriate for the problem being addressed.
- Many problem-solving initiatives by patrol officers were fast-breaking, making it difficult to apply before and after measures in the time allowed.
- For some problem-solving initiatives, effectiveness will not be apparent for a long time after a solution is implemented.
- Problems may reappear after the evaluation has been conducted. (As one commander expressed it, the solutions "don't come with a lifetime guarantee.")
- Constant evaluations by outsiders would have been intrusive. In addition to disrupting daily precinct operations, this could have discouraged personnel from participating because of extra paperwork and unrealistic demands on their time.

For these reasons, evaluations of individual problem-solving efforts had to be flexible, noninteractive, and inexpensive. Indicators that problem-solving efforts were successful included:

- Reductions in or elimination of calls for service
- Reductions in the seriousness of incidents related to the problem
- Creation of better methods for handling incidents
- Transfer of responsibility to another, more appropriate agency or police unit
- Citizen satisfaction evidenced by surveys, letters, telephone logs, public recognition, etc.
- Observed differences in conditions
- Cost savings
- More appropriate use of patrol personnel
- Improvements in officer safety

Data sources used to assess effectiveness were individual project files, CAD runs on repeat calls for service (when available), other department records, interviews with officers and supervisors, and observations of changed conditions.

MAJOR PROJECT TASKS

A summary of the main tasks performed by site personnel and researchers is provided in Appendix B.

Certain activities that relate to key aspects of the project are described in more detail below. These include training supervisors and patrol officers, introducing police service officers (PSOs) to Woodlawn precinct, and assessing the results from the first survey of officers and supervisors.

Training for Supervisors and Crime Analysts

The Forum conducted four training sessions for Area I supervisors in April and May 1987. Lieutenants, sergeants, and crime analysts from all three precincts attended. Training was held off site at a local hotel, with about 15 participants at each session. The Area I major addressed each session to describe the project and explain the roles of the Forum and ILJ.

The training was based largely on the curriculum the Forum developed in Newport News, and drew heavily on examples from that department. The curriculum included a history of problem-oriented policing and theories of problem analysis. The course also included the four components of the problem-solving process developed in Newport News: scanning (identifying and defining problems), analysis, response, and assessment.

Since the participants were primarily managers, training focused on their role in implementing problem-solving. They expressed concerns about whether department policymakers would be supportive of problem-solving, whether there

would be adequate time during normal operating hours to perform problem-solving, and whether the rotating shift schedules would allow them to successfully manage projects. Their concerns about administrative support focused not so much on support during the study, but on whether problem-solving would remain a patrol priority after the experiment ended. They also stressed that many officers already solved problems in the course of their daily work, although these efforts were not always documented or recognized.

In light of these concerns, several adjustments were made in the training format and content when it was later presented to patrol officers.

Training for Patrol Officers

In January and February 1988, all patrol officers in Area 1 were trained in problem-oriented policing techniques. Many two to three-hour sessions and make-up classes were held, and a videotape was made, to accommodate patrol schedules. Most of the classes met at Wilkens precinct in the roll-call room.

The instructor for these sessions was an Area 1 COPE officer with 18 years of experience at the department. He was selected because of his knowledge of problem-solving and high level of credibility with patrol personnel.

The curriculum included an introduction to the problem-solving concept, focusing on problem identification, analysis, and response. Considerable emphasis was placed on working with community agencies. Since some problem-solving projects were underway before patrol training began, the instructor was able to use these as examples. Participants were also instructed in how to complete the forms designed to document problem-solving projects.

Subsequent officer interviews and the results of the problem-solving projects indicate that the training was a successful introduction to problem-solving. Officers were also asked on the second project survey whether the

training gave them a good understanding of the problem-solving concept. Only about 22 percent said it did not, while 34 percent said it did, and 36 percent expressed no opinion.

Police Service Officers (PSOs)

In May 1987, the department hired four civilians as police service officers. As noted earlier, the overall purpose of the PSOs was to relieve patrol officer workload by performing nonemergency, noncriminal duties that did not require sworn law enforcement personnel. These duties included: responding to locked vehicle calls and minor accidents, directing traffic, performing victim call-backs, staffing the precinct front desk, relaying vehicles and precinct mail, serving prisoner meals, and performing a variety of administrative tasks.

The PSOs received six weeks of classroom training at the academy. The curriculum included: legal subjects, juvenile law, patrol procedures, criminal evidence and investigations, motor vehicle law and procedures, report writing, administrative procedures, and an overview of the criminal justice system.

Following the academy, the PSOs were assigned to field training at Woodlawn for four weeks. Their field training was complete by June 8, 1987. Two PSOs were assigned to the day shift (7:00 a.m. to 3:00 p.m.) and two to the evening shift (3:00 p.m. to 11:00 p.m.), in order to cover high workload periods.

ILJ staff developed a data collection form to record PSO daily activities and time spent on activities. Data collection on PSO activities began in June 1987 and continued through March 31, 1988. The department sent these data collection forms to ILJ monthly, where they were coded and analyzed. ILJ sent the department regular reports on the results.

Key Results of First Project Surveys

In October and November 1987, Area I patrol officers and supervisors completed the first survey developed by the evaluators. The return rate was more than 90 percent.

The officer survey yielded several findings of immediate interest to the department. First, officers did not hold COPE in high regard. Antipathy toward COPE was highest in Wilkens, where COPE had spent the least time, but was strong throughout the area.

Second, a significant number of officers and supervisors reported dissatisfaction with weekly shift rotation. Third, officers felt crime analysis information should be provided more quickly, and did not feel the information was useful for identifying problems. Fourth, most officers did not feel the command staff supported problem-solving. Fifth, officers felt their workloads would prevent them from working on problems. Finally, officers felt they had to handle too many trivial complaints. Woodlawn officers were positive about the PSOs because they had been handling some of these complaints.1

ILJ prepared a report on these and other results from the first survey, and presented them to Area I command personnel and to the chief of police at separate meetings. During the study, the department took several steps in an attempt to improve COPE's image and convey administrative support for problem-solving. COPE members spoke at roll call in all three precincts to brief

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1 ILJ's analysis of PSO activity logs from June 1987 through January 1988 showed that much of the PSOs' work was on errands and administrative duties (69.6 percent of their activities and 70.8 percent of their time). However, they spent considerable time dealing with minor complaints (24.2 percent of their activities and 19.5 percent of their time was related to offenses, and parking and traffic problems).

officers on COPE's objectives and activities. To convey their support for problem-solving, administrators emphasized at meetings and stated in memos that they expected problem-solving to continue after the study ended.

THREATS TO VALIDITY

In conducting any study, the evaluator must be sensitive to the threats that can weaken the experimental design and evaluation results. These threats have been well documented by Campbell and Stanley (1966), and more recently by Tien (1979). Some of the threats we believe are most applicable to this test are explained briefly below and discussed in greater detail throughout the report. We identified these potential threats in our proposal, and made adjustments as needed during the study in an attempt to neutralize them.

- Extraneous Events. Changes in key personnel during the project may have affected the evaluation results.

Several key personnel changes occurred that lengthened the project's planning phase and delayed the project's start of problem-solving assignments. The Area I major retired in June 1987 and another major transferred to fill the command position. This transfer was not permanent until the end of December 1987. At the end of June and during July, additional meetings were required to acquaint the new commander with the evaluation project.

In addition, Garrison precinct was commanded by a temporary captain for the first ten months of the project. In December 1987, a permanent assignment was made. The new captain quickly became involved in the project and remained at Garrison for the rest of the study.

There were no key personnel changes in Wilkens and Woodlawn; however, the Woodlawn captain was absent from the precinct on educational leave for approximately six weeks in September and October 1987. In addition, Woodlawn was 20 officers below authorized strength when the study began (10 officers down by January 1988).

- Intervention Integrity: Lack of complete implementation of all interventions may affect evaluation results.

The key personnel changes mentioned above lengthened the project's start-up phase somewhat. This may have reduced the number of problem-solving projects available for analysis.

Also, we anticipated that throughout the study, precinct personnel would receive computer printouts of repeat calls by address. These data runs were not available for most of the implementation phase because of technical problems with the department's new CAD system. This had some effect on officers' ability to identify problems and restricted the precinct crime analysts' participation in problem-solving. It also limited supervisors' and evaluators' ability to document the success of certain problem-solving projects.

Early in the project, we met with the department's DPR task force and emergency communications personnel. We found that many calls for service were already being diverted to a telephone report unit. It did not seem likely that additional calls would be diverted in the near future. The department was also considering a call stacking system, but did not begin to pilot test it until the final months of the study.

- Accuracy and Consistency of Definitions.

This was not a problem overall, but there was some confusion about the types of problems officers on directed patrol should handle, given the other demands on their time. As a result, some supervisors at first expressed difficulties in identifying problems. These difficulties were discussed throughout the planning and early implementation phases of the study.

- Temporal Maturation of Subjects: As officers become more knowledgeable about a project, some may report what they believe the evaluators are looking for.

During the second half of the implementation phase, Area I command personnel made it clear that all precincts were expected to undertake more problem-solving projects. This may have resulted in several administrative assignments being inappropriately included as problem-solving projects.

- Multiple-Intervention Interferences: Relating program success to one or two particular interventions is always a potential problem when several interventions have been introduced simultaneously.

Overall, the study was not subject to multiple-intervention interferences; however, this was a factor to consider when assessing individual projects. For example, a problem-solving project involving a neighborhood dispute was ultimately solved when the parties moved. It was impossible to determine whether the project effort contributed to the resolution.

The evaluators made every effort to identify multiple-interventions on all individual projects.

CHAPTER 4

TIME AVAILABLE FOR PROBLEM-SOLVING

INTRODUCTION

One of the main questions of interest in this study concerns whether patrol units have time to perform problem-solving activities and still respond to citizen calls for service. To address this question, ILJ took the following steps:

- Analyzed CAD system data to determine (1) the percentage of time Area I patrol units spend on calls and (2) the chances that units will have uninterrupted *blocks* of time that could be devoted to problem-solving.
- Considered other duties that competed with problem-solving for officers' time between calls. These included report writing, court duty, car relays and errands, other directed patrol assignments, special projects, and many other activities.
- Performed a special analysis of PSO activities to determine whether they freed up officer time at Woodlawn precinct.
- Considered officers' and supervisors' perceptions of their workloads, based on surveys and interviews.

ANALYSIS OF CAD DATA

The county's CAD system supports the dispatching of emergency vehicles for the police, fire, and emergency medical services departments. The CAD system collects basic information on all citizen calls for service to which patrol units respond. The information collected on each call includes:

- Date
- Primary Unit Assigned
- Time Unit Was Dispatched
- Time Unit Arrived at the Scene
- Time Unit Completed the Call
- Type of Call

The time that the primary unit spends on a call is determined from the time the unit was dispatched to the time the unit completed the call. During this period, the unit is unavailable for other assignments.

The records in the CAD system can be analyzed for a variety of purposes. The average time per call can be calculated by simply totaling the elapsed times for all calls and dividing by the number of calls. More specific averages can be calculated by type of call, units, days of the week, and other combinations. Imbalances in the workloads among units can also be determined from the CAD data.

For this study, ILJ obtained the CAD information on a magnetic tape for the three Area I precincts for January through October 1987.[1] The month of April 1987 was selected for detailed analysis as an "average" month.

The specific questions addressed with April's data were as follows:

- How many units are usually fielded?
- What percentage of time do these units spend on calls for service from citizens?
- What are the chances that a unit will have time for other duties, such as problem-solving activities, uninterrupted by another call for service?

The analysis was further restricted to the day (0700-1500) and afternoon (1500-2300) shifts, since most problem-solving activities were performed during these shifts.

The CAD records were first analyzed to determine the number of units usually assigned in each precinct by day of week and shift. The results of this analysis are shown in Exhibit 4-1. In Garrison precinct, for example,

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1 A new CAD system for the department became operational on November 1, 1987. Unfortunately, numerous problems were encountered in transferring the CAD data from this system to the county's mainframe computer. At the time of our evaluation, only CAD data prior to November 1987 was available for analysis.

the number of units fielded ranges over the days and shifts between nine and 13 units, with the higher number of units on the Saturday afternoon shift. Woodlawn precinct fields between six and nine units, and Wilkens precinct fields between six and 11 units.

EXHIBIT 4-1

NUMBER OF UNITS USUALLY FIELDED

APRIL 1987

GARRISON PRECINCT

	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
0700-1500	9	9	11	11	10	10	10
1500-2300	12	11	11	12	12	12	13

WOODLAWN PRECINCT

0700-1500	7	6	7	8	8	7	6
1500-2300	8	8	9	8	9	8	9

WILKENS PRECINCT

0700-1500	7	6	8	8	7	8	7
1500-2300	10	8	10	10	10	9	11

The next step in the analysis was to calculate the "unit utilization" for each precinct. This is defined as the percentage of time that units spend on calls for service during a shift. Unit utilization is a simple calculation as follows:

$$\text{Unit Utilization} = \frac{\text{Workload (in hours)}}{\text{Unit Hours}}$$

where

$$\text{Workload} = \frac{\text{Ave. no. of calls/hr. X ave. srv. time (in min.)}}{60}$$

The "unit hours" are the average number of units actually fielded per hour. All averages are for a given shift.

As an example of this calculation, suppose that seven units are fielded during a shift, and that there is an average of 4.6 calls per hour with an average service time of 36.5 minutes for each call. The workload is then calculated as:

$$\text{Workload} = \frac{\text{4.6 calls X 36.5 minutes per call}}{60} = 2.8 \text{ hours}$$

then

$$\text{Unit Utilization} = \frac{2.8}{7} = 0.40 \text{ (or 40\%)}$$

In this hypothetical example, each patrol unit spends an average of 40 percent of its shift on citizen calls for service.

Exhibit 4-2 shows the unit utilizations by day of week and shift for the three precincts during April 1987. The percentages range from a low of 14.6 percent to a high of 34.5 percent. In general, the afternoon shifts are busier than the morning shifts, and weekends are busier than other days.

EXHIBIT 4-2

PERCENT OF TIME ON CALLS

APRIL 1987

GARRISON PRECINCT

	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
0700-1500	26.3	15.8	30.6	19.5	21.2	29.3	31.8
1500-2300	23.1	19.8	30.8	25.8	29.7	24.8	34.5

WOODLAWN PRECINCT

0700-1500	27.2	20.6	32.3	27.2	21.5	30.3	29.6
1500-2300	32.3	20.9	25.5	26.3	28.5	25.8	26.4

WILKENS PRECINCT

0700-1500	32.0	14.6	27.8	23.9	25.8	23.9	27.9
1500-2300	19.5	24.9	24.9	16.2	20.3	20.1	29.7

Note: 1. Assumes that 50 percent of the calls require an assist unit.

2. Average time per call is about 25 minutes.

Several points need to be made concerning the figures in Exhibit 4-2. First, many calls require that one or more assist units be assigned along with the primary unit. Unfortunately, the information on these assist units is not captured by the CAD system. Discussions with command personnel in the precincts and with members of the crime analysis unit indicate that about half of the calls require an assist unit. The figures in Exhibit 4-2 assume that 50 percent of calls had an assist unit for the full duration of the call. Also, as noted in the exhibit, the overall average time per call for each unit is about 25 minutes.

Another point concerning the CAD data is that it does not capture all the activities of the basic patrol units. For example, department policy dictates that units complete their incident reports after calling back into service with the dispatcher. This procedure has the advantage of making units available for the next call for service, but it has the disadvantage of not capturing report writing time in the CAD system.

Another department policy requires that units call back into service when they have made an arrest and are heading to the station for processing. Once again, this procedure makes the units available for calls, but prisoner processing time is not captured in the CAD data.

Finally, there are many other duties performed by officers that are not part of the CAD data. These include administrative activities, special assignments, court, meals, patrol car relays for maintenance, and other duties. In late summer 1988, the department's planning and research division began a special study of calls for service time in Area I. While the results were not available when this report was prepared, they should prove useful to the department in determining the amount of time actually available for problem-solving and other directed patrol assignments.

In summary, the figures in Exhibit 4-2 must be interpreted carefully. They represent the responses of primary and assist units to citizen calls for service. Within this definition, the figures are accurate representations of unit utilizations. Since the figures do not include all activities of patrol officers, it cannot be concluded that the remaining time is always available for problem-solving activities.

Even with the deficiencies of the CAD data, the figures in Exhibit 4-2 indicate that officers have sufficient time for many other activities, including assignments directed at problem-solving. Time for these activities is more likely to be available on certain days of the week, such as Monday through Thursday, and on morning rather than afternoon shifts. The assignments of problem-solving activities should probably emphasize these time periods and avoid the busier periods of the week.

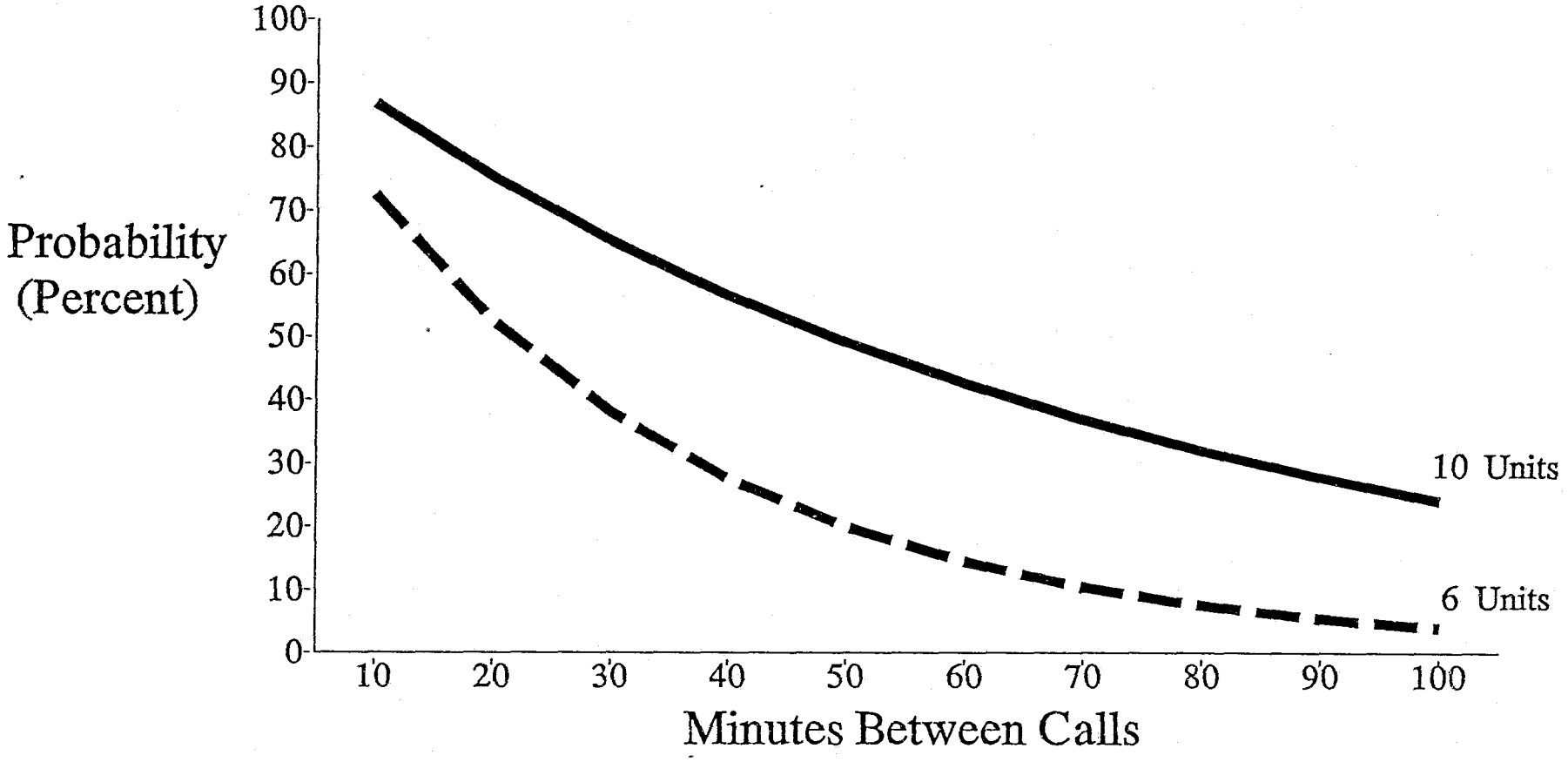
The final question concerns whether there are "blocks" of time in which to conduct problem-solving activities. Since many activities require 30 to 45 minutes to perform, it is of interest to know how often these time periods are available free from assignments to other calls.

In mathematical terms, this question can be posed as "What is the probability of having at least 30 to 45 minutes of uninterrupted time between calls?" Our approach to this question is based on a queuing theory model frequently used by police departments for patrol allocation. Appendix C provides the details of this model. The approach is a standard procedure used in many patrol allocation models, such as the Patrol Car Allocation Model (PCAM) developed by the Rand Corporation. The basic queuing model has been validated by several police agencies across the country.

Exhibit 4-3 shows the results of this "free time" model based on six and ten units fielded. To illustrate the model, the exhibit assumes six calls per

EXHIBIT 4-3

PROBABILITY OF HAVING TIME BETWEEN CALLS



hour and 25 minutes per call. With six units, the average unit utilization is just over 40 percent. With ten units, the average unit utilization is 25 percent.

Exhibit 4-3 shows, for example, that with six units, the probability of having 30 minutes between calls is about 38 percent. If ten units are fielded, this probability is about 65 percent. Longer times between calls have smaller probabilities. With six units, there is only about a 5 percent chance of 90 minutes between calls, while with ten units, this probability is about 30 percent.

This exhibit shows that the units in the Area I precincts generally will have enough available time between calls to handle other assignments such as problem-solving. While not all of the time durations between calls will be long enough to handle problem-solving assignments, with the current patrol workload, many problem-solving activities can be performed.

POLICE SERVICE OFFICERS' ABILITY TO FREE UP TIME IN WOODLAWN

The PSOs at Woodlawn completed daily time and activity logs for nine months. ILJ staff analyzed the information regularly and forwarded the results to the department.

PSO activities were coded using six categories: offense reports, errands, administrative, front desk, parking and traffic, and community relations. PSOs were encouraged to use these categories when entering activities on the logs.

ILJ's first PSO report to the department covered PSO activities from June 8 through August 15, 1987. The analysis was based on a total of 764.5 hours

and 928 separate activities logged by the four PSOs. At least 75 percent of the PSOs' time was spent on tasks that relieved patrol officer workload. Offense reports and errands were the main types of workload relieved.

The second report covered the period August 16 through September 30, 1987 and showed similar results. The majority of PSO time was spent on errands (47.1 percent), administrative tasks (25.3 percent), and handling minor calls for service and preparing offense reports (14.8 percent). As during the first reporting period, PSOs spent a substantial portion of their time on activities that freed up time for patrol officers.

Monthly analysis of PSO activities concluded with the report on February 1988 activities. The pattern established in the first two months remained consistent throughout, with PSOs spending at least 75 percent of their time on tasks that relieved patrol officer workload. During the nine-month analysis period, PSOs returned an average of about 540 hours per month to the officers.

RESULTS OF FOLLOW-UP SURVEYS ON TIME TO DO PROBLEM-SOLVING

The CAD data analysis shows there is sufficient time between calls for patrol officers to do other activities. The chances are also good that there are blocks of time long enough to work on problem-solving projects, particularly on the day shift. Nevertheless, lack of time for problem-solving was a major concern expressed on our surveys of officers and supervisors in Area I.

The surveys contained several questions on officer workloads and time to do problem-solving. Responses to the second wave of surveys administered at the end of the implementation phase are contained in Appendix D. Respondents

used a five-point scale ranging from agree strongly to disagree strongly. The following statements were related to call-handling alternatives and time for problem-solving:

- Most patrol officers have to spend too much of their time handling unimportant, noncriminal complaints (statement 5).
- The police should respond to all calls immediately (statement 11).
- Police service officers could handle many of the calls for service that patrol officers now handle (statement 6).
- (Woodlawn personnel only) Civilian police service officers have reduced my workload (statement 7).
- My workload does not allow enough time to work on problem-solving strategies, (A) on the day shift, (B) on the 3 to 11 shift, (C) on the night shift (statement 13).

More than 80 percent of officers (83 percent) and supervisors (81 percent) reported they still spent too much time handling unimportant, noncriminal complaints.

The majority of officers (63 percent) and supervisors (73 percent) felt it was not necessary for police to handle all calls for service immediately. However, the respondents seemed less sure of this than at the time of the first survey. In October 1987, 73 percent of officers and 85 percent of supervisors agreed that an immediate response was not necessary.

Officers (82 percent) and supervisors (89 percent) *strongly* agreed that police service officers could handle many calls currently handled by patrol. There was no significant change on this question between the first and second surveys. Respondents' opinions of the PSOs' performance were also high. About 75 percent of officers and 89 percent of supervisors at Woodlawn agreed that the PSOs reduced their workloads.

Whether they participated in problem-solving or not, however, Area I personnel reported their workloads did not allow enough time for this strategy (Exhibit 4-4).

EXHIBIT 4-4

RESPONSES TO STATEMENT 13:

MY WORKLOAD DOES NOT ALLOW ENOUGH TIME TO WORK ON PROBLEM-SOLVING STRATEGIES

SUPERVISORS

N = 26

DAY SHIFT		3-11 SHIFT		NIGHT SHIFT	
Agree	Disagree	Agree	Disagree	Agree	Disagree
85%	0	92%	0	62%	35%

OFFICERS

N = 166

DAY SHIFT		3-11 SHIFT		NIGHT SHIFT	
Agree	Disagree	Agree	Disagree	Agree	Disagree
77%	8%	87%	6%	54%	21%

More than one-third of supervisors (35 percent) and 21 percent of officers reported there was some time for problem-solving on the night shift. However, only a small percentage of respondents said there was time for problem-solving on the day and evening shifts, when most of the contact with community agencies, businesses, and residents would occur. Officers at Woodlawn, the only precinct supported by PSOs, reported less time for problem-solving on the day shift than officers at Garrison and Wilkens. At Woodlawn, 88 percent of officers (compared to 69 percent at Garrison and 74 percent at Wilkens)

reported there was not enough time for problem-solving on the day shift. This may be explained in part by the fact that Woodlawn was below authorized strength during the study. Woodlawn was down 20 officers and four cars in January 1987 (by January 1988 it had gained 10 officers and two cars). Exhibit 4-2 shows that on the day shift, Monday through Wednesday, for example, Woodlawn officers averaged 26.7 percent of their time on calls, compared to 21.9 percent at Garrison and 22.1 percent at Wilkens. Nevertheless, 26.7 percent is not extremely high, and other reasons for reports of insufficient time for problem-solving need to be explored. These include other time-consuming demands on officer time not captured by the CAD system as well as officer perceptions about problem-solving as an appropriate patrol activity.

Finally, two open-ended survey questions asked officers to list three positive and three negative things about problem-solving. "Lack of time or manpower," listed by 85 respondents, was by far the most frequently mentioned negative feature. Under positive things about problem-solving, 30 respondents stated it "reduces calls for service."

SUMMARY

The analysis of the CAD data shows that blocks of time are available between calls for service that could be used for problem-solving. The conclusion that PSOs relieve officer workload is supported by the analysis of their time and activity logs and the survey results. As discussed in the next chapter, Area I personnel did find time for problem-solving projects. They were able to work on 40 projects during the evaluation.

During interviews, many supervisors and officers reported they did have time to work on problem-solving projects. Although they resisted assigning or working on projects "just to get the numbers up," many felt they could handle one worthwhile project per shift, and in a few cases, one per squad.

The overwhelming majority of survey respondents, however, still contended they did not have adequate time to devote to problem-solving. Several possible reasons for this are discussed under Time Available for Problem-solving in chapter 7.

CHAPTER 5

THE PROBLEM-SOLVING PROCESS

INTRODUCTION

The evaluation of the Area I officers' problem-solving projects was concerned with both process and effectiveness. To assess the process and determine whether the project was implemented as planned, we looked at the following factors:

- Number of problem-solving projects undertaken
- Use of available resources to identify problems
- Whether the problems selected met project guidelines
- Evidence that officers analyzed problems before taking action
- Use of other agencies and police units (if appropriate) when responding to problems
- Clarity of directives given
- Evidence that department personnel tried to assess the effectiveness of individual projects.

These process measures relate to our management and direction hypotheses. To the extent possible, we first compared the level of activity in the three precincts based on these measures.

NUMBER OF PROBLEM-SOLVING PROJECTS

A total of 40 problems were assigned in Area I from May 1987 through June 1988. Garrison precinct had 12 projects compared to 14 in Woodlawn and Wilkens. The number of projects by precinct is shown in Exhibit 5-1. The exhibit shows Woodlawn handling many more projects than the other two precincts during the first eight months; but from January through June 1988, new assignments increased more significantly in Wilkens and Garrison than in Woodlawn.

EXHIBIT 5-1

NUMBER OF PROBLEM-SOLVING PROJECTS BY PRECINCT

Date Project Assigned	Precinct Woodlawn	Garrison	Wilkens
May - December 1987	9	2*	2
January - June 1988	5	10	12
	14	12	14**

* Includes auto theft problem at Owings Mill Town Center, which was reassessed and cancelled after some action had been taken.

** Two projects at Wilkens were reassigned after initial solutions proved to be temporary. Thus, although Wilkens has 16 project files, we based our total on the 14 different problems identified and assigned.

At the beginning of the project, all three Area I precinct captains believed their officers would respond more favorably to problem-solving if they began slowly. They favored choosing relatively simple projects (e.g., false and faulty alarms) that had a high probability for success.

This approach was used by the captains at Garrison and Wilkens. The Woodlawn captain agreed with the approach but had a more thorough understanding of problem-solving concepts during the early implementation phase. He had coordinated several early planning meetings and was also involved in the department's DPR task force. Thus, when several community problems occurred that seemed appropriate for problem-solving, he was comfortable moving forward.

No new problem-solving assignments were made at Woodlawn, however, in October and November 1987, when the captain was on educational leave for about six weeks. Also, a new administrative lieutenant was assigned at Woodlawn that October. The lack of new projects during this period may have been a result of these events.

If supervisors did not share the captain's confidence in the approach, they may have been reluctant to begin new projects. Also, their increased management responsibilities during this period may have diverted their attention from problem-solving.

In general, the differences in project start-up dates and levels of sustained effort in the three precincts seem to point to the importance of consistent management for implementing problem-solving. A significant increase in problem-solving Area-wide began in January 1988. At this time, the Area I major moved from acting to permanent status, and a new captain was assigned to Garrison.

Although this study was not designed to measure *leadership*, it seems be a significant factor in problem-solving. Leadership qualities may be found among administrators, but also among patrol officers and crime analysts. The Wilkens precinct crime analyst began assuming a leadership role. For example, by early 1988, he showed a great deal of initiative by identifying problems, recommending action plans, organizing records, and working on several projects himself. Chapter 7 explores some ideas on leadership and police problem-solving.

We believe the 40 projects undertaken during the study provide a significant addition to the scant literature on problem-solving implementation. Previously, the most ambitious attempt at evaluating problem-solving was in Newport News, a department approximately the same size as Area I in Baltimore County. When the report on the Newport News study was published (Eck and Spelman, 1987), that department had worked on about 18 problem-solving projects. In addition, we believe the 40 Area I projects comprise a large enough sample to make comparisons among the precincts on methods used to identify problems, types of problems addressed, and strategies used to address problems.

PROBLEM IDENTIFICATION

Four stages in the problem-solving process were developed in Newport News: scanning, analysis, response, and assessment. Problem identification takes place in the scanning phase. The abilities of police officers and supervisors to identify problems is critical to the rest of the process.

Problems are frequently identified through increases in calls for service. Examination of repeat calls by a crime analysis unit may show an unusually high number of calls for an area or an address. Repeat police responses to such calls may be an indication of a high expenditure of resources with little effect. False alarm calls are a good example of this.

Problems are not just a pattern of calls to the police. Many concerns that the public expects police to handle are not reported to the police via the telephone. For example, a corner drug dealing problem may prompt letters to elected officials and police executives, or complaints at public meetings. Calls for service to the area, however, may be minimal.

One of the most common ways to identify problems is through patrol officer observation. Familiarity with neighborhoods places officers in a position to recognize situations that may be problems. While on routine patrol or responding to calls for service, officers may be able to identify a pattern of behavior by observing activities over time. For example, an officer in Garrison precinct noticed the lack of a crossing guard position near an elementary school. Recognizing the potential danger, the officer crossed the children himself several times, and observed the situation for a few days. The amount and speed of traffic convinced the officer that something needed to be done. His request to the traffic division resulted in a traffic survey and the assignment of a crossing guard at that site.

Officers on foot patrol or "stop, walk, and talk" assignments have additional opportunities to learn of problems from residents and business persons. Officers may design and conduct neighborhood and business surveys. Problem-solving projects may also stem from issues raised at community meetings attended by police personnel at all levels.

Another means for identifying potential problems is through the media. For example, a Baltimore County resident wrote to the editor of a neighborhood newspaper describing potential crime problems that might result from moving a bus stop from a mall entrance to a site across the parking lot. In this case, an officer had already identified the problem. If the officer had not detected this problem, the newspaper article could have triggered a police action. Media coverage of national or regional problems can also indicate problems that may be of local concern as well.

In the report on problem-oriented policing in Newport News, Eck and Spelman (1987) listed 16 sources of information that officers could use to identify problems:

- Patrol Officers
- Detectives
- Crime Analysis Unit
- Crime Prevention Unit
- Vice Units
- Communications and Dispatch
- Chief's Office
- Other Law Enforcement Agencies
- Elected Officials
- Local Government Agencies
- Schools
- Community Leaders
- Business Groups
- Neighborhood Watch
- Newspapers and Other News Media
- Community Surveys

Several other potential sources could be added to this list, based on the Baltimore County experience:

- Precinct Community Relations Officer
- Individual citizen complaints to precinct captain
- Precinct "CC books," which contained copies of all offense reports taken in that precinct

- Repeat domestic call lists compiled by the domestic assault unit. (These were not available during the study, but routine distribution was planned for the summer of 1988.)
- Observations of general neighborhood deterioration (graffiti, blight, vandalism)
- Information from COPE
- Night card updates (asking about problems while updating information on after-hours business contacts)

IDENTIFYING PROBLEMS IN BALTIMORE COUNTY

The discussion above cites more than 20 resources police officers in many departments could use to identify community and business problems. Included are resources requiring little time to use (for example, officer knowledge). Other resources are more time-consuming (non-routine data searches, extensive surveys). Still others would require an internal referral system not developed for this project (for example, referrals from detectives, vice, domestic assault, or other specialized units).

In Area I, problems were identified by the following three methods:

- Complaints from residents, businesses, organizations, and others. These included complaint calls to the precinct, calls or letters to the chief, and issues raised at community meetings attended by the precinct captain or other personnel.
- Officer knowledge or observation of problems.
- Computerized or manual searches of department records (e.g., calls for service, offense reports).

Exhibit 5-2 shows that there were few differences among the precincts in methods used for problem-identification.

EXHIBIT 5-2

PROBLEM IDENTIFICATION METHODS

Methods	Number of Problems Identified			
	Woodlawn	Garrison	Wilkens	
Complaints	8	4	5	17
Officer Knowledge	4	6	5	15
Data Searches	2	2	4	8
				40

In the Newport News study, officer knowledge was the source used most often to identify problems, followed by complaints. Only a few problems were identified by other means (Eck and Spelman, 1987). Problem identification was similar in Baltimore County, except that officers made somewhat greater use of department records. Of the 40 problems identified and addressed in Area I during the study, about 43 percent were identified from citizen complaints, 38 percent by officer observations and knowledge, and 20 percent by data searches of department records. Officers did not use information from other department units or outside agencies to identify problems, although they did use them to effect solutions.

In the planning and early implementation phases of the project, we expected CAD runs of repeat call addresses to be available on request; however, as discussed earlier, the department's computer problems persisted from approximately November 1987 until July 1988. Without this potentially useful tool, the precinct crime analysts' ability to aid in problem identification was somewhat limited.

DEFINING PROBLEMS APPROPRIATE FOR PATROL

Area I precincts had considerable latitude in selecting the types of problems appropriate for problem-solving projects. General guidelines based on the Newport News experience were given during training and planning meetings. During these meetings, a problem was defined as *a group of incidents that are similar in one or more ways and are of concern to the police and the public.*

Central to this definition is that public concern is paramount (Goldstein, 1979). The problem must be of some concern to a portion of the public, and not just a concern of the police. Further, if the public *expects* the police to be involved, then the problem becomes a police matter and a candidate for the problem-solving approach.

Problems may be crime-oriented, such as burglaries, robberies, or assaults; or they may be disorder-oriented, such as youth drinking in public, noise complaints, or loitering. Disorder problems disrupt neighborhoods or raise anxieties among residents, and may be related to crime conditions. The pernicious effects of disorder problems were principle reasons for establishing the COPE units (Taft, 1986). Many of the problems Area I patrol officers handled during this project were disorder problems.

Conditions that may become a problem in the future also should be targets for problem-solving efforts. Officers' concerns about such conditions prompted action on two potential problems cited earlier in the chapter: a bus stop was moved, and a school crossing guard was installed, because officers were concerned that riders might be robbed and children might be injured.

There are also many levels at which a problem may be addressed. For example, a teenager who repeatedly runs away from home may be a problem with which one police officer works. At the precinct level, however, a supervisor or group of

officers might address a problem common to many repeat runaways in the precinct. Alternatively, a department-wide working group might address repeat runaways throughout the jurisdiction. Going even further, a task force of police officials from across a state could address the problem. Finally, national studies by federal agencies, police groups, and other organizations are parts of national problem-solving efforts.

There is no standard method of determining the most appropriate level at which problems should be addressed. Rather, this depends on the objectives of the effort.

Two problems handled in Woodlawn precinct provide interesting examples. In one problem, an officer attempted to assist the family of a teenage repeat runaway. After interviewing many local officials and working with family members, she discovered that no public agency had the power to intervene. At this stage, it may have been useful for the police juvenile unit to become involved on a different level. This might mean determining what changes in state laws, county ordinances, and interagency agreements might prove helpful for resolving such problems. This different level of effort, however, would not address the problem of immediate concern to the officer and the family.

Another problem involved an officer attempting to work with a local hospital to improve the handling of the mentally ill. Little progress was made until help came from an official at police headquarters who was looking at the same problem from a county-wide perspective. The county-wide effort would have had little impact in Woodlawn if the beat officer had not already been working on the problem. The next chapter on case studies discusses these and similar efforts in greater detail.

In many instances, the most appropriate level to begin problem-solving will be at the beat- or neighborhood-level. Beat officers may have a greater stake and interest in problems than police personnel further removed from the street. Beat officers are also closer to the people most affected by the problem. However, department administrators and supervisors should be prepared to provide assistance at a higher level if similar problems are being confronted throughout the jurisdiction or beat-level efforts are running into roadblocks.

A multi-level approach may sometimes be helpful, as the two examples described above indicate. False alarm problems provide another example of the need for a multi-level approach to problem-solving. While beat officers in Area I were addressing a number of separate false alarm problems, others in the department were working with state legislators to give the police greater powers to reduce false alarms. Both sets of efforts were successful, and in the future, officers at the beat level will have greater authority to curb false alarms. Clearly, if the resolution of a class of problems requires legislative changes, a beat officer would have a difficult time *leading* an effort to get a law changed. However, officers' ability to work toward such an effort and contribute important information should not be underestimated.

In summary, there does not appear to be any inherent limit on the types of problems on which patrol officers can work. If a problem is identified by an officer as being of concern to the community, it is likely there will be an appropriate role for the officer in addressing the problem.

TYPES OF PROBLEMS ADDRESSED IN BALTIMORE COUNTY

Operating under guidelines similar to those developed in Newport News, Area I officers worked on many types of crime and non-crime problems. One difference

between the two sites was the existence of the COPE units in Baltimore County. At the beginning of the project, the planning team discussed the need to avoid duplicating COPE efforts, and to refer to COPE problems that fell within its area of responsibility. As discussed earlier, COPE was to focus on fear of crime problems or other complex situations that were likely to require extensive time commitments.

COPE had been involved before the study in a few situations that later became problem-solving projects for Area I patrol officers. Area I officers did not refer any of the problems they identified to COPE.

The 40 problem-solving projects undertaken by Area I officers can be categorized as follows:

- **False and faulty alarms.** These projects all involved repeat, unfounded alarm calls to commercial addresses.
- **Crimes and public disturbances.** Crimes addressed as problem-solving projects included one burglary, three thefts, and two problems of suspected drug sales. An additional nine projects dealt with public disturbances (drinking in public, juveniles loitering, and others).
- **Family and neighbor conflicts.** Two of these projects involved arguments and threats among neighbors. One concerned a girl who ran away from home repeatedly. Another involved a woman who made unfounded calls to the police about her adult son's behavior.
- **Conflicts between agency or business practices and community needs.** Problems in this category involved a bus company, a hospital, the health department, recreation department, an all-night car wash, and a store that sponsored skateboarding contests. Regardless of whether the situations were technically police business, they became problems for the police: citizens complained to the police, or officers were frequently dispatched to respond to these situations.
- **Parking and traffic.** Problems involved tractor-trailers parked illegally overnight at a shopping center, speeding near a Goodwill Industries crosswalk, and others.
- **Police administrative.** Three projects involved updating police "night cards" on after-hours business contacts.

Exhibit 5-3 is a master list of projects by type, and Exhibit 5-4 summarizes the types of problems addressed in each precinct. Not every problem fits neatly into only one category (family conflicts may involve crimes, agency practices can create police administrative problems). The groupings are useful, however, to organize our discussion. They also enable us to see whether there were any important differences by precinct in the type or complexity of problems addressed.

EXHIBIT 5-3

PROBLEM-SOLVING PROJECTS BY TYPE OF PROBLEM

False and Faulty Alarms

84 Lumber Store (Woodlawn)
Budget Tire Store (Woodlawn)
Chizuk Amuno Synagogue (Garrison)
Basics Food Store (Garrison)
Ingleside Cleaners (Wilkens)
Washington Aluminum Company (Wilkens)

Crimes and Public Disturbances

Disturbances, Trespassing, Granite Quarry (Woodlawn)
Juvenile Disturbances, Johnnycake Elementary (Woodlawn)
Juvenile Loitering at Bar, Ingleside (Woodlawn)
Thefts, Disorderly, Pace Bell Plaza (Woodlawn)
Thefts from autos, Owings Mill Town Center (Garrison)
Suspected Drug Sales, Pleasant Hill Dr. (Garrison)
Loitering, Marriottsville Sh. Ctr. (Garrison)
Loitering, Main Street (Garrison)
Disorderly, Sulphur Spring Inn (Wilkens)
Disorderly, Kings Tavern (Wilkens)
Juveniles Loitering, Landsdown Shopping Center (Wilkens)
Burglaries from Drop Trailers (Wilkens)
Drinking in Public, Valley View Tavern (Wilkens)
Auto Thefts, Alan Dr., Wilkens Plaza (Wilkens)
Drugs, Drinking, Disorderly, Sandy Hills Park (Wilkens)

Family and Neighbor Conflicts

Repeat Runaway (Woodlawn)
Neighbor Conflict, Walden Cir. (Woodlawn)
Neighbor Conflict, Claridge Rd. (Woodlawn)
Trouble with Son Calls (Garrison)

Conflicts Between Business/Agency Practices and Community Needs

Emergency Psychological Evaluations (Woodlawn)
Bus Stop, Security Mall (Woodlawn)
24-Hour Car Wash (Garrison)
Skateboarding Contests, Banana Beach Store (Garrison)
Runaways, Kelso Center (Garrison)

EXHIBIT 5-3 (continued)

Parking and Traffic

Truck Parking, Woodmoor Sh. Ctr. (Woodlawn)
Traffic at Cedar Circle (Woodlawn)
Precinct 2 Station Access (Woodlawn)
Illegal Parking, Dreher Ave. (Garrison)
Child Safety, Winands Elementary School (Garrison)
Illegal Parking, Frederick Rd. and Holmhurst Ave. (Wilkens)
Crosswalk, Goodwill Industries (Wilkens)

Police Administrative

Business Contacts, Wilkens Ave. Area (Wilkens)
Business Contacts, Edmondson Ave. Area (Wilkens)
Business Contacts, Arbutus (Wilkens)

EXHIBIT 5-4

SUMMARY OF
PROBLEM TYPES BY PRECINCT

Problem Types	Number of Problems		
	Woodlawn	Garrison	Wilkens
False Alarms	2	2	2
Crimes, Disturbances	4	4	7
Family/Neighbor Disputes	3	1	0
Agency Practices	2	3	0
Parking and Traffic	3	2	2
Police Administrative	0	0	3
	14	12	14

Most problem-solving projects followed the guidelines given during training: they involved a group of similar incidents and were of concern to the police and the public. As noted earlier, it was within the guidelines to undertake "crime prevention" projects, where officers observe potentially dangerous situations, but may not have a record of repeat incidents or complaints. Only the administrative problems, discussed later in this section, did not meet the guidelines.

Crime v. Non-Crime Problems

One question of interest was why the problem-solving approach in Area I was not applied more frequently to robberies, assaults, burglaries, and other serious crimes. In the Newport News study, 11 of the 18 problems addressed these and other serious crimes, while in Area I the focus was on disorder problems and other community concerns. Perhaps the most likely explanation is that, in Baltimore County, problem-solving may have been closely linked to community policing in the minds of department and precinct officials. To many of the officers and supervisors interviewed, community policing meant focusing on non-

crime concerns. Precinct officials may have interpreted the push to address problems as a push to address non-crime problems. The training for patrol officers placed considerable emphasis on building linkages with other agencies, residents, and business people. The potential community relations benefits were easy to recognize. The applicability of problem-solving to major crime problems was not as obvious, and was not emphasized by administrators or supervisors.

Baltimore County also has a number of special units designed to address crime problems. Each precinct has a Selective Enforcement Unit of plain-clothes officers who conduct stakeouts and other activities at the discretion of the precinct captain. The department's western burglary unit operates in Area I. The COPE unit also handles serious crime problems, if fear is a major concern. Early in the study, the Area I COPE unit was addressing robberies along a major highway in Area I. Officers and supervisors may have felt that analyzing certain crime patterns was the domain of these units.

This points to another difference between Area I and Newport News. The problem-solving process in Newport News was designed by a task force that involved members of specialized units, including investigations, crime scene search, vice, and crime prevention. This may have helped clarify areas of responsibility and encouraged the inclusion of more crime problems in the Newport News experiment.

Some Area I supervisors may have felt that crime problems were too complex or too time-consuming for officers to address. In an attempt to build on what they felt would be easy successes, supervisors may have emphasized disorder problems and other community and business concerns.

Finally, more crime problems may not have been addressed because Area I communities are more concerned with disorder problems. Almost all of the problems addressed were identified by citizens complaints, repeat call analysis,

and officer observations. If these sources for detecting problems are accurate barometers of community concerns, then the reason for the focus on disorder and non-crime problems is that the public is most concerned with these problems. In addition, the police recognize that some of these problems can lead to crimes if intervention does not occur.

If disorder and other "quality of life" problems are the most frequent type of problems in Area I, and citizens are more concerned about them, then the patrol emphasis on these problems seems well placed. In fact, after the study ended, the department affirmed its desire to involve officers in more "quality of life" issues as it moves to implement patrol problem-solving throughout the department.

Administrative Problems

Exhibit 5-4 shows that three Wilkens projects dealt primarily with police administrative matters. All three involved updating night cards (records of after-hours business contacts) for different sectors of the precinct. Another project involving night cards was included in the "crimes/disturbances" category. This was the first "night card" project assigned, and updating the cards was part of the police response to business complaints about loitering and infrequent patrolling. The other three night card projects, however, were assigned primarily because it was time to update the information.

These administrative projects provided a good example of how officers can be more proactive about *identifying* problems, but they did not meet the guidelines for problems of interest to this study. Some confusion could have resulted from comments during training about how problem-solving techniques can be applied to many situations, including administrative problems, personnel problems, budgeting, dealing with labor issues, and other matters.

PROBLEM ANALYSIS AND RESPONSE

As discussed at the training sessions on problem-solving, there are three objectives for analyzing and responding to problems:

- Develop a more thorough understanding of the problem
- Develop possible responses that are consistent with the information gathered
- Implement a response (Eck and Spelman, 1987)

Most problems selected need further research to clearly define them. Possible resources may include department records; applicable laws; interviews with victims, offenders, and third parties; discussions with officers who had experience with the problem; information from other agencies; and many others.

To record information on each problem, including the resources consulted and the responses planned, officers were instructed to use several forms (see Appendix E). A "criminal activity data sheet" and "criminal activity data supplement" were used to state the apparent problem and note "identifiers" that included the following:

- Type of location
- Days and times the problem occurred
- Suspect profile
- Weapons
- Suspect vehicle
- Victim profile
- MO

An "operational response" form included checklists of frequently-used resources and space to indicate the planned "response mode" (surveillance, selective enforcement, community involvement, and others). A separate list of community agencies was also distributed to officers as part of their training. The response plan was to be summarized on the operational response form using "specific action statements only." Supervisors were to approve all data and response forms.

These forms were drafted before the study began by the Area I crime analysis task force. Since the task force had been working for several months to develop these forms, they were adopted for the project with few changes. After some experience with them, the evaluators considered revising them to better capture information on *problem* analysis. For example, it would have been helpful to have better documentation on how problems were identified. Officers and supervisors, however, did not report any significant problems with the forms, and we decided it would be too disruptive to change them.

False alarm problems were defined easily from CAD data (when available) or officer experience. Other problems, however, suggested a need for more thorough research and preparation. In Woodlawn, for example, one of 15 business owners in a shopping center complained about shoplifting. A survey revealed this was not a problem for others, and the officer helped that business improve security. If others had also been concerned about shoplifting, the project coordinator might have planned a different response.

Citizens also complained about matters that turned out to be symptoms of larger problems. At Garrison, one complaint about cars parked illegally near a photography shop lead officers to suspect drugs were being sold in a nearby house. In another Garrison project, businesses complained about vagrants loitering. Police discovered the vagrants lived in an abandoned shack nearby, and that a woman living near the shack needed immediate assistance from the health and water departments.

Other problems requiring relatively complex analysis were those in Woodlawn and Garrison that involved the need for agencies (e.g., a hospital, a group home) to change certain practices. Several of these problems are presented as case studies in the next chapter.

Wilkens precinct assigned more crime and disturbance problems than the other precincts. As Exhibit 5-5 shows, Wilkens also relied almost exclusively on traditional resources -- department data and complainant interviews -- to analyze these problems. Not surprisingly, the responses were also largely traditional, centering on selective enforcement and the use of high visibility patrol.

Of course, in many situations, a traditional response (selective enforcement, for example) is warranted and is often expected by the complainant. Frequently, however, the solution it effects is only temporary. The problem-oriented approach encourages police to consult a variety of resources to explore the causes of problems and attempt long-term solutions. In Garrison and Woodlawn, several non-traditional resources (e.g., surveys) were used to analyze crime and disturbance problems. In line with this, responses also included non-traditional methods and outside resources. A few Wilkens projects used techniques other thanselective enforcement and high visibility patrol to respond to crime problems, but the majority did not.

Not surprisingly, family problems and neighbor disputes proved especially difficult to analyze and resolve. Officers had to deal with rumors and conflicting reports; complainants with mental health problems; lack of access to confidential information; and frustration determining which, if any, social service program could or should help. The next chapter on "Case Studies and Analysis" comments further on some of the difficulties encountered. The sample was too small for extensive analysis; but in all four neighbor and family dispute projects, police found they could make little progress without involving professional counselors and other outside experts.

Finally, analyzing and responding to traffic and parking problems patrol officers often worked with the department's traffic division. Some also involved interviewing citizens and working with outside agencies.

EXHIBIT 5-5

RESOURCES USED TO ANALYZE CRIME AND DISTURBANCE PROBLEMS

Resources

Problem	Victim and Third Party Interviews	Police Data	Other Police Units	Other Agencies	Surveys	Community Meetings
Woodlawn						
Quarry	X		X			X
Johnnycake	X				X	
Ingleside						
Pace Bell					X	
Garrison						
OMTC		X				
Pleas. Hill			X	X		
Marriottsv.			X			
Main Street		X		X	X	
Wilkens						
Disord. Sulph. Spr.			X			
Disord., Kings Tav.	X	X				
Disord., Lansdown	X	X				
Burg., Trailers	X	X	X			
Drink., Val. View	X	X				
Auto Thefts, Val.View	X	X				
Drugs, Sandy Hill	X	X				

The next chapter presents a series of case studies. These are intended to 1) illustrate the level of effort required on representative Area I projects and 2) highlight specific aspects of the problem-solving process, including the assessment of completed projects to determine officers' success in meeting their objectives.

CHAPTER 6

CASE STUDIES AND ANALYSIS

INTRODUCTION

The fourth step in the problem-solving process is "assessment." Supervisors are expected to review each project and determine whether the officers met their objectives. As discussed earlier, none of the individual projects were designed as controlled experiments. During training and in meetings with Area I personnel, supervisors were briefed on criteria they could use to determine the success of problem-solving projects. These possible outcome measures included the following:

- Reductions in or elimination of calls for service
- Reductions in or elimination of citizen complaints
- Reductions in the seriousness of incidents related to the problem
- Creation of better methods for handling incidents
- Transfer of responsibility to another, more appropriate agency or police unit
- Citizen satisfaction as evidenced by surveys, letters, public recognition, etc.
- Observed differences in conditions
- Cost savings
- More appropriate use of patrol personnel
- Improvements in officer safety

It is important to note that several projects were still in the response phase when the study ended. Other projects seemed to reduce or eliminate problems, but long-term results could not be determined.

In the discussion that follows, we again grouped the individual projects by problem type (false alarms, crimes and disturbances, etc.). Included throughout are selected case studies. The case studies were chosen to illustrate various aspects of problem-solving (identification, analysis, response, assessment), and are based on documents from individual project

files. These documents were clarified as needed through interviews with supervisors and officers and on-site observation of conditions. Fictitious names are used for the county residents who had problems.

FALSE AND FAULTY ALARMS

There were several reasons why police and evaluators believed false and faulty alarm problems would make worthwhile projects:

- They affected many officers and consumed a tremendous amount of time that could better be spent on other tasks.
- CAD data could be used to help identify these problems and document the results of officer interventions.
- Officers might be more likely to accept problem-solving if they experienced early successes without investing a great deal of time.

All eight alarm problems documented during the study were handled in virtually the same way: an officer met personally with the business owner (or manager), determined why the alarms malfunctioned, and asked the owner to explore solutions. Before the study began, officers occasionally handled alarm problems by visiting business owners, but it was not standard procedure.

FAULTY ALARMS AT INGLESIDE CLEANERS

WILKENS PRECINCT

Background and Problem Statement

A faulty alarm problem at Ingleside Cleaners, Wilkens precinct, was similar to others addressed during the study.

Captain Kramer instructed his staff to look into the situation and reduce or eliminate false alarm responses to Ingleside Cleaners.

Analysis

A CAD printout showed that from October 11 to December 14, 1986, patrol officers responded to 16 false alarm calls at this location, or approximately two per week.

Response

On October 23, 1987, Captain Kramer assigned the project to the shift 1 commander, Lieutenant Wickless. Officer Harmon contacted Brad Hooper, the manager, and Henry Tucker, the owner of the business, on October 26.

According to the owner, the building had two alarm systems: one by ATA Alarm Systems, and one by Pirone Alarms. Both alarm companies made site visits to the cleaners on October 19, 1987 and adjusted the systems.

Officer Harmon indicated in his progress report that the owner and manager understood the police department's concern and were willing to cooperate. Lt. Wickless requested that all shift commanders document alarm responses to Ingleside Cleaners for 30 days, beginning on November 4, 1987.

Results

All shifts submitted monitoring reports for the 30-day period. On December 11, 1987, Officer Harmon again met with the manager and owner to advise them there were three false alarm calls since their last meeting. One call was the result of an employee not properly locking the building before leaving for the night, and the other two were determined to be faulty systems.

The owner stated that he had the alarm companies service the systems following the meeting on October 26, 1987. He was advised the alarms were in proper working order at that time.

Officer Harmon compared the 1986 period to the 1987 period and found a decrease in the number of calls for false or faulty alarms. In 1986, there were 16 such incidents and three in 1987.

Lt. Wickless concluded that eliminating the false alarm calls might not be possible given the age of the building. However, with continued follow-up and cooperation of the owner the number of calls could be kept to a minimum.

The total number of person-hours recorded for this project was two.

Of course, the technical problems with alarms varied among the projects and affected the outcomes slightly. At Washington Aluminum Company (Wilkens) the perimeter fence alarm was triggered when Amtrak trains went by. The alarm was repaired and calls were reduced, but little short of moving the company could eliminate the problem. In Garrison, construction work at a synagogue activated an alarm five times in one week. Calls were eliminated after the alarm was adjusted and the construction completed. Alarm calls to the Basics food store, also in Garrison, sometimes occurred at the rate of two or three per shift in January 1988. After an officer met with the manager, there were no more alarm calls to Basics for the next two months.

At the 84 Lumber store (Woodlawn precinct) an overly-sensitive alarm went off about three times a week for a year. In addition, weeds around an eight-foot high fence blocked the responding officers' view, and no company representative responded to the scene. After officers met with the owner, the weeds were cut and the alarm adjusted. During the next six months, the alarm sounded only three times, and the manager came to the scene each time.

All eight alarm projects succeeded in reducing calls. This was evidenced by CAD data (when available), special project logs, or officer observation. Few alarm projects required more than two hours of officer time, and all three precincts were able to schedule this time. The savings in officer time was significant. Average elapsed time for a false alarm call in 1987 was about 25 minutes. Eight businesses each generating 12 calls would require about 40 hours in officer response time. This can be compared to the 16 hours needed to work with eight business owners and resolve the problem.

There are also important safety benefits to resolving false and faulty alarm problems. Officers who respond repeatedly to the same false alarm address may begin to assume all alarm calls there will be false, leaving them less alert to handle a dangerous situation.

CRIMES AND DISTURBANCES

Four case studies are included in this section to illustrate different aspects of solving crime and disturbance problems with the problem-solving approach.

Woodlawn precinct's "Illegal Use of Granite Quarry" was the first problem-solving project undertaken during the study. In 1986, before the study began, the precinct captain, crime prevention officer, and COPE officers had analyzed this problem. They developed and carried out an action plan that combined enforcement with community involvement. In 1987, the assignment involved repeating and evaluating the success of the same action plan. Although much of the analysis and planning had already been done, the captain considered this a good introduction to problem-solving that could involve officers on all shifts.

ILLEGAL USE OF GRANITE QUARRY

WOODLAWN PRECINCT

Background and Problem Statement

For nearly fifty years, juveniles and young adults had used a large abandoned quarry for swimming and parties. The quarry is about 100 yards from the road near the village of Granite in an undeveloped, wooded area. Footpaths leading to the quarry are not marked, and it is not visible from the road. Until the mid-1980s, many residents and police officers did not consider the use of the quarry a significant problem.

Between 1983 and 1985, however, four people drowned in the quarry, three accidentally and one by suicide. During the same period, citizen calls to the police increased. The complaints were related to noise, litter in private yards and the woods, traffic problems, and illegal parking.

Throughout 1984 and 1985, the police intervened by making arrests and issuing citations, but for several reasons, these efforts had little impact on the situation. No parking and no trespassing signs were often torn down soon after they were posted. The county did not have an ordinance that authorized the towing of illegally parked vehicles. The quarry owner lived out of town and was often unable to appear in court to press charges; and the prosecutor frequently set cases aside.

In 1985, the owner tried to cooperate by assigning power of attorney to a friend who lived near the quarry and was willing to testify in court. The owner also dumped tree stumps on the berm to deny access to the quarry by all-terrain vehicles.

But young people still parked their cars along the nearby roads and walked into the quarry area. By 1986, Granite residents reported as many as 200 youth gathering at the quarry, often arriving in groups of 30 or 40. Cars parked along the winding roads nearby created traffic hazards and blocked driveways. The neighbors believed that most of the trespassers were not residents of Granite or the surrounding area.

Analysis

Analysis of the quarry problem involved a review of the earlier police response to this situtation in 1986. Soon after taking command of Woodlawn precinct that year, Captain Engel, crime prevention officer Herb James, and several COPE officers discussed the quarry situation with Granite residents at a community meeting. As a result of this and subsequent meetings, and other discussions with the quarry owner and neighbors, the following plan was developed:

- Community association members would keep police informed of violations and encourage residents to appear at court hearings.
- Police would remind residents of court dates.
- Police would seek more serious treatment of quarry cases by the prosecutor. Persons caught trespassing once would be cited, required to appear in court, and warned. Persons apprehended more than once would be fined.
- Precinct officers, supplemented by COPE and traffic division officers, would begin intensive enforcement of parking, traffic, and trespassing laws.

In the summer of 1986, this plan was put into action. Police regularly ticketed cars parked near known access points, and conducted several "raids" of the wooded area throughout the summer. Swimmers began parking farther from the quarry, adopting a church lot as a new parking spot.

A total of 140 arrests were made that summer. Precinct personnel kept a list of apprehended offenders, but found very few repeaters. When they reviewed the results of one "sweep" involving 30 arrests, they learned that only 10 persons arrested lived within 30 miles of the quarry. This confirmed that non-residents were major contributors to the problem.

The police continued working with the community association, and by late summer, a noticeable decrease occurred in the number of persons using the quarry. With the resumption of school and the onset of cool weather, the problem entered its usual seasonal decline.

Response

After the current problem-solving study began, illegal activities at the quarry again occurred. The quarry's reputation as a recreation spot had grown by word of mouth over time. Police believed that consistent enforcement action might eventually establish a new reputation that the quarry was off limits. When the situation was assigned as a problem-solving project in May 1987, the objective was to build on the apparent successes of 1986 and cause further reductions in the use of the quarry.

Officer James again met with the community association to review the previous season's efforts, and to encourage reporting and support for police actions. Beat officers, coordinated by shift Lt. Turner, were given information about the project, and throughout the summer, police followed the previous year's plan of action. The same general plan was followed in the summer of 1988.

Results

Although the problem was not eliminated in 1987, there was a noticeable decrease in the number of swimmers at the quarry. Complaints from neighbors at community meetings and calls to the police declined. Neighbors also reported that youth were more likely to congregate in groups of five or six, rather than the groups of 30 or 40 that gathered in previous years. Police made only 26 arrests in 1987, compared to 140 in 1986. Officers spent 47 hours on this project from May 21 through September 1, 1987.

By mid-July 1988, police had made only one arrest, the no trespassing and no parking signs had been left intact, and neighbors filed very few reports of noise, litter, or other evidence of the problem. The community association president wrote the precinct a letter thanking officers for their help.

By the end of July 1988, the quarry owner had entered into a two-year lease agreement with a defense contractor to test sonar equipment in the quarry. The contract includes fencing in the quarry and using a private firm to guard it. Police hope that interrupting the summer swimming tradition, first by enforcement and community efforts, and then by the fence and guards, will permanently halt the use of the quarry by outsiders.

The next case study, "Loitering on Main Street," exemplifies thorough problem analysis techniques. CAD data and a survey of businesses were used to clarify a problem raised at a business association meeting. In addition, officers conducted a careful check of the surrounding area. In doing so, they discovered housing problems that needed immediate attention. Their response involved gaining the cooperation of health and social service agencies.

LOITERING ON MAIN STREET

GARRISON PRECINCT

Background and Problem Statement

Business owners along Main Street in Reisterstown frequently complained about vagrants loitering and trespassing on their property. The subject came up at a chamber of commerce meeting attended by Captain Webster. On January 20, 1988, the captain assigned the project to Lt. Rongione.

Analysis

Lt. Rongione first researched this problem using a list of calls for service prepared by ILJ. The list showed repeat calls from businesses located between numbers 21 and 39 Main Street, Reisterstown. Most of the calls concerned loitering and trespassing.

Since the call data was from 1986, Lt. Rongione instructed Sgt. Miller to conduct a survey of the businesses to determine if the problem still existed. The sergeant and his staff interviewed nine business owners. Six indicated that loitering and trespassing on their property was still a problem.

During the survey process, Sgt. Miller and Officer Smith identified two dilapidated houses on a gravel lane immediately behind the Main Street businesses. One of the houses was occupied by two men (vagrants) who claimed to have the owner's permission to live there. The other was occupied by Ms. Bradley, an elderly woman, who had lived there most of her life. Both of the houses were infested with vermin and lacked plumbing.

Response

On March 8, 1988, Officer Smith contacted the Department of Environmental and Resource Management to report the conditions found at the Caltrider Lane houses. Ms. Cheryl Sorrow was assigned to the case.

Officer Smith accompanied Ms. Sorrow to the location on March 10, 1988. At that time, Ms. Sorrow noted many health code violations, including an open well, rat infestation, no plumbing or septic system in place, and widespread trash and debris. Ms. Sorrow said she would conduct an investigation to determine the ownership of the properties.

On March 31, 1988, Ms. Sorrow reported that the property where the vagrants lived was owned by Michael Brooks. She served Mr. Brooks notice to rat-proof or raze the house and to remove the trash and debris from the premises.

Ms. Sorrow also contacted the County Works and Social Services departments to request a cap for the open well and the installation of a septic system for Ms. Bradley's house.

Officer Smith contacted Mr. Brooks on April 1, 1988 and learned that he did not want anyone living in the house. Mr. Brooks intended to post "No Trespassing" signs on his property and to obtain a permit to raze the house as soon as possible.

Results

The health code violations cited by Ms. Sorrow were addressed: the well was capped, trash was removed, and the Brooks property was razed. Social Services installed a temporary toilet facility in Ms. Bradley's house pending the installation of a septic system and plumbing.

On March 31, 1988, Officer Wright arrested Ernest Price for trespassing at one of the businesses on Main Street. Officer Wright learned that Price was one of the vagrants using the Brooks property and that he was on probation for a previous offense.

No further complaints of loitering or trespassing were reported.

In terms of reducing calls and complaints from one group of Main Street businesses, the "Loitering on Main Street" project was successful. Police also saw that living conditions were improved for an elderly woman in need of help. However, as one officer noted, vagrants disturbing businesses is a symptom of a larger community problem. The vagrants who were disbursed remain homeless. Complaints may well begin again when these men appear in a new area.

As noted earlier, Wilkens precinct used traditional analysis and response methods to deal with most of its crime and disturbance problems. Two of these projects are presented below. The first, "Burglaries from Drop Trailers," was assigned twice. The first time, selective enforcement was the only response, and the burglaries continued. The second time, selective enforcement was combined with crime prevention advice to the business owner.

BURGLARY FROM DROP TRAILERS,
OLD SULPHUR SPRING ROAD

WILKENS PRECINCT

Background and Problem Statement

The Purity Products corporation parks loaded drop trailers along the berm of the 1800 block of Old Sulphur Spring Road. The area is part of the public road and is not secure. In addition, the site is easily observed from Route 695 (the Baltimore beltway).

Between January and April 1988, six burglaries of these trailers occurred. Mr. Irvin Goldstein, a representative of Purity Products, estimated the loss to be at least $6000.

Analysis

Officer Cain, the Wilkens crime analyst, maintained records of repeat burglary locations in the precinct. He gave the precinct captain the information on calls to the Old Sulphur Spring Road location.

Response

On February 3, 1988, Captain Kramer assigned the project to Lt. Schwartz. The Lieutenant's plan of action involved all shifts in substantially increased police presence. He instructed officers to make ride-by checks every one-half hour between 2000 and 0400 hours.

The increased patrol began on February 5, 1988 and ended on March 5, 1988. On February 11, 1988 a drop trailer and an auto parked nearby were burglarized. In response to these incidents, Lt. Schwartz ordered the increased patrol to include the 1700 block of Old Sulphur Spring Road. Between February 11 and March 5, 1988, no burglaries were reported and the project was suspended.

On May 4, 1988, Mr. Goldstein called Officer Cain and told him of four (unreported) burglaries that had occurred the previous week.

Officer Cain notified Captain Kramer, who reopened the project and assigned it to Lt. Wickless. Lt. Wickless directed all shifts to check the location every one-half hour between 2000 and 0600 hours Monday through Friday, and 2000 hours Friday through 0600 hours Monday for a period of 30 days beginning May 5, 1988.

In addition, Officer Cain discussed with Mr. Goldstein how he might deter burglary attempts. Following the officer's suggestion, Mr. Goldstein had his staff start parking the trailers with the door ends together.

Results

During the second project period (May 5 - June 5, 1988), no break-ins occurred. On July 20, 1988 Officer Cain reported that no burglaries had been reported since the project was suspended on June 5, 1988.

We cannot prove whether "target hardening" alone solved the problem; whether it was target hardening in combination with increased police presence; or whether the burglars simply moved on. Still, reducing the opportunity for burglary is certainly worth trying, and may well have made a difference here. The advice cost a few minutes of Officer Cain's time, compared to many hours spent patrolling the area.

As part of another Wilkens problem, "Disturbances at Sulphur Spring Inn," the shift lieutenant combined an increased police presence with a new procedure for following up on officer field contacts with juveniles. This required temporarily scheduling the community relations officer to the 4:00 p.m. to midnight shift so that parents could be contacted within 24 hours.

DISTURBANCES AT SULPHUR SPRING INN

WILKENS PRECINCT

Background and Problem Statement

The Oregon Avenue business center includes small shops and businesses located between 5501 and 5515 Oregon Avenue in the Arbutus section of Baltimore County. The businesses include a jewelry store, bakery, pharmacy, small movie theater, restaurant, laundromat, and "snowball" stand. Around the corner on Sulphur Spring Road is a bar-lounge, the Sulphur Spring Inn. Immediately behind the bar-lounge is a public parking lot.

Patrons of the Sulphur Spring Inn congregated in the parking lot behind the businesses, creating a public nuisance. Business owners filed numerous complaints over the years and the police department continually responded to the calls.

Analysis

Although officers at Wilkens were aware of the problem, they also analyzed a CAD printout for calls specific to Oregon Avenue. The list revealed 27 calls for service to the 5500 block of Oregon Avenue between October 14 and December 19, 1986. Most of these calls were for loitering, disorderly conduct, and alcohol violations.

Response

On November 7, 1987, Captain Kramer assigned the Oregon Avenue project to Lieutenant Purper. The Lieutenant's plan of action involved all shifts in a substantially increased police presence. He instructed patrol officers to make arrests when appropriate and write citations for loitering and disturbing the peace. In addition, he required that officers complete field interview reports on juveniles found loitering or consuming alcohol. At the end of their shifts, the patrol officers gave these reports to the community relations officer, who notified the parents the following day. This was the first time officers at Wilkens had used this technique.

The operation was assigned for a 30-day period and began on November 8, 1987. Initially, activity was high, but had stopped by November 22. The problem had not recurred by the end of the project on December 8, 1987.

As part of this project, officers at Wilkens made two arrests, issued one citation for an alcohol violation, interviewed and reported on 16 juveniles, and requested two detentions for juvenile runaways.

Results

The total time spent on this project during the initial 30-day period was 47.5 hours. The location will require additional monitoring, especially when warm weather returns.

Several business owners called Captain Kramer to express their appreciation.

The problem at Sulphur Spring Inn was similar to the quarry problem in Woodlawn. The parking lot behind the bar had built a reputation over time as a place where teenagers could gather and drink with few consequences. Although the same or other teenagers may "test" the police again, contacting parents was a step toward addressing one of the causes of the problem, rather than just treating the symptoms.

CONFLICTS BETWEEN BUSINESS AND AGENCY PRACTICES AND COMMUNITY NEEDS

Most of the five projects in this category involved police in situations where few laws had been broken. Nevertheless, the situations became police business. All five are included as case studies. The first two projects described below became police matters because of repeat citizen complaints.

Late night business at the Milford Mill car wash (Garrison precinct) did not technically violate the county's noise ordinance, but the noise was a problem for nearby residents. Juvenile skateboard contests sponsored by another Garrison business bothered nearby merchants and created some traffic hazards, but the larger issue was a need for supervision and a safe area to hold the contests.

In both of these Garrison projects, police officers used exceptional analytical and community relations skills. They were also persistent, and achieved their objectives.

DISTURBANCES AT
MILFORD MILL SELF-SERVICE CAR WASH

GARRISON PRECINCT

Background and Problem Statement

The Milford Mill Self-Service Car Wash at 8120 Liberty Road operates 24 hours a day, seven days a week. There is no attendant on duty during operating hours. Bordering the car wash on one side is Eitmiller Road, part of a middle income, residential neighborhood. On the other side is a Giant food store.

Residents of Eitmiller Road had complained for some time about noise, loitering, and litter resulting from the unsupervised operation of the car wash. From May 15 through September 28, 1987, 35 calls for service about the car wash were recorded. About 66 percent of the calls were noise complaints.

Analysis

On December 10, 1987 Captain Tivvis assigned the Milford Mill Car Wash project to Lieutenant Bowers, who assigned it to Officers Meerdter, Miller, and Kelly. The officers met that week to formulate their plan, and decided a community survey was needed to determine the nature of the residents' complaints. The officers created a brief questionnaire and conducted a door-to-door survey on December 17, 1987. They interviewed residents from 24 of the 28 homes within the complaint area.

Approximately 88 percent of residents indicated that activity at the car wash generated excess noise, litter, and public disturbances.

On January 2, 1988, the officers reviewed the survey results and identified four problem areas: noise, litter, loitering, and traffic. Assignments were made in three broader topic areas: police response, zoning violations, and legal opinions. Officer Meerdter investigated the police response, Officer Miller researched zoning violations, and Officer Kelly obtained legal opinions.

Officer Meerdter requested a CAD run from the precinct crime analyst and learned that calls for service had increased substantially within the past year. Police handled only three calls for service during all of 1986 compared to 35 calls within a four month period in 1987.

Officer Miller learned from the county zoning office that until 1982, the car wash operated from 8 a.m. to 5 p.m. daily. In 1982, the owner requested a variance to operate 24 hours a day. When the zoning office published notification and invited citizens to respond at a public hearing, no one from the Eitmiller Road neighborhood appeared and the variance was granted. The type of zoning permit now in effect has no life span requiring it to be renewed.

Officer Miller also discussed the litter complaints with the county environmental services department. Mr. Deloatch of that office said a scheduled inspection was due and agreed to report the results to Officer Miller.

Officer Kelly contacted the county legal department concerning the noise complaints. Its opinion was that no noise violation had occurred because the

noise emanated from a business or commercial property. The office of the State's Attorney offered a similar opinion, stating that a business owner would probably not be held liable for the actions of his patrons.

After reviewing their findings, the officers planned a community meeting to help residents and the car wash owners develop a solution. A letter inviting interested parties to the meeting was sent on February 6.

Response

On February 24, the community meeting took place at Garrison precinct. The meeting was attended by five area residents, two representatives of Whiz Car Wash (owner of the Milford Mill Car Wash), two owners of the property where the car wash is located, one Giant Food representative, one representative of the Baltimore County Housing Authority, and one officer from the police department legal division.

Mr. Rice, one of the car wash owners, said he was willing to cooperate with the residents to resolve some of the complaints. He agreed to install a stockade-style fence as soon as possible separating the car wash from the residences along Eitmiller Road. He also agreed to assess revenue generated between midnight and 6 a.m. He would then consider closing the car wash during those hours, or hiring a security guard.

According to the officers' report on the meeting, the participants appeared to be satisfied with this plan.

Results

The car wash owner installed the fence he promised. The fence, designed to absorb sound, also stands 12 feet high and blocks residents' view of the commercial property.

Lieutenant Bowers observed the change and talked to several residents who expressed their gratitude for the officers' work. The carwash is still open 24 hours, but complaints from residents have stopped.

The total time spent on the project was 72 hours. It is reasonable to think this project will have "paid for itself" in about a year. Had complaints continued at the rate of 35 per quarter, with each response taking about 30 minutes, officers would have spent 68 hours in a year answering complaints without resolving the problem.

SKATEBOARDING CONTESTS AT CHERRYVALE PLAZA

GARRISON PRECINCT

Background and Problem Statement

For several years during the spring and summer, Garrison precinct had received complaints about juvenile skateboarding contests at Cherryvale Plaza in Reisterstown. The contests were sponsored by the Banana Beach store. Other merchants complained that the skateboarders did not stay within the assigned contest areas, creating traffic hazards and problems for their businesses. The activity usually occurred on Friday, Saturday, and Sunday evenings between 6:00 p.m. and midnight.

After Officer Lynch received several complaints on one Saturday in March 1988, he and Officer Nicholson proposed to Lieutenant Weih that the situation be addressed as a problem-solving project. Work on the project began March 31.

Analysis

Since none of the complainants reported any criminal activity, the officers outlined the following response: "1) organize the contests with specific rules and adult supervision, and 2) attempt to re-locate the contests to an area away from the shopping area." They proposed working with Banana Beach owner Al Snyder, and identified several other possible sources of assistance, including the precinct community relations officer, the department's youth services division, and the county Department of Recreation and Parks.

Response

On April 13, Officer Nicholson met with Mr. Ripley, supervisor of the Reisterstown area for the Department of Recreation and Parks, and discussed alternative sites for the skateboarding contests. One possibility was an area at the Hanna Moore recreation center, where three tennis courts were overgrown with weeds and were no longer used.

The officer was told he would have to submit a written proposal to the recreation department describing

- type of event
- type of supervision
- qualifications of supervisors
- number of anticipated participants and spectators
- preparation of grounds needed, and who would do the work.

On April 26, Officers Nicholson and Lynch met with Al Snyder of Banana Beach to discuss the meeting with Mr. Ripley. Mr. Snyder agreed to write up his ideas in response to the recreation department's questions. He gave the officers a handwritten list the next day, but a closer look at the proposed site was needed to complete the proposal. On April 29, Officer Lynch took Mr. Snyder to the Hanna-Moore center. There were several advantages to the site, including adequate parking and fencing on three sides. To make the site

suitable for skateboarding contests, the officers proposed that they supervise area youth in cleaning up the tennis court area; and that the county provide trash barrels and toilet facilities.

On May 19, recreation department administrators agreed to the officers' proposal, but the approval process was not yet complete. Officers Nicholson and Lynch next had to present the proposed project to the recreation council June 8 at the Hanna Moore center. They asked Mr. Snyder to help gather some adult and parent support for the meeting. They also consulted with the Area I administrative officer, Jim McAulay, about techniques for making an effective community presentation.

Results

On June 8, the recreation council approved the officers' proposal. As the study came to an end in the summer of 1988, the officers began to carry out their plan.

Officers Lynch and Nicholson spent approximately 15 hours on this project through June 1988.

Because of the difficulties described earlier in obtaining CAD data, it was not possible to document the reduction in complaint calls from Cherryvale Plaza merchants. If the contests at the new site are supervised as planned, it appears the problem will have been solved.

The next project in the "agency and business practices" category involved having a bus stop moved at a large mall. An officer volunteered for the project, which was an attempt to prevent muggings and accidents.

BUS STOP AT SECURITY MALL

WOODLAWN PRECINCT

Background and Problem Statement

Security Mall is a fully-enclosed shopping center and a major retail center for western Baltimore County. Many employees and shoppers take the Metropolitan Transit Authority (MTA) bus to the mall. The bus stop was only a short walk to one of the mall's entrances until store owners complained in 1987. They said riders sometimes blocked the sidewalk, and that young riders were sometimes rowdy, littered the area, and damaged plantings. In the fall of 1987, mall management moved the stop across the parking lot about 300 yards from an entrance.

Officer Mark Watkins patrols the beat that includes the mall. He noticed that the long walk from bus stop to mall was dangerous for elderly riders, especially in winter when the pavement was slippery. He was also concerned that the stop's new isolated location made waiting riders likely robbery targets. In December 1987, Officer Watkins suggested this situation be addressed as a problem-solving project.

Analysis

Officer Watkins talked to a series of agency representatives and individuals who had an interest in the bus stop location. The head of mall security said a number of mall employees and customers had complained, but various stores owned sections of the parking lot near their entrances and did not want the stop nearby, fearing that many of the young riders were shoplifters. A shuttle bus was considered too costly and could pose liability problems for the mall.

Officer Watkins next interviewed bus drivers, who confirmed that riders were unhappy with the new bus stop location; and talked to passengers waiting for busses. Many riders were afraid to walk across the lot, but felt powerless to do anything about the stop's location.

Other contacts made by Officer Watkins included the MTA planning and real estate departments. MTA had also received complaints about the bus stop location and was trying to have it moved.

Response

From the mall owner in St. Louis, Officer Watkins learned that negotiations with MTA were in progress. He told the owner's representative of the complaints he had documented, and of the police department's concern for the riders' safety. Finally, Officer Watkins met with a community activist who was working with a senior citizens' group to have the bus stop moved. The activist wrote letters to a local newspaper and enlisted the support of the state delegate for the area.

Results

The mall and MTA agreed to compromise and moved the bus stop closer to the mall, although not as close as it was at first. Officer Watkins spent approximately 20 hours on this project.

There was no evidence that anyone had been robbed at the bus stop or had been injured walking to the mall before the officer intervened. However, officers were encouraged to be pro-active in identifying problems, and crime prevention projects met the study's guidelines. Physical evidence that change

occurred, citizen and business satisfaction, and records that the location remained incident-free, would be appropriate measures of success for this and similar projects.

Another point of interest on the bus stop project was one patrol officer's ability to deal directly with a large organization (the MTA). However, other problems with "bureaucracies" may be difficult or impossible to resolve unless police department executives contribute information and exert their influence. The next case study, "Emergency Psychological Evaluations and Hospital Relations," is an example.

Woodlawn officers had long waits at the county hospital for these evaluations. They also had problems getting prisoner prescriptions filled. At first, they did not realize that headquarters was also working on these problems.

EMERGENCY PSYCHOLOGICAL EVALUATIONS AND HOSPITAL RELATIONS

WOODLAWN PRECINCT

Background and Problem Statement

In 1987, Woodlawn officers were concerned about the amount of time they had to spend guarding and transporting persons for emergency mental health evaluations. They felt that certain procedures at Baltimore County General Hospital made this process more time-consuming than necessary.

There are three ways officers can become involved in emergency evaluations. First, a family member can petition the court for a civil commitment. The court then authorizes police to transport the relative to the hospital for evaluation. Second, police may observe a person acting in a way that suggests he or she has psychological problems and is a threat to self or

others. Third, a doctor who believes a patient needs hospitalization for a psychological disorder can have the required legal documents drawn up and request that police transport the patient to the hospital for evaluation (this situation occurs less frequently than the other two).

At the hospital, an emergency room physician evaluates these persons soon after they arrive but often requests a second opinion from a psychiatrist. Police officers frequently have to wait several hours until a psychiatrist comes. Although the hospital has its own security personnel, staff members felt police presence was needed to handle persons who became violent. If both doctors believe a person should be committed, an officer transports the person to a psychiatric facility. If the doctors at this facility decide against commitment, the officer usually takes the person home. A 1987 department-wide inquiry into emergency psychological evaluations found that officers spent an average of 3.5 hours per case.

In December 1987, Woodlawn shift 2 decided to address this situation as a problem-solving project. Officer Steve Peterson was assigned as the project coordinator in January 1988.

Analysis

From mid-January through March 1988, Officer Peterson began a series of meetings with hospital personnel, including the emergency room head nurse and doctor. These meetings were frustrating for the officer, since the hospital participants were often late for meetings, and had to interrupt them to make phone calls or handle other matters. Peterson learned that the hospital had hired an "entirely new" staff of emergency room nurses and doctors.

Because of the project, other Woodlawn officers saw Officer Peterson as their hospital liaison. They told him of another problem: they could not fill prescriptions for prisoners in their custody because no pharmacy was open late at night or on weekends. Officer Peterson discussed this with emergency room personnel, hoping the hospital pharmacy could help, but met with no success.

Officer Peterson also lacked data about the time Woodlawn officers spent on emergency evaluations. He asked that others report to him any problems they encountered, including the time spent on these cases. By mid-February, however, he had received no further complaints. He was uncertain whether this was because his efforts had paid off, no serious cases had arisen, or whether officers had overestimated the extent of the problem.

Finally, precinct captain Engel learned that department executives at headquarters had been working on the same hospital-related issues. He sent copies of Officer Peterson's reports to headquarters, and Officer Peterson was given a new hospital contact, the vice president in charge of emergency procedures.

Response

Officer Peterson met with this hospital official, who encouraged the officer to contact him about future problems and started looking into ways the hospital could help fill prisoner prescriptions. Within about a month, Officer Peterson met with the pharmacy's assistant director and a hospital budget representative. A set of procedures was established for hospital employees to fill prisoner prescriptions and for police to pay for the drugs.

Police headquarters officials met with the county health department and representatives of four county hospitals to discuss ways to handle emergency evaluations. As stated in an April 15 memorandum from the head of field operations, "all of these efforts have had little, if any, effect on reaching the stated goal -- that of returning our officers to their posts much quicker."

The memorandum did contain revised procedures that gave police somewhat more discretion in handling these situations. Officers who believe a person will remain non-violent can tell hospital personnel they intend to leave unless a doctor requests that they stay. If a disagreement with hospital staff occurs, officers are to call their supervisors. Supervisors will either tell the officers to stay and remind hospital staff that state law requires evaluations to be completed "as promptly as possible;" or approve the officers' leaving and advise attending physicians to call in hospital security staff.

Results

The problem with prescriptions seems to have been resolved because of the combined efforts of precinct and headquarters personnel. Officer Peterson continues to meet with hospital personnel as needed.

The department is not hopeful that time spent on emergency evaluations will be reduced significantly. This situation will have to be reassessed to determine whether the new procedures have any effect.

Both the bus stop and emergency evaluations projects suggest that precinct patrol officers can be important in solving problems that involve large

community agencies. One difference, however, was that the bus stop problem was largely a *precinct* problem. The problem with lengthy hospital evaluations was county-wide.

To avoid officer frustration and duplication of effort by department members, responsible precinct personnel will need to determine whether county-wide problems are being researched or addressed at another level within the department.

Also, information on community-wide problems needs to flow "down from," as well as "up to" headquarters. Administrators may need to start viewing the community issues they address as "problem-solving projects." If they can develop ways to inform precinct commanders of these projects, they may benefit from involving patrol officers who have useful information, contacts, and ideas.

Another difference between the bus stop and hospital problems was citizen concern and support. Residents had also identified the bus stop problem and worked with the officer. The situation with the hospital evaluations was primarily an administrative problem for the police. Persons being evaluated may have been inconvenienced, but were not in a position to organize and advocate for change.

FAMILY AND NEIGHBOR CONFLICTS

The four problem-solving projects in this category show the importance of involving outside resources when analyzing and addressing family and neighbor conflicts.

In the two neighbor dispute problems at Woodlawn, the officers attempted to handle these problems alone at first. They met with little success beyond information-gathering. Officers met frequently with the disputants and tried

to mediate the situations. One of these projects ended when the disputants decided to move. In the second situation, an officer was accused of siding with one of the families, and the project was eventually reassigned to a different officer. The next officer consulted with a professional mediator from the community college. The project was not completed by the time the study ended.

Another Woodlawn project involved a teenager who had run away repeatedly. As discussed in Chapter 7, the officer learned that no agency appeared to have the authority to intervene. The officer was not able to resolve that problem, but began addressing it at another level by exploring possible system changes with the juvenile unit and other agencies. In addressing the "trouble with son" problem at Garrison, described below, outside resources were also needed.

TROUBLE WITH SON CALLS

GARRISON PRECINCT

Background and Problem Statement

For months, Garrison post cars 413 and 414 responded to repeat calls from a woman in Pikesville. The calls were sometimes dispatched as domestic situations, and sometimes as "trouble with son."

As Officers Dumais and Barile described the problem, the mother, Mrs. Baxter (age 60), "calls the police any and every time her son (age 30) refuses to eat, bathe, or smokes in the house. These calls for the police are frequent and continuous."

The officers noted that the calls occurred at various times and on various days, and that all calls had been unfounded and non-violent. Based on personal observations and discussions with psychiatrists, they concluded Mrs.

Baxter was "suffering from a mental disorder." Also, Mrs. Baxter had often said she was under the care of a psychiatrist. The son's father did not live at the house, but the officers were aware that he lived in the Baltimore area.

Because of problems with the new CAD system, no reports were available to document the exact number of calls Mrs. Baxter made. However, the repeat "trouble with son" calls were well known to many Garrison officers on all shifts.

Officers Dumais and Barile proposed to Lieutenant Weih (shift 2) that attempting to reduce these calls would be an appropriate problem-solving project. On April 6, Captain Webster approved the project.

Analysis

The officers decided they would contact Mrs. Baxter's psychiatrist, explain the situation, and obtain the psychiatrist's recommendations. If the problem continued, they would explore the possibility of the son moving in with his father. Lieutenant Weih suggested that the county Department of Social Services and the police department psychologist might be able to provide some advice and assistance.

Response

On April 25, Officers Dumais and Barile interviewed Mrs. Baxter and her son at their home. They learned that the son was seeing the same psychiatrist as his mother, and that the son's father lived in Baltimore city. Mrs. Baxter said that, to prevent further police involvement, she would take the son to his father's house when she became upset. Although the son did move in with his father temporarily, he was soon back at his mother's house, and the calls to the police department continued.

On May 25 Officer Dumais contacted the psychiatrist and explained the repeated calls Mrs. Baxter was making about her son's behavior. The psychiatrist agreed he would try to discuss the situation with Mrs. Baxter and her son at their next session.

Results

Because of Mrs. Baxter's emotional problems, this is not a project that lends itself to a "quick fix." At the end of the study, the officers were still working on the problem and communicating with Mrs. Baxter's psychiatrist. As a result of their intervention, the psychiatrist has more information about Mrs. Baxter's behavior. This may suggest certain steps for her treatment and that of her son. In the short run, this may be the best anyone can hope for. The officers spent about 3.5 hours on the project through June 1, 1988.

PARKING AND TRAFFIC PROBLEMS

Area I officers used several techniques to solve parking and traffic problems. As part of his work on an illegal parking problem on Dreher Avenue (Garrison), one officer sent a letter to businesses and residents seeking information and cooperation. One Wilkens project was assigned in January 1988 because of citizen complaints about illegal parking on Frederick Road. Post cars were instructed to check the site and write tickets, but no violations were observed and no tickets written. When citizens complained again in March, the project was assigned again. This time, the precinct crime analyst arranged for police cadets to work the location. They spent 36 hours on the assignment (half the time logged by officers when the project was first assigned), and issued 13 citations at $24 each.

The project described below involves tractor trailers parking illegally at a Woodlawn precinct shopping center.

ILLEGAL PARKING AT
WOODMOOR SHOPPING CENTER

WOODLAWN PRECINCT

Background and Problem Statement

The Woodmoor Shopping Center contains 15 stores in three buildings that face Liberty Road near the Baltimore city line. The main group of stores is anchored by a drug store on one end and a grocery store on the other. The center also includes an auto parts store and a gas station with a convenience store attached. Behind the center is the residential neighborhood of Woodmoor. The shopping center has deteriorated over the years, but is still important to residents. It serves a densely populated area and is the only shopping center for several miles within the county line along Liberty Road.

Because of a 1986 homicide nearby, the Area I COPE unit became involved in problems at the shopping center in February through July 1986. Merchants and Woodmoor residents complained about vagrants and about large trucks parked illegally in the center's parking lot. As a result of COPE intervention, better lighting was installed, several abandoned cars were removed, no loitering signs were posted, two no truck parking signs were posted on the drug store, high visibility patrols were established, and merchants were told of other possible legal actions they could take.

The COPE project was completed in July 1986, but about a year later, the Woodmoor Community Association again expressed its concern about vagrants and

truck parking to the Woodlawn precinct captain. Shift 2 discussed the problem at roll call and Officer Gabis volunteered to address it as a problem-solving project.

Analysis

The first step Officer Gabis took was to discuss the problem with Area I COPE members. COPE advised that, because many merchants feared losing their leases if the owner saw them as trouble-makers, officers needed to build trust between the merchants and the police. Officer Gabis next interviewed all the merchants, encouraging them to contact him about problems. Based on these interviews and discussions with other Shift 2 officers, a "stop, walk, and talk" program began at the center.

The main problems Officer Gabis identified were:

- a drunk man who often panhandled on the sidewalk near the grocery store and came inside, disturbing customers
- a shoplifting problem at the drug store
- continued illegal truck parking between the drug store and auto parts store

Officer Gabis also learned the department's Western Traffic division was working on the truck parking problem. Traffic officers had increased their enforcement somewhat, but they were off duty by 10 p.m. and most of the violations occurred later at night. Officer Gabis discovered four of five trucks parked at the center one night were from other states. Apparently, the shopping center lot was the first convenient parking area truckers found when they pulled off of Interstate 695.

Response

To deal with the vagrant at the grocery store, Officer Gabis explained the trespassing ordinances to the manager and advised store personnel to log his appearances. The officer also explained how to file a trespassing report and obtain a magistrate's warrant if the man failed to heed warnings to leave. Officer Gabis also discussed with the drug store manager ways the store's security personnel could be more effective in detecting shoplifters.

Officer Gabis worked with Western Traffic on the truck parking problem. After the officer talked to the local trucker, he stopped parking there. Increased enforcement seemed to reduce the number of out of state trucks using the lot, but the area was not adequately posted. Officer Gabis researched the county code to determine how signs should be worded and posted, designed a sign, and discussed the requirements for signs with the center's management company.

Results

After the grocery store manager threatened the vagrant with specific action, the man left and has not returned. There are no statistics to show decreases in shoplifting at the drug store, but apprehensions increased from four in the period July 15 to December 17, 1986 to nine during the same period a year later. As a result of Officer Gabis's efforts, a new sign prohibiting truck parking was posted at the center's Liberty Road entrance. Officer Gabis and other shift 2 officers continue to monitor the shopping center. Letters from the residents' association and informal conversations with merchants suggest the effort was successful. A total of 69.1 hours were devoted to this effort.

CHAPTER 7

SUMMARY OF FINDINGS AND CONCLUSIONS

INTRODUCTION

This chapter relates our findings and conclusions to the study's three hypotheses on time, management, and direction. We expected that all three factors would be important: having time available between calls for other activities, including problem-solving; blocking time for and managing problem-solving projects; and providing direction at the executive and precinct level. What we hoped to gain was information on the relative importance of these three factors.

The chapter also discusses the relationship between leadership and problem-solving, crime analysis support, and the types of problems that can be handled by patrol officers on directed patrol.

TIME AVAILABLE FOR PROBLEM-SOLVING

The time-effectiveness hypothesis stated that unless officers' workloads are reduced, little or no problem-solving can take place. The main ways the department reduced officers' workloads were by 1) using the differential police response (DPR) program, and 2) in Woodlawn precinct only, hiring four police service officers. This section summarizes our conclusions on time available between calls, differential police response, and police service officers.

Time Available between Calls for Service

As discussed in Chapter 4, unit utilization is defined as the percentage of time units spend on calls for service during a shift. CAD data for April

1987, considered an "average" month, were used to determine unit utilization. In addition, estimates by command personnel were used to compute time spent on assists, since the CAD system does not capture this data. The department reports that about half of all calls have an assist for the full duration of the call. Our findings are summarized below:

- Unit utilizations (including assists) ranged from a low of 14.6 percent (the figure for the Monday day shift at Wilkens) to a high of 34.5 percent (the Saturday 3 p.m. - 11 p.m. shift at Garrison).
- At this rate of unit utilization, officers have sufficient time for many other activities. Time is more likely to be available at certain times and on certain days of the week (for example, Monday through Thursday on the day shift).
- Based on a widely accepted queuing theory model, enough *blocks of time* (for example, 30 to 45 minutes) are available to handle problem-solving assignments. For example, if ten units are fielded, the probability of having 30 minutes between calls is about 65 percent.
- Although these are accurate representations of unit utilizations, it is *not* accurate to assume that non-call for service time is always available for problem-solving. Competing interests for officers' time must be considered.

Among the many activities *not* captured by the CAD data are report writing, time after arrests spent returning to the station and processing prisoners, court time, administrative duties, special assignments, and meals. Time on these activities will vary from department to department, but must be considered when estimating the time available for problem-solving.

Differential Police Response (DPR) and Police Service Officers

The department's DPR system was well established before the project began. The telephone report unit (TRU) is the system's primary means of relieving officer workload. During the first six months of 1988, the Area I TRU handled over 3,000 calls that might otherwise have been dispatched to Area I patrol

officers. The department has a system in place to continue developing call-handling alternatives (the DPR task force). In the future, these alternatives may include call stacking, diverting additional calls to the TRU, and if funding requests are successful, hiring PSOs in more precincts.

All three precincts had time freed up because of DPR, but only Woodlawn precinct had PSOs to handle nonemergency, noncriminal duties. The time and cost savings resulting from their work is significant:

- At least 75 percent of the PSOs' time was spent on tasks that relieved patrol officer workload. From June 1987 through February 1988, PSOs returned an average of 540 hours per month to Woodlawn officers.
- More than three-fourths of Area I officers and supervisors agreed that PSOs could handle many of the calls for service handled by officers.
- More than three fourths of the Woodlawn officers agreed that the PSOs did in fact relieve their workload during the study period.

There are several other benefits to employing PSOs that should be recognized. Not the least of these is the cost benefit. Costs to recruit, train, equip, and pay a PSO are significantly lower than the equivalent costs for an entry-level police officer. According to the department's personnel and training divisions, the first-year costs for a police officer in 1987 were about $35,388, while the same costs for a PSO were about $26,035. When PSOs handle tasks previously performed by veteran officers, the savings in salary and benefits are even greater.

PSOs also have the potential to improve officer morale. According to our surveys, at least 75 percent of patrol officers feel they spend too much time handling unimportant complaints; and 75 percent report that a great deal of

their work has little to do with controlling crime. A reduction in the time spent on such tasks as relaying inter-precinct mail and transferring vehicles for routine maintenance is perceived as an enhancement.

It is clear that PSOs free up time, save the department money, and have the potential to boost officer morale. In terms of our hypothesis on time, however, another finding must be recognized:

- Although PSOs freed up officer time, the number of problem-solving projects at Woodlawn was not significantly higher than the number at Garrison and Wilkens.

Woodlawn had 14 projects; Garrison, 12; and Wilkens, 14. Of course, counting numbers of projects does not speak to the types or complexity of these projects, the methods used to analyze or resolve problems, or the results achieved. However, it is likely that changes in key personnel, rather than time considerations, account for Garrison working on slightly fewer projects. After this situation stabilized, the number of projects assigned at Garrison equalled or exceeded the numbers assigned at Woodlawn and Wilkens.

In short, a considerable amount of time freed up by PSOs was not channeled into problem-solving. Our findings about time can be summarized as follows:

- Making time available for problem-solving will not, in and of itself, ensure that it gets done. More than a few hours of training and a few months experience are needed. Issues related to management, direction, and leadership need to be explored.

LEADERSHIP AND PROBLEM-SOLVING

Introduction

This study was designed to address the relationship between patrol officer workload and problem-solving. It asked the question, "Will decreasing the time patrol officers spend on calls and other tasks increase problem-solving efforts?" If patrol officers in Woodlawn precinct handled more problems than

patrol officers in the other two precincts, then this would indicate that increasing uncommitted patrol time can increase problem-solving by patrol officers. If, on the other hand, Garrison and Wilkens precincts showed the same or greater patrol officer problem-solving, then we could surmise that a simple relationship between problem-solving and workload may not exist. Of course, our conclusions may hold only within the range of workloads tested in these three Baltimore County precincts.

The results proved to be more complex than the simple relationship of time and effort can explain. Clearly, factors other than time had important influences on the problem-solving. A major factor seems to be leadership. A number of reasons for this conclusion are discussed in this section.

Unfortunately, leadership is not easily defined or measured. The evidence suggesting the importance of leadership in fostering problem-solving is indirect, in part, because leadership is difficult to measure and, in part, because this study was not designed to measure it. Thus, our conclusions regarding leadership are tentative.

Defining Leadership

Leadership holds an important position in management theory because it helps explain how organizations change and develop. Skolnick and Bayley (1986) describe its importance for implementing community policing. Much of the discussion on leadership is based largely on case studies of organizations (Peters and Waterman, 1982; and Kanter, 1983) and descriptions of individuals occupying important positions in organizations (Burns, 1978; Bennis and Nanus, 1985). However, there are some leadership studies that have involved systematic data collection and comparisons (Kotter, 1982).

There are three characteristics of leaders that seem to dominate the recent literature on this subject. First, leaders have a sense of where they want the organization to go. In other words, they have a vision (Peters and Austin, 1985; Schein, 1985). Second, leaders can communicate their vision to the people they work with and who work for them (Kotter, 1982; Schein, 1985). Third, leaders seek to motivate others to accomplish their vision (Bennis and Nanus, 1985; Peters and Austin, 1985; Schein, 1985). How leaders communicate their visions and motivate others is the subject of many recent popular management books (Peters and Austin, 1985).

Leadership is often thought of as an attribute of the heads of organizations or their immediate subordinates. However, anyone in an organization can be a leader (Bennis and Austin, 1985). Position in an organization influences the scope of a vision (e.g., department-wide, precinct-wide, or squad-wide), the means used to communicate it (e.g., directives and meetings, or personal interactions), and the means available to motivate action (e.g., formal recognition, rewards and sanctions, or informal allegiances).

Evidence of Leadership

Our observations of problem-solving efforts in Area I of Baltimore County revealed three sets of evidence suggesting that leadership is important for promoting problem-solving. The first set derives from the seeming lack of a strong relationship between time and problem-solving activities. This evidence implies that some factor other than time is needed to explain the results of this study. The second set of evidence comes from comparing the different problem-solving approaches used in the three precincts. This

evidence shows systematic differences in the way officers in each precinct approached problems. Precinct leadership and organizational culture are plausible explanations. Dates when problem-solving efforts began in each precinct reveal a third body of evidence. The presence and absence of precinct commanders in two precincts seems to have influenced problem-solving work.

Time, Problem-Solving, and Leadership

Like officers in Newport News (Eck and Spelman, 1987), many officers and first line supervisors felt they had too little time to routinely address problems. Lieutenants and sergeants expressed this concern during training sessions early in the project. Surveys of Area I personnel consistently revealed a concern with the availability of time to address problems. Officers and supervisors in all three precincts expressed these concerns.

In the first survey, officers were asked how much they agreed with the statement, "My workload does not allow enough time to work on problem-solving strategies". Officers' responses roughly correspond to the number of calls handled by personnel in each precinct. In descending order of precinct workload, 95 percent of Woodlawn officers, 85 percent of Garrison officers, and 79 percent of Wilkens officers agreed with this statement. Supervisors also reported on the first survey that not enough time would be available for their officers to address problems.

It is important to remember that when the first survey was conducted, Garrison and Wilkens precincts had engaged in no problem-solving projects and Woodlawn had engaged in only a few. Experience with the time needed to address problems was limited.

Despite these concerns, officers addressed problems in all three precincts. Interestingly, informal interviews with officers working directly on problem-solving projects seldom revealed concerns about time. These officers felt that they had adequate time to address the current problem, although some felt that routinely addressing problems might not be feasible. In other words, though the particular problem-solving effort they were engaged in presented few workload difficulties, they were not certain if this would always be true. Similarly, over one-half of shift lieutenants and their sergeants reported during interviews that it was possible to block officer time for worthwhile projects.

It may be true that perception of a heavy workload, and not the workload itself, is a potential impediment to problem-solving. Objective measures of time availability, presented earlier in this report, suggest there was enough time available to address problems.

Although perceptions of time availability may be important, perceptions of what is normal police work may be more important. In general, police define their primary role as controlling crime. This is especially true for patrol officers who tend to be younger and less experienced, Tasks that deviate from this role are perceived as somewhat inappropriate. As officers gain experience, many come to understand that much of their work does not relate to crime. Many accept the reality of their role, but may be reluctant to embrace a strategy they perceive as taking them even further away from their definition of police work. Both the surveys and the interviews conducted in Area I substantiate these perceptions and show that the majority of supervisors and officers feel much of their work has little to do with controlling crime.

It appears these perceptions affected problem-solving in Area I in two ways. Interviews with officers and supervisors revealed that many thought of problem-solving as "social work" or "not the department's job." It did not fit their definition of police work. Little effort was made to dispel these notions of problem-solving and the concept did not gain a wide acceptance.

Although less clearly revealed, it is possible that the perceptions of what is real police work versus the officers' view of problem-solving influenced response methods. In Wilkens precinct, one standard method of handling problems is to have patrol officers engage in intensive patrolling of problem locations. This may suppress the problem while the patrol car is in the area, but the problem usually reappears quickly. The time taken to handle problems is potentially greater than would be needed to address the circumstances that gave rise to the problem.

Although problem-solving can save time and money, intensive patrolling and call handling are considered "normal" police duties. Officers know what to expect when they get these assignments and supervisors know what to expect of the officers. Further, police officers and supervisors may prefer traditional responses to problems because they are familiar with these methods, know how to do them, and know how they will be judged by their peers and supervisors. In that sense, traditional responses may appear less risky.

What these observations about normal police work suggest is that additional time is unlikely to result in problem-solving without some additional intervention.

A strong organizational culture seems to support traditional police work (Skolnick, 1966; Rubenstein, 1973; and Sanders, 1977). This culture seems to be shared by most officers and supervisors. Officers and supervisors share

the notion that their workloads are too high to permit problem-solving. The culture also promotes the use of traditional police responses, even though these responses often may be time-consuming. Schein (1985) summarizes the role of culture within organizations:

> [C]ulture develops around the external and internal problems that groups face and gradually becomes abstracted into general and basic assumptions about the nature of reality; the world and the place of the group within it; and the nature of time, space, human nature, human activity, and human relationships. Culture can be thought of as the stable solutions to these problems. The pattern of particular assumptions that represents these solutions can be thought of as the underlying "essence" that gives any given group its particular character. Although culture is ultimately manifested in overt behavior patterns, it should not be confused with overt behavior patterns. Culture is not visible; only its manifestations are.

Yet in this project, officers made efforts to address problems. What instigated these efforts? Either some officers and supervisors changed their perceptions of their workload and normal police work or they were encouraged to address problems by some other force. The surveys of officers suggest that there was little change in perception of workload. It seems unlikely that the training, by itself, given its short duration, could have altered the culture of work in Area I.

Several management theorists point to the link between leadership and changing organizational culture (Deal and Kennedy, 1982; Schein, 1985). According to these theorists, organizational change is unlikely without leaders who understand the culture and are pushing for this change. Skolnick and Bayley (1986) make a similar argument about changing police work. That problem-solving was carried out in Area I, despite an organizational culture that was not supportive, suggests that leaders with insight into this culture were encouraging problem-solving by patrol officers.

County-Wide and Area-Wide Efforts to Stimulate Problem-Solving

During this study, there were efforts to stimulate problem-solving from the area commander and from police headquarters. From headquarters these influences came in the form of directives and memoranda, discussions at staff meetings, talks at in-service training, and the choice of reading material for promotional exams. This effort to move the entire department to a problem-oriented approach was not new. It had begun with the formation of the COPE units several years before. These efforts were intensifying, however, and beginning to show results.

In White Marsh precinct, for example, the newly promoted commander instituted a precinct-wide problem-oriented approach that was independent of this study. This captain, a former COPE lieutenant, probably would not have tried such an undertaking without strong support from headquarters. The participation of the Baltimore County Police Department in this study was also a part of its larger effort to shift to a problem-oriented approach.

Within Area I, and as part of this study, the area commander promoted problem-solving by issuing several directives and holding several meetings to further these efforts. In January 1988, he asked all three of his precinct commanders to try to always have at least one active problem-solving project per shift.

Clearly there was department-wide and area-wide pressure to have officers become involved in problem-solving. The following sections discuss two distinct patterns that suggest that precinct leadership also was a strong candidate for stimulating problem-solving.

Differences in Problem-Solving Responses

Officers in each precinct seemed to develop different types of solutions to problems. This suggests that precinct-specific influences were at work to stimulate problem-solving.

In Wilkens precinct, the principle mode of addressing a problem was the use of intensive patrolling. Although the other precincts also used this tactic, they used it less and combined it more frequently with other tactics when addressing crime and disturbance problems.

Officers consulted with community members and groups far more frequently in Woodlawn and Garrison than in Wilkens. Woodlawn and Garrison officers were also far more willing than Wilkens officers to engage in nontraditional efforts to resolve problems. Most of these efforts involved police personnel working with members of the community.

In addition, Garrison officers seemed more willing to seek the help of nonpolice agencies and organizations. They did not do this for every problem, but they did use outside resources more frequently than officers in the other two precincts.

There are two possible reasons for these differences. First, they may be due to different perceptions of problem-solving by the precinct commanders. Second, these precincts have their own cultures and informal leaders who influenced the direction of problem-solving efforts. It is also possible that the differences were the result of both influences.

Initiating Problem-Solving

Woodlawn and Garrison precincts offer additional evidence of precinct leadership influencing problem-solving. This evidence suggests that the precinct captains had a large role in stimulating problem-solving activities.

Problem-solving began at different times in each precinct. It began earliest in Woodlawn, where the first problem-solving project was dated May 1987. Wilkens began work on its first problem in October and Garrison in December.

It is likely that the late start in Garrison was due to the absence of a permanent precinct commander until December 1987. Once a permanent captain was installed, problem-solving began and continued unabated.

Woodlawn was commanded by a captain who embraced problem-oriented policing early in the study and seemed determined to demonstrate that it could work. His commitment may explain why [illegible] in this precinct began earlier than in the others. By August 1987, several problem-solving efforts were under way in the precinct. However, the captain's early advocacy and monitoring of problem-solving were apparently not enough to sustain the same level of effort in his absence. No new problem-solving projects were initiated between October and December when the captain was on leave.

While this is far from conclusive evidence, these patterns of problem-solving activities suggest that both strong initial leadership and ongoing management and accountability are important to having officers engage in this type of work.

Managing and Supporting Problem-Solving

Most of this discussion centers around leadership at the precinct commander level and higher. The responsibility fell to the shift lieutenants, however, for managing officers' time on problem-solving and helping them formulate their action plans when needed. A review of the methods used to

address problems, and observations and interviews in each precinct, suggest that some shift lieutenants were much stronger leaders of problem-solving efforts than others.

Some lieutenants understood and supported problem-solving, made sure their squad sergeants and officers understood the concept, and provided them with the support and time they needed to address problems. This may have been most consistently true in Garrison precinct. Garrison shift lieutenants did not initiate much problem-solving until a permanent captain provided direction and leadership. Once they began, however, all four lieutenants ensured that problems selected by officers were appropriate, saw that problem analysis took place, suggested outside resources when necessary, monitored officers' progress, and stressed the importance of complimenting officers on jobs well done.

Lieutenants who were not leaders of problem-solving efforts may have discouraged such efforts from being undertaken. More likely, they just did nothing to promote problem-solving. Because all shifts were eventually expected to always have a least one problem-solving effort underway, lieutenants who were not leaders let interested officers pursue problems, but provided no guidance or additional support.

In Wilkens, the general pattern was for the captain to assign problem-solving projects. The majority were assigned as a result of citizen complaints or because the crime analyst provided information and recommendations. Patrol officers seldom participated in identifying problems. The shift lieutenants followed through with their assignments, but seldom used non-traditional methods to analyze and respond to the problems.

Implications of Leadership

Leadership at several levels within the Baltimore County Police Department seems to have had a greater influence on problem-solving efforts than officer workloads. Efforts to free up officers from handling minor calls and errands are still worthwhile. Clearly there are workloads that will not permit officers to address problems and, with moderate workloads, many problems will go unaddressed unless additional time is made available. Finally, by diverting some calls and administrative assignments, department managers may be able to motivate problem-solving efforts by addressing the perception of high workloads.

Reducing workloads will not make police officers more effective unless police executives provide clear and consistent direction on how this time should be used. Both executives and middle managers must exert strong and consistent leadership. While efforts to reduce officer workloads are important, they should be part of a much broader effort to improve effectiveness.

PROBLEM ANALYSIS SUPPORT

Some of the data officers need comes from sources outside the police department, but much useful information is available from department records. Crime analysis units were a useful source of this information in Newport News (Eck and Spelman, 1987). Officers in Baltimore County also requested information from precinct crime analysts. Precinct crime analysis, however, will require some changes if these units are to fully support problem-solving.

Use of crime analysis information to address problems varied across the precincts. In Wilkens precinct, the crime analyst instigated problem-solving efforts, both by identifying potential problems and supplying information for

analysis. In Garrison and Woodlawn, crime analysts were not as involved in problem identification. They did supply crime data on problem locations when asked.

Several factors worked against the abilities of crime analysts to become more involved. First, they were often given assignments that had little to do with crime analysis. Second, the data they had was crime data. They had little data to offer on public disturbances and non-crime problems. Third, officers and supervisors in the first survey were ambivalent about the usefulness of crime analysis. It is not surprising, then, that officers did not ask crime analysts to take a larger role in problem-solving. Finally, the department was in the process of upgrading the precinct crime analysis function by supplying the analysts with computers and training.

Because of these factors, we were not able to test the potential for crime analysts to evolve into "problem analysts." Recommendations for expanding the crime analysis function to provide more problem-solving support are included in the next chapter.

TYPES OF PROBLEMS APPROPRIATE FOR PATROL

In the Newport News study, a problem was defined as a group of incidents that are related in one or more ways and are of concern to both the police and the public. Thirty-seven of the 40 Area I problem-solving projects fit this definition. The exceptions were the three projects involving night card updates. These were essentially responses to police administrative problems. There was no evidence of public concern about updating these records.

Nothing in the Baltimore County experiment would suggest a change in the Newport News definition as a general guide for identifying appropriate

problems. The problem-solving experience in Area I, however, does suggest that additional, more specific guidelines are needed on a practical level.

Even when managers and executives throw their full support behind problem-solving, and enough blocks of time are available, other factors need to be considered in selecting problems to be addressed by patrol. These include:

- The role of specialized units in patrol problem-solving
- Department policies
- The scope of certain problems (e.g., precinct-specific v. county-wide)
- The complexity of the problems
- Officers' attitudes, interests, and special skills

Role of Special Units

Before patrol officers begin problem-solving, the role of a department's specialized units needs to be clearly defined. For example, in Area I, efforts were made to distinguish between problems COPE should handle and those appropriate for patrol. COPE's work centers around crime and non-crime problems where citizen fear is a factor. Area I patrol and COPE coordinated their activities during the study, and no patrol officers tackled fear of crime issues that should have been referred to COPE.

At the end of the study, however, a considerable number of officers and supervisors who saw value in the problem-solving *approach* felt that COPE (or some other special unit) should have undertaken the projects that patrol had handled. This relates to the earlier discussion about perceived workload. Even when patrol officers had time for problem-solving, many pointed to the fact that COPE had the "luxury" of solving problems full-time, while officers had to answer calls or remain in a state of readiness to do so.

Few departments have specialized problem-solving units comparable to COPE, but many have special units such as crime prevention, community relations, traffic, and youth services. On the Area I follow-up survey, officers were asked whether each of seven special units was helpful. The statement read: "This police unit helps officers in my precinct by solving problems." About 40 to 50 percent of officers disagreed with this statement for each special unit listed. Providing the special units with an orientation to the patrol problem-solving project might have encouraged greater cooperation and a better understanding of responsibilities and referral procedures.

The Area I experience also suggests that relationships between patrol and special *investigative* units need to be clearly defined. This may be especially true when a department expects patrol to apply problem-solving techniques to serious crime problems. Only a few serious crime problems were addressed by patrol in Area I, while in Newport News slightly more than half of the problem-solving efforts were related to robberies, burglaries, and other crimes. A likely reason for this was the emphasis that Baltimore County administrators, trainers, and supervisors placed on dealing with other types of community and business concerns. In contrast, Newport News detectives and vice officers were included in the problem-solving planning group and worked with patrol to identify problems.

Department Policies

Existing department policies may discourage or may not permit officers to adopt certain situations as problem-solving projects, even though repeat calls to an address are well known and well documented. An example is a repeat domestic assault situation.

In Baltimore County and around the country, the patrol officer role is shifting from mediator to law enforcer in handling domestic assaults. The Baltimore County Police Department's policy is to make arrests for assault (although Maryland law limits arrests when a couple is not married). The department also has a specialized domestic violence unit, with two officers responsible for follow-up on these cases. Precinct officers are usually first respondents to domestic calls and serve ex parte orders.

As a result, most patrol officers know of repeat domestic locations without the aid of a data printout, and are aware of how the pattern of violence can escalate over time. But officers are also aware of a long list of frustrations in these cases, including the reluctance of victims to press charges, and the time and professional help needed for both victim and perpetrator to break long-standing behavior patterns.

The department's arrest policy did not prohibit Area I officers from applying problem-solving techniques to domestic assault cases; but a combination of established policies and procedures, the existence of the special unit, and the potential time and frustration involved appeared to discourage officers from taking on domestic assault problems during the study.

We would not conclude from this, however, that it would be inappropriate for patrol officers in other departments or in Baltimore County to undertake repeat domestic situations as problem-solving projects. A problem-solving approach could be used without expecting patrol officers to serve as mediators, social workers, or psychologists. For example, part of the solution on individual cases might involve precinct officers in increased

enforcement or improved case tracking or documentation. Other solutions might involve system changes such as developing new relationships with the domestic assault unit, or making changes in referral or follow-up procedures.

Scope of Problems

With regard to the scope of problems appropriate for patrol, the "hospital relations" problem in Woodlawn might serve as a guide. A key question in analyzing problems that involve large organizations should be: does the problem primarily affect the officers and residents of one precinct only, or does it also affect others in the county? Either way, a single officer can play an important role in solving the problem; but if other precincts are affected, analysis should include checking with headquarters to see what, if anything, is already being done by department administrators and others.

Complexity of Problems

Another factor to consider is the complexity of problems patrol officers should handle. The Area I precinct commanders felt that officers should be introduced to problem-solving through relatively simple projects, such as those dealing with faulty alarms. The faulty alarm problems were easy to identify, and seldom required more than two hours of an officer's time. All of these problems were successfully resolved.

Based on both the Area I and Newport News studies, however, we would not advocate setting limits based on how complicated a problem might be. Working within a system that specifically encourages problem-solving may be new to most officers, but many already have problem-solving experience and skills.

Resolving the problem involved research on zoning and legal matters, surveying 24 residents door-to-door, and holding a community meeting at which many competing interests were represented.

Similarly, Woodlawn's first project, the illegal use of a granite quarry, involved coordinating the response with COPE, community relations, traffic, and other police units; joint planning with residents; and arresting and citing violators. These were both ambitious projects, and they were both successful.

Officer Attitudes, Interests, and Skills

Research on organizational culture and police problem-solving suggests that a certain percentage of officers and supervisors can be expected to object strongly to working on problem-solving projects while on directed patrol. This may be especially true when community relations problems are emphasized over crime problems. Other officers will quickly see potential benefits in the approach; be willing to experiment; or welcome a change of pace from "always being the one who gets on their (residents') case," as one officer expressed it.

On the follow-up survey, 27 percent of Area I patrol officers and supervisors said they would like more opportunities to *lead* a problem-solving effort. There was no significant difference on this between officers who had already worked on a problem-solving project and those who had not.

These results are in line with expectations expressed by the captain in Baltimore County's White Marsh precinct, where patrol problem-solving was being carried out independent of this study. The White Marsh captain's approach was to require all officers (volunteers first) to receive about three

hours training on problem-solving. The training stressed practical applications over theory. Subsequent completion of one problem-solving effort was considered part of the training. Continued problem-solving was to be encouraged and supported, but not required. The captain's assessment was that about one-fourth of the officers would continue using the approach after training.

Based on the Area I experiment, we believe all officers could benefit from training in basic problem-solving techniques. The training should emphasize the practical application of these techniques, drawing heavily on local examples of crime and disturbance as well as community relations problems.

We would not necessarily advocate that all patrol officers be required to lead or coordinate a problem-solving project, but those who wish to do so should be encouraged and supported. Over time, most officers could be called on to participate in the problem-solving process in a way that uses their strengths. For example, several Area I projects combined working with citizen groups and traditional enforcement tactics. Officers who do not have the interpersonal skills needed to facilitate a community meeting obviously should not be required to perform such a task; but they could be involved in data analysis, selective enforcement, surveillance, or some other aspect of the project that draws on their special skills and interests.

Overall, we would conclude that there are no inherent limits on the types of problems patrol officers can address. There are many examples from Area I, Newport News, and other departments where officers, given an opportunity, have shown a high level of skill and resourcefulness in solving difficult problems. The five factors discussed above should be considered, but are not intended to be restrictive. The decision whether to make problem-solving voluntary or

required should be left up to individual departments. The organizational culture of the department, and of individual precincts, must be considered when making that decision. Most likely, problem-solving cannot be successfully introduced by "forcing it down people's throats," nor will it simply catch on by issuing an order, sitting back, and "letting it happen."

We are encouraged that there exists a core group of 27 percent of patrol who are interested in leading a problem-solving project, and presumably others who would not object to participating as required. As problem-solving continues, we are confident more successes will be documented. These can result in direct benefits to other officers -- solving crimes as well as reducing repeat calls and complaints -- and may foster greater interest in the approach by those who are currently unconvinced.

For this to happen, problem-solving will need to remain an administrative priority, with precinct commanders and supervisors held accountable for providing direction. Improvements in the problem-solving support system will also be needed, including data and problem analysis support; training; and relief from clerical duties and minor calls that steal time from directed patrol.

CHAPTER 8

RECOMMENDATIONS FOR PATROL PROBLEM-SOLVING

INTRODUCTION

At the end of the study, the Baltimore County Police Department reaffirmed its intention to have patrol officers throughout the department engage in problem-solving. In September 1988, the Area I major announced to precinct captains and lieutenants that each precinct was expected to continue problem-solving, with at least one active project per shift. Department administrators were also developing procedures for department-wide implementation.

Based on the Baltimore County study, we would expect that most members of a department would accept the theory behind problem-solving. The problem-solving process -- identification, analysis, response, and assessment -- is not difficult to understand, and is one that many officers have already applied in some way, although they may not have documented their efforts or received credit for them. The difficulties come in creating and sustaining a support system that enables patrol officers to address problems.

Elements of this support system may include call-handling alternatives for minor calls, relief from excessive errands and clerical work, training, crime and problem analysis support, measures to ensure accountability, and processes to reward problem-solving efforts.

After the study ended, several Area I supervisors made the following recommendations for managing directed patrol problem-solving:

- Place a strong emphasis on patrol officer training.
- Develop a logical implementation plan with specific milestones.

- Be prepared for difficulties in coordinating problem-solving projects if the department has rotating shifts.
- Assign a captain whose sole major responsibility is to develop and monitor problem-solving. An individual at this level is needed to "assume ownership" of the effort and ensure accountability.

We offer the following additional recommendations to any department interested in having officers use the problem-solving process while on directed patrol.

TIME FOR PROBLEM-SOLVING

Departments interested in extensive patrol officer problem-solving will need to ensure 1) that time is in fact available for directed patrol, and 2) that there is a reasonable probability that blocks of time (e.g., 30 to 60 minutes) will be available between calls. The times and days on which such blocks of time are likely to be available should also be determined. In Baltimore County's Area I, data was obtained for percent of time on calls (including assists). However, we did not analyze the percent of time Area I officers spend in court, running relays, writing reports, handling preventive patrol assignments, or performing other patrol activities not captured by the CAD system (the department was conducting such an analysis for Area I when the study ended). These duties and activities must be considered when determining the actual time available for directed patrol and problem-solving. A department's analysis of non-call for service time can also help document the need for PSOs or other civilians to handle duties that do not require sworn personnel.

As unit utilization exceeds acceptable levels (30-40 percent, for example), time for patrol problem-solving is likely to diminish proportionally. Departments in which officers are extremely busy handling calls are not likely to succeed in replicating the Area I effort. They might

still benefit, however, from adapting certain elements of the problem-solving approach: for example, briefing officers on the process, expanding or changing the types of data crime analysts provide, or attempting a limited number of projects.

Police Service Officers and Civilians

One way Baltimore County was able to free up patrol time in Woodlawn precinct was by employing police service officers (PSOs). The PSOs freed up a significant number of patrol hours, and the department hoped to expand the use of PSOs.

Police departments might also want to consider developing two distinct positions, one paraprofessional (e.g., the PSOs) and a civilian position.

For example, the Baltimore County PSOs received about ten weeks of training that prepared them for a paraprofessional law enforcement position. The department originally envisioned they would spend considerable time answering minor calls in the field, handling victim call-backs, writing offense reports and supplementals, and similar assignments. Time spent on enforcement-related tasks, however, steadily declined from 25.8 percent of their total time in August 1987 to 6.5 percent by March 1988. Thus, while the four PSOs returned an average of about 540 hours per month to patrol, 74 percent of these hours were devoted to errands and administrative (clerical) activities. This work benefitted patrol, but the tasks did not require the same skills in which the PSOs were trained.

Departments interested in using civilians to reduce patrol officers' workloads will need to conduct their own task analysis. The first step would be to list all tasks officers perform that do not require sworn law enforcement capabilities, and the time spent on those tasks. Second, each

task is analyzed regarding the skill level and training required to meet department standards. Decisions can then be made about which tasks could be diverted to another class of employee.

When the analysis is complete, the department may find that tasks appropriate for diversion from patrol can be divided into two categories: civilian and paraprofessional (PSO). Training for these two groups can then be designed that is commensurate with their duties.

PROBLEM ANALYSIS SUPPORT

To be useful for problem-solving, precinct crime analysts will need to become "problem analysts." Refocusing the crime analysis function can improve supervisors' and officers' ability to identify problems, obtain timely information for problem analysis, and evaluate the effectiveness of problem-solving efforts.

Problem Identification, Analysis, and Assessment

Currently, precinct crime analysts in most departments are not prepared to play a major role in identifying problems. As their title implies, they focus their attention on crimes: burglary, auto theft, and robbery. Officers in Area I, however, addressed many non-crime problems and public disturbances that are not tracked by crime analysts. To assist with these situations, analysts will need to track calls for service by address, blocks, apartment complexes, businesses, and neighborhoods.

Crime analysis units usually emphasize detecting crime patterns quickly so officers can intervene quickly. Problem-solving, however, often has a longer time horizon, requiring analysts to look for patterns that develop over several months.

Many problems will still be detected through other sources (e.g., citizen complaints and officers' observations), but a problem analyst should be able to supply data that helps officers confirm and determine the extent of those problems.

Having identified and confirmed the existence of a problem, officers need to analyze it carefully. Thorough analysis will increase officers' chances of selecting the most appropriate response. Officers should be able to obtain customized tabulations of department data for most problem-solving efforts. A problem analyst will need access to a variety of data and the skills to manipulate and interpret it. For example, one problem-solving effort may require a time series of noise complaints for one block, while another effort may need the number of thefts reported in a six-month period for several strip shopping centers.

Once officers have developed a response to a problem and implemented it, they need to determine if the solution was effective. A problem analyst should be able to assist in evaluating solutions by supplying before and after data and data from control areas.

Administration and Training

Ideally, a precinct problem analyst's responsibilities should all relate to helping identify, analyze, and assess crime and community problems. In many departments, as in Baltimore County, precinct crime analysts may need to be relieved of many of the administrative tasks they now perform.

To ensure a market for the analysts' work products, patrol supervisors will need to play a stronger role in defining their problem-solving functions and the data needed to support them. For example, although precinct analysts

in Baltimore County are supervised by precinct personnel, they are heavily dependent on the planning and research division for data, equipment, training, and direction on some tasks.

CAD and automated management information systems can provide useful, precinct-specific data to support problem-solving. Several departments are also experimenting with crime mapping programs, and combining police data with crime location data provided by citizen groups (McEwen, 1989).

A department's specialized units may also be compiling data that could be useful in problem identification or analysis.

A change from traditional crime analysis to problem analysis will require time to evaluate needs, coordinate resources, and provide training. However, if problem-solving is to become standard practice department-wide, administrators will need to free up analysts' time and direct a coordinated effort to begin this change.

TRAINING IN PROBLEM-SOLVING

The Area I training during the study had mixed results. Observation and interviews suggest that the patrol officer training was somewhat more successful than the sessions attended by their supervisors. Patrol training contained less discussion of problem-solving from an historical perspective. It also benefitted from being able to use local case studies as examples.

To lay the groundwork for training, the department's goals and objectives for problem-solving should be made clear to all involved personnel. Officers need to know specifically what is expected of them and have a clear understanding of the department's commitment to this strategy.

Based on our experience in Area I and other jurisdictions, we would make the following key recommendations for providing effective training:

- The curriculum should place a strong emphasis on how problem-solving is directly applicable to the individual department.

It is important to demonstrate early in the training sessions that problem-solving can be applied to existing situations. The instructor should identify current problems in the jurisdiction and use them as illustrations or case studies. These local examples can be used to demonstrate and discuss problem analysis, resolution, and assessment.

- Trainer(s) should be carefully selected and thoroughly prepared in order to achieve a high level of audience acceptability.

Whether the trainers are department employees or individuals engaged from other organizations, they should have a thorough knowledge of the department. It is important that they understand the existing organizational climate as well as the department's unique operations. At a minimum, the instructor should be well acquainted with operational units, personnel allocations, the information system, and any history of problem-oriented policing in the department.

As with any professional training, materials and audiovisual aids should be of high quality; and sample case studies, lists of resources and contact persons, forms, and other materials should be clearly written and accurate. Audiovisual aids should be relevant and well produced and the training facility should be comfortable. Attention to these and other details can underscore the importance the department places on problem-solving.

- The training should be appropriate for the audience.

The strata that normally exist within a police organization have overlapping, but different responsibilities. For training purposes, the

command staff (captains, lieutenants, and sergeants) should be trained separately and prior to line officers. This will allow an instructor to address operational issues specific to each group and to tailor the course for the different roles they will play in problem-solving.

- Specialized units should receive training commensurate with their expected role in problem-oriented policing.

Crime analysis, community relations, juvenile services, crime prevention, narcotics, burglary, domestic violence, robbery, and other special units need to be made aware of patrol's new emphasis on problem-solving. The exact training these units receive depends on the department's size and goals for problem-solving. At a minimum, all units should be briefed on the basic concept and the plan for implementation.

- Once the department has incorporated problem-solving, it should be taught to recruits at the academy.

For many recruits, problem-solving on directed patrol will differ greatly from their general concept of police work. They will need to know what is to be expected of them. After training, they should at least be able to demonstrate a general understanding of the process.

DOCUMENTATION

Early in the study, a set of special forms were created to record problem-solving efforts. Each of the three precincts used these forms, but there was little consistency regarding what information was captured and how it was routed through the chain of command. The main inconsistencies or omissions were related to how problems were identified, the extent of the analysis conducted, and how much time was devoted to the effort.

Consistency in documentation can help maintain operational consistency and accountability, and will be needed to evaluate department-wide problem-solving efforts.

Departments preparing forms for problem-solving might begin by reviewing all related forms and consolidating them as much as possible. These might include forms already used by crime analysts, those used to document directed patrol and selective enforcement, and others. Recognizing that, in general, a great deal of report information is predictable and repetitive, the objective should be to simplify. Predetermined responses can be used whenever possible to save time and ensure that certain data is captured consistently.

Upon completion, report forms should follow a predetermined process for review by supervisors to assess the status of projects, determine whether intervention or additional resources are needed, and evaluate results.

REWARDING PROBLEM-SOLVING EFFORTS

Recognizing officers for their problem-solving efforts is important to the success of problem-oriented policing. Chief executives who are committed to institutionalizing problem-oriented policing should be prepared to provide incentives for consistent and competent work.

Just as officers are recognized for good investigative skills, traffic control performance, or number of felony arrests, department members must know that their problem-solving efforts are noticed and taken seriously. Not all investigations result in arrests, and not all problem-solving efforts will resolve problems. Supervisors will need to accept good faith efforts to resolve problems, even if these efforts prove unsuccessful.

Personal satisfaction from aiding citizens, resolving a series of crimes, or eliminating repeat complaint calls can be a strong incentive for some officers. However, officers also rely on supervisors and other officers when deciding whether their efforts are worthwhile.

Administrators and supervisors can use both informal and formal means to recognize problem-solving efforts. Three years after Newport News began problem-solving, recognition and rewards became a major topic of discussion. Many officers were not as interested in awards such as certificates and plaques as they were in simply being told their efforts were appreciated. Some officers suggested letters of appreciation from the chief as a way to acknowledge their efforts, while others said a few words of recognition from immediate supervisors was important.

Other ways of recognizing problem-solving can include obtaining newspaper and television coverage and reporting officers' work in a department newsletter or national police publication. A proliferation of small awards is unlikely to encourage problem-solving (Peters and Austin, 1985), but some type of award system might be considered. The department should recognize officers who assisted in solving problems as well as those who lead problem-solving efforts.

Opportunities to exchange information on problem-solving experiences with officers from other jurisdictions may be another way to recognize officers for their work. This might include assisting or training officers from other agencies, or representing the department at conferences.

Monetary rewards should also be considered for officers who consistently pursue problem-solving. Newport News now plans to expand its evaluation system to accomplish this. Currently the Newport News performance evaluation system includes a three-level merit step increase. Officers who have

successfully mastered the skills and knowledge needed for each step are eligible for a pay increase. The new system will add a fourth level. Only officers who demonstrate problem-solving competence can achieve this level. To stay at this level, problem-solving competence must be continually demonstrated. As noted earlier, there will be instances where factors outside of officers' control affect outcomes and a problem cannot be resolved, even though analysis was thorough and the response was carefully designed. To build problem-solving competence into an evaluation system, a department will need to define the minimum steps required to demonstrate that a thorough analysis was done and a plausible response was implemented.

Overall, department administrators will need to send a consistent message about problem-solving as it evolves from an experimental status to standard procedure. Rewards will need to reflect the value the department places on the effort. The department must be aware of how rewards for problem-solving compare to those given for more traditional activities. Agencies that incorporate problem-solving into the patrol function department-wide will need to develop a new performance evaluation system to recognize, support, and evaluate problem-oriented policing.

APPENDIX A

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APPENDIX B

PROJECT TASKS

APPENDIX B

PROJECT TASKS

PLANNING AND ORIENTATION (MONTHS 1-6)

- Reaffirmed commitment of chief and Area I command personnel to the project.
- Consulted with Area I commanders, communications, planning and research, COPE, and others.
- Reviewed project proposal and revise project plan and timetable.
- Provided orientation for a new major transferred to Area I during the sixth project month.
- Hired and provided six weeks academy training for four police service officers (PSOs). The PSOs started work at Woodlawn precinct (month 6).

TRAINING

- Trained Area I lieutenants, sergeants, and crime analysts in problem-solving theory and process (months 4 and 5). Four all-day training sessions were conducted by Forum staff.
- Trained Area I patrol officers in problem-solving process (months 11 and 12). COPE and the research team planned the training. A COPE officer conducted a number of three-hour training sessions to accommodate officer work schedules.

DATA COLLECTION (PLANNING AND IMPLEMENTATION PERIODS)

- Revised crime analysis forms developed by the department to document problem-solving by Area I patrol officers.
- Developed logs for recording PSO time on activities; analyzed data regularly for ten months, and provided the department with interim written reports to aid in monitoring PSO workload.
- Interviewed the four PSOs, their supervisors, and other Woodlawn personnel to validate the trends identified (month 13).
- Designed, distributed, and analyzed first survey to measure officer and supervisor knowledge of and attitudes about problem-solving and related matters. Prepared report on results and discussed with key department personnel (months 10-12).

- To gather baseline data and to aid Area I personnel in identifying problems, ILJ analyzed 1986 CAD data, grouping repeat calls for service by precinct and address. The researchers also gave each precinct a list of problems identified by officers on the first survey.

- Interviewed commander of White Marsh precinct to discuss his problem-solving experiences. A former COPE lieutenant, the commander had implemented problem-solving at White Marsh independently of this project.

- Designed, distributed, and analyzed second survey of officers and supervisors (months 19-20).

- Analyzed 1987 CAD data to determine unit utilization and the probability of officers having blocks of non-call for service time available for problem-solving.

- Interviewed more than 30 Area I personnel about their problem-solving experiences, including all shift lieutenants (12), the three crime analysts, five sergeants, and 13 officers.

- Spent more than 30 days on site collecting documentation on problem-solving projects and interviewing key personnel.

IMPLEMENTATION

- Implemented all project elements. By June 30, 1988 officers and supervisors had worked on and documented 40 problem-solving projects in the three precincts.

- On their own initiative, Area I personnel installed problem-solving bulletin boards at each precinct. The Area I administrative officer also began publishing a newsletter to report on problem-solving projects in Area I. The newsletter was distributed throughout the department.

POST IMPLEMENTATION

- Presented results of second survey, a preliminary analysis of CAD data regarding time available for problem-solving, and an overview of completed problem-solving projects at Area I supervisors meeting (major, captains, and lieutenants).

APPENDIX C

FREE TIME MODEL

APPENDIX C

The "free time" model represented in Exhibit 4-3 is based on a queuing model that has been used in many patrol allocation models. It is, for example, the basis of the Patrol Car Allocation Model (PCAM) developed by the RAND Corporation.

The queuing model assumes that arrivals occur according to a Poisson input with parameter λ and that the service time for each unit has an exponential distribution with mean $1/\mu$. Thus the mean service rate per busy unit is μ.

Suppose there are s patrol units fielded to respond to citizen calls for service. If $\lambda < s\mu$, so that the mean arrival rate is less than the maximum service rate, then the probability of no units being busy (i.e., no calls in the queuing system) is given by

$$P_o = \left[\sum_{n=0}^{s-1} \frac{(\lambda/\mu)^n}{n!} + \frac{(\lambda/\mu)^s}{s!} \cdot \frac{1}{1-(\lambda/s\mu)} \right]^{-1} \qquad (1)$$

Further, the probability of n units being busy (i.e., the probability of n calls in the system) is given by

$$P_n = \frac{(\lambda/\mu)^n}{n!} P_o \qquad \text{where } 0 \leq n \leq s \qquad (2)$$

For the Baltimore County project, the question to be addressed is the probability that a unit's next call will not occur for at least T minutes. Formally, we want

$$G(T) = P\{\text{time until this unit's next call} > T\}$$

To calculate this probability, we need to introduce the general form of the Erlang distribution with two parameters, E(b,c). The probability density function of this distribution is

$$E(b,c) = \frac{(x/b)^{c-1} \; e^{-x/b}}{b[(c-1)!]} \tag{3}$$

This distribution has mean = bc, variance = b^2c and a cumulative distribution function

$$F(b,c,t) = \int_0^t E(b,c) = 1-e^{-t/b} \left[\sum_{i=0}^{c-1} \frac{(t/b)^i}{i!} \right] \tag{4}$$

Assume now that a patrol unit has just become free from a call. Then G(T) can be calculated from the two following equations:

$$\alpha_s = \sum_{i=0}^{s-1} \frac{1}{s-i} P_i \tag{5}$$

and

$$G(T) = \alpha_s \sum_{k=1}^{\infty} (1-\alpha_s)^{k-1} \cdot \text{Prob}(E(1/\lambda,k)>T) \tag{6}$$

In this formulation, we can use $F(1/\lambda,k,T)$ as an Erlang distribution of order k with mean k/λ. With Equation (4),

$$F(1/\lambda,k,T) = 1-e^{-\lambda T} \left[\sum_{i=0}^{k-1} \frac{(\lambda T)^i}{i!} \right] \tag{7}$$

so that

$$G(T) = \alpha_s \sum_{k=1}^{\infty} (1-\alpha_s)^{k-1} e^{-} \; T \left[\sum_{i=o}^{k-1} \frac{(\lambda T)^i}{i!} \right] \qquad (8)$$

APPENDIX D

BALTIMORE COUNTY SURVEYS

BALTIMORE COUNTY POLICE DEPARTMENT

HEADQUARTERS

400 KENILWORTH DRIVE
TOWSON, MARYLAND 21204-4007
(301) 494-2214

Cornelius J. Behan
CHIEF OF POLICE

July 15, 1988

Dear Officer:

Over the past year, many of you have been developing and testing a problem-solving approach to police work. The Police Executive Research Forum (PERF) and the Institute for Law and Justice (ILJ) have been working with the department on an experiment that uses problem-solving in the patrol function.

In the future, problem-solving will be emphasized department-wide. It is important to know more about your experiences in order to provide all officers with the training, direction, and support they need. Your comments and ideas on the attached questionaire will be extremely valuable in the planning process.

Your responses will be completely anonymous. ILJ will be compiling the results of this survey. No one in the department will receive your questionnaire, have access to it, or know how you answered the questions.

When you have completed the survey, please follow these instructions:

1. Place the questionnaire in the attached envelope and seal it. The seal will be broken only by ILJ staff, who will not be able to link your name to your responses. To assure anonymity, do not put your name on the questionnaire or envelope.

2. Hand the sealed envelope to your supervising officer. This is to ensure that everyone participates in the survey.

At the completion of the experiment, the results of the survey will be released at roll call.

Your cooperation and help in this process is appreciated.

Sincerely,

Neil J. Behan

Cornelius J. Behan
Chief of Police

Questionnaire Instructions

Please indicate how much you agree or disagree with each of the following statements by circling the number over the response that best describes how you feel.

If you want to explain any of your responses, please feel free to do so. Your comments are important. You may write explanations on the back, noting the question number to which you are referring.

1. Many community problems can be solved by cooperation between police and local nonpolice agencies.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

2. A lot of my work every day has little to do with controlling crime.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

3. Police officers need to spend more time working with businesses to solve problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

4. Police officers need to spend more time dealing with neighborhood problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

5. Most patrol officers have to spend too much of their time handling unimportant, noncriminal complaints.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

6. Police service officers could handle many of the calls for service that patrol officers now handle.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

7. ANSWER THIS QUESTION ONLY IF YOU ARE IN PRECINCT 2. Civilian police service officers have reduced my workload.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

8. Police relationships with the people in my precinct are good.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

9. Patrol officers should spend more time working with community groups.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

10. I would like to have more opportunities to lead a problem-solving effort.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

11. The police should respond to all calls immediately.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

12. This department involves officers of all ranks in planning solutions to crime problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

13. My workload does not allow enough time to work on problem-solving strategies

A) on the day shift

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

B) on the 3 to 11 shift

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

C) on the night shift

1	2	3	4	5
agree strongly	agree	neutral	disagree somewhat	disagree strongly

14. Rotating shifts every week makes it difficult to address problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

15. If a patrol officer wants to understand local crime problems, the best place to start is to talk to citizens.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

16. Which rotation schedule would you find most preferable?

1	2	3	4	5
rotate weekly (current procedure)	rotate monthly	rotate every 3 months	rotate every 6 months	rotate annually

17. I get a real sense of accomplishment from doing my job.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

18. This police unit helps officers in my precinct by solving problems (circle a number for each unit listed).

		very helpful	somewhat helpful	neutral	seldom helpful	not helpful at all
A)	Traffic	1	2	3	4	5
B)	Detective Bureau	1	2	3	4	5
C)	COPE	1	2	3	4	5
D)	Community Relations	1	2	3	4	5
E)	Youth Serv. Division	1	2	3	4	5
F)	Crime Prevention	1	2	3	4	5
G)	Spousal Abuse Unit	1	2	3	4	5

19. Most officers on my shift support problem solving efforts.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

20. The department offers me the chance to improve and develop my own special skills and abilities.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

21. The department recognizes officers who do a good job.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

22. Problem-solving training gave me a good understanding of the concept.

1	2	3	4	5	6
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly	did not receive training

23. If I had it to do over again, I'd still choose to be a police officer.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

24. My immediate supervisor is pretty well informed about general problems in this precinct.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

25. My immediate supervisor gives me the support I need to do my job.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

26. My immediate supervisor and I discuss problems in my precinct.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

27. I get the impression the command staff really supports a problem-solving approach to police work.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

28. I don't feel that I have any influence in deciding what changes are made in this department.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

29. Additional training in problem-solving is needed.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

30. List three positive things about problem-solving.

31. List three negative things about problem-solving.

32. If you feel that problem-solving is a good concept but improvements could be made in how it is implemented and practiced, please list the improvements you would suggest.

33. I worked on one or more of the problem-solving assignments listed below. (Circle yes or no. You do not need to indicate which problem you worked on.)

Yes

No

WOODLAWN

Dangerous use of quarry, Old Court Road
Alarms, 84 Lumber
Vagrants, truck parking, Woodmoor Shopping Center
Neighborhood conflict, Walden Cir.
Neighborhood conflict, Claridge Rd.
Juv. disturbances, Johnnycake Elem.
Bus stop, Security Mall
Alarms, Budget Tire

Runaway, Luryford Rd.
Disorder, thefts, Pace Bell Plaza
Emergency evaluations, Baltimore County General Hospital
Precinct 2 station access
Juvenile loitering at bar, Ingleside and Johnnycake
Traffic at Cedar Cir.
Other _____

GARRISON

Disturbances, etc., Milford Mill Car Wash
Break-ins, loitering, unit block, Main St.
Alarms, Chizuk Amuno Synagogue
Alarms, Basics Food, Liberty Rd.
Thefts from autos, etc., Owings Mill Town Center
Illegal parking, Dreher Ave.
Illegal parking, sus. drug sales, Pleasant Hill Dr.

Skateboarding, Banana Beach store
Trouble with son, Arborwood
Loitering, Marriottsville Shopping Center
Child Safety, Winands Elem.
Runaways, Kelso Center
Car vandalism, no street lighting, Pikesville residential area
Other_____

WILKENS

Alarms, Ingleside Cleaners
Disorderly, etc., Sulphur Spring Inn
Disorderly, etc., Kings Tavern area
Illegal parking, Frederick Rd. and Holmhurst Ave.
Alarms, Washington Aluminum Co.
Business complaints, juveniles loitering, Landsdown Sh. Ctr.
Crosswalk, Goodwill Industries
Thefts from drop trailers, Sulphur Spring Rd.

Business contacts (night cards), Wilkens Ave., Frederick Rd.
Business contacts (night cards), Edmondson Ave. & Rt. 40 area
Business contacts (night cards), Arbutus area
Drinking on bar property, Valley View Tavern
Auto thefts, Alan Dr., Wilkens Plaza, Broadfield
Alcohol, drugs, disorderly, South West and Sandy Hills Parks, River View Elem.
Other_____

General Background

Your responses to the questions in this section will be used only to prepare a statistical summary of the survey results. This type of statistical analysis is important in measuring the results of the problem-solving experiment. As stated in the cover letter, your responses to all of the survey questions will remain anonymous. No one in the department will know how any individual answered the questions.

1. Rank:

   1 Patrol Officer or Corporal 2 Sergeant and above

2. In what precinct do you work?

   1 Wilkens 2 Woodlawn 3 Garrison

3. I started work at this precinct before October 21, 1987.

   Yes No

4. I started work at this precinct after February 1, 1988.

   Yes No

Thank you very much for your time and cooperation in completing this questionnaire.

BALTIMORE COUNTY POLICE DEPARTMENT

HEADQUARTERS

400 KENILWORTH DRIVE
TOWSON, MARYLAND 21204-4007
(301) 494-2214

October 21, 1987

Dear Officer:

Over the next year, many of you will be developing and testing a problem-solving approach to police work. The Police Executive Research Forum (PERF) and Research Management Associates, Inc. (RMA) will be working with the department on an experiment that uses problem-solving in the patrol function.

It is important to have your ideas during the planning process. The attached questionnaire is designed to solicit your opinions on such issues as departmental policies and procedures and problems you encounter working for the department. In about six months, you will be asked to complete a similar follow-up questionnaire. The purpose of the second questionnaire will be to see if certain changes occur as a result of the problem-solving experiment.

Your responses will be completely anonymous. RMA will be compiling the results of this survey. No one in the department will receive your questionnaire, have access to it, or know how you answered the questions.

When you have completed the survey, please follow these instructions:

1. Place the questionnaire in the attached envelope and seal it. The seal will be broken only by RMA staff, who will not be able to link your name to your responses. To assure anonymity, do not put your name on the questionnaire or envelope.

2. Hand the sealed envelope to your supervising officer. This is to ensure that everyone participates in the survey.

At the completion of the experiment, the results of these surveys will be released at roll call.

Your cooperation and help in this process is appreciated.

Sincerely,

Cornelius J. Behan
Chief of Police

Questionnaire Instructions

Please indicate how much you agree or disagree with each of the following statements by circling the number over the response that best describes how you feel.

If you want to explain any of your responses, please feel free to do so. Your comments are important. You may write explanations on the back, noting the question number to which you are referring.

1. Some calls to the police can be handled over the telephone without sending an officer.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

2. Many community problems can be solved by cooperation between police and local nonpolice agencies.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

3. A lot of my work every day has little to do with controlling crime.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

4. Crime analysis information is out-of-date by the time I get it.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

5. If crime analysis information were provided more quickly, it would help direct my patrol activity better.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

6. Police officers need to spend more time patrolling neighborhoods.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

7. Police officers need to spend more time dealing with neighborhood problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

8. The police should handle calls on a priority basis to ensure availability for emergency calls.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

9. Most patrol officers have to spend too much of their time handling unimportant, noncriminal complaints.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

10. Curbing citizen fear of crime should be just as high a priority for this department as cutting the crime rate.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

11. Police service officers could handle many of the calls for service that patrol officers now handle.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

12. ANSWER THIS QUESTION ONLY IF YOU ARE IN PRECINCT 2. Civilian police service officers have reduced my workload.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

13. Police relationships with the people in my district are good.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

14. Patrol officers should spend more time working with community groups.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

15. The majority of people in my precinct are supportive of the police department.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

16. My precinct gets the staffing, equipment, and facilities it needs from the county.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

17. New ideas are needed if we are to solve persistent crime problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

18. The police should respond to all calls immediately.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

19. This department involves officers of all ranks in planning solutions to crime problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

20. My workload does not allow enough time to work on problem-solving strategies

A) on the day shift

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

B) on the 3 to 11 shift

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

C) on the night shift

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

21. Rotating shifts every week makes it difficult to address problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

22. If a patrol officer wants to understand local crime problems, the best place to start is to talk to citizens.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

23. When I need information about crimes in my district, the best place to get it is the crime analysis unit.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

24. Weekly rotating shifts are a good idea.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

25. This department's number one priority is responding to calls for service.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

26. COPE helps officers in my district by solving problems.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

27. Patrol officers frequently refer citizens to the department's specialized units (e.g. crime prevention, spouse abuse, COPE, community relations).

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

28. I get a real sense of accomplishment from doing my job.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

29. The department offers me the chance to improve and develop my own special skills and abilities.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

30. The department recognizes officers who do a good job.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

31. If I had it to do over again, I'd still choose to be a police officer.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

32. My immediate supervisor is pretty well informed about general problems in this precinct.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

33. My immediate supervisor gives me the support I need to do my job.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

34. My immediate supervisor and I don't really have much opportunity to discuss problems in my precinct.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

35. I get the impression the command staff really supports a problem-solving approach to police work.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

36. I don't feel that I have any influence in deciding what changes are made in this department.

1	2	3	4	5
agree strongly	agree somewhat	neutral	disagree somewhat	disagree strongly

37. In general, a problem that might lend itself to problem-solving efforts by officers has all these characteristics:

a) It involves a group of incidents (two or more).
b) The incidents are similar in one or more ways.
c) The public is concerned about the problem.
d) The police are expected to handle it.

A. Officers on the street generally have a good idea of the problems faced by the public and police. Many of these problems may not have been identified by support personnel. Please list five problems (criminal and non-criminal) in your district that meet these criteria. Please be specific about the type and location of each problem.

Problem 1: _____

_____

Problem 2: _____

_____

Problem 3: _____

_____

Problem 4: _____

_____

Problem 5: _____

_____

B. Using the map on the next page, please circle the locations of the five problems listed above and label them with the appropriate problem number.

General Background

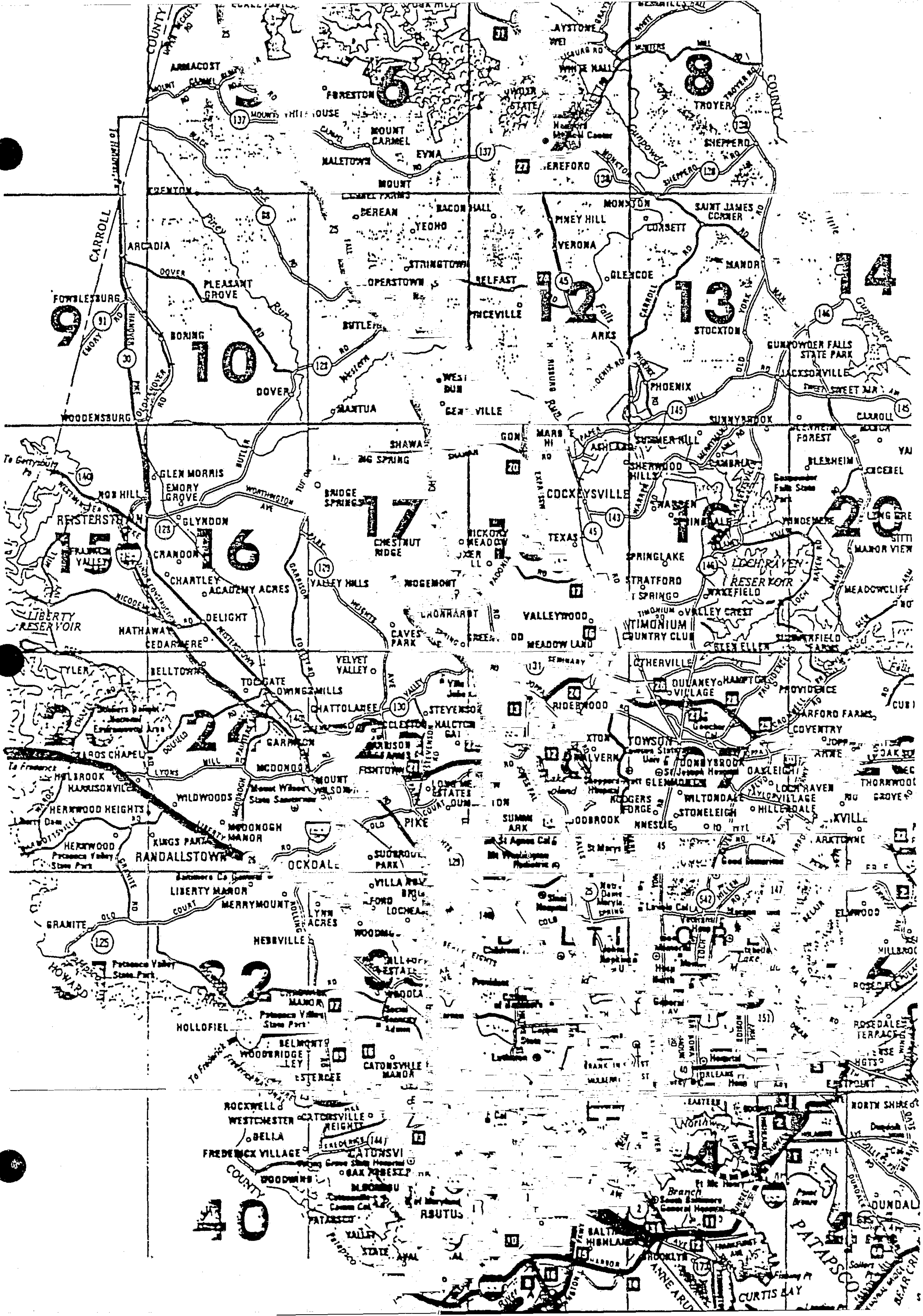
Your responses to the questions in this section will be used only to prepare a statistical summary of the survey results. This type of statistical analysis is important in measuring the results of the problem-solving experiment. As stated in the cover letter, your responses to all of the survey questions will remain anonymous. No one in the department will know how any individual answered the questions.

1. Rank 1 Patrol Officer or Corporal 2 Sergeant and above

2. In what location do you work?

1	2	3
Wilkens	Woodlawn	Garrison

Thank you very much for your time and cooperation in completing this questionnaire.


ARMACOST
FORESTON
MOUNT CARMEL
EVNA
HALETOWN
WHITE HALL
TROYER
SHEPPERD
CARROLL
ARCADIA
PLEASANT GROVE
FOWBLESBURG
BORING
DOVER
WOODENSBURG
BEREAN
YEOHO
BACON HALL
STRINGTOWN
BELFAST
PINEY HILL
VERONA
MONKTON
SAINT JAMES CORNER
CORBETT
GLENCOE
MANOR
STOCKTON
GUNPOWDER FALLS STATE PARK
JACKSONVILLE
PHOENIX
MANTUA
SUNNYBROOK
To Gettysburg
GLEN MORRIS
EMORY GROVE
GLYNDON
REISTERSTOWN
FRANKLIN VALLEY
CRANDON
CHARTLEY
ACADEMY ACRES
BRIDGE SPRINGS
CHESTNUT RIDGE
HICKORY MEADOW
COCKEYSVILLE
TEXAS
SHERWOOD HILLS
SPRINGLAKE
STRATFORD
LOCH RAVEN RESERVOIR
WAKEFIELD
VALLEY HILLS
LIBERTY RESERVOIR
HATHAWAY
DELIGHT
CEDARMERE
CAVES PARK
VALLEYWOOD
MEADOW LAND
TIMONIUM COUNTRY CLUB
VALLEY CREST
MEADOWCLIFF
TYLER
BELLTOWN
TOLGATE
OWINGS MILLS
VELVET VALLEY
CHATTOLANEE
STEVENSON
RIDERWOOD
DULANEY VILLAGE
PROVIDENCE
HARFORD FARMS
COVENTRY
HOLBROOK
HARRISONVILLE
HERNWOOD HEIGHTS
WILDWOODS
GARRISON
MCDONOGH
FISHTOWN
TOWSON
GLENMONT
OAKLEIGH
LOCH RAVEN VILLAGE
THORNWOOD
STONELEIGH
HILLENDALE
RODGERS FORGE
KINGS PARK
RANDALLSTOWN
MCDONOGH MANOR
HERNWOOD
LIBERTY MANOR
MERRYMOUNT
GRANITE
LYNN ACRES
HEBBVILLE
HOWARD
HOLLOFIELD
BELMONT
CATONSVILLE MANOR
ROSEDALE TERRACE
EASTPOINT
NORTH SHORE
ROCKWELL
WESTCHESTER
CATONSVILLE HEIGHTS
BELLA
FREDERICK VILLAGE
CATONSVILLE
OAK FOREST PARK
ARBUTUS
COUNTY
PATAPSCO
DUNDALK
CURTIS BAY
To Frederick
9
10
12
13
14
15
16
17
20
40

APPENDIX E

AREA I C.M.P.
PROBLEM IDENTIFICATION/RESOLUTION
PROGRAM

AREA I C.M.P.

PROBLEM IDENTIFICATION/RESOLUTION PROGRAM

METHODOLOGY

STEP 1: Police personnel of any rank, and specifically those personnel serving as the Crime Analyst and Police Community Relations Officer, will initiate a "Fact Sheet" once a crime trend and/or other problem is determined to exist.

STEP 2: Once a "Fact Sheet" is completed with all known information available to facilitate a response; it will be forwarded to the Precinct Crime Analyst who shall assign a file number to same.

STEP 3: The information will be presented to the Precinct Commander for his review, knowledge and authority by means of his signature; to begin an "Operational Response" to the problem.

STEP 4: The problem will then be directed to a shift commander who will initiate an "Operational Response" for ALL shifts within the Precinct in an effort to resolve the problem; using the format/reference sheet designed for same.

STEP 5: Supplementary data relative to the crime and/or community problem will be issued at any point information is received; OR the problem(s) is resolved; OR no activity relative to the problem has occurred within a period of 30 days.

STEP 6: Progress reports will be required and submitted to the Precinct Commander at the end of every five days of a shift's rotation; indicating from the Shift Commanders and Sergeants, the action taken their tours of duty; OR at any given time a major development occurs in the issue at hand.

STEP 7: When a crime and/or community problem has been resolved, by whatever means, and/or no longer exists after 30 days, the Precinct Crime Analyst will then advise the Precinct Commander; who will authorize suspension or closing of the file.

STEP 8: When crime and/or community problems or trends are identified along either Liberty Road or Route 40 corridors, "Fact Sheets" will be cross-referenced to each other; AND EACH Precinct will maintain a separate file on their respective problem(s).

ALERT POST CARS/PERSONNEL: _____

PROBLEM IDENTIFICATION/RESOLUTION PROGRAM

FACT SHEET

Date Issued: _____ Data File #: _____

o ACTIVITY: _____

_____

o RESUME: _____

_____

_____

o IDENTIFIERS:

Type of Permise/Location: _____

Day(s) _____ Time(s) _____

Suspect Profile: _____

_____

Weapon(s): _____

Suspect Vehicle: _____

M.O.: _____

Related Data: _____

_____

OPERATIONAL RESPONSE PLAN: _____ Date: _____

AUTHORITY: _____ Date: _____

COMMENTS: _____

_____

CRIME ANALYSTS USE ONLY

PROGRESS REPORTS

SHIFT 1 SHIFT 3

SHIFT 2 SHIFT 4

STATUS: Suspended ( ) Closed ( )

ALERT: _____

PROBLEM IDENTIFICATION/RESOLUTION PROGRAM - SUPPLEMENT

Original Date Issued: _____ Date File # _____

Supplement Date: _____

- o ACTIVITY: _____

  _____

- o RESUME: _____

  _____

- o The following information has been learned regarding this criminal activity:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Source: _____

Authority: _____ Date: _____

PROBLEM IDENTIFICATION/RESOLUTION PROGRAM

Operational Response

Data File # _____

The following resources are provided to serve as a reminder of assistance from support units that may be available. This is not inclusive of ALL resources one may use to resolve any given problem(s).

o RESOURCES - Post Officer(s) _____ Precinct _____

Traffic _____ K-9 _____ Tactical _____ SEU _____

Intell _____ V/N _____ Youth _____ COPE _____

P.C.R. _____ CRD _____ CID/Squad _____

Community Leaders _____

Other agency(s)/sources _____

_____

o AVAILABILITY - Resources:
Manpower:
Equipment:

o RESPONSE MODE - Directed Patrol _____ Decoy Car _____

Surveillance/Stake-out _____ Foot Patrol _____

Police Visibility _____ Selective Enforcement _____

Community Involvement _____ Other _____

_____

o RESPONSE PLAN - (Specific action statements ONLY.)

PREPARED BY: _____ APPROVED BY: _____

COPIES ( )

PROBLEM IDENTIFICATION/RESOLUTION PROGRAM

- PROGRESS REPORT -

Data File # _____

SHIFT #: _____ LIEUTENANT: _____

SHIFT ASSIGNMENT: 0700/1500 1500/2300 2300/0700 OTHER _____

PERIOD WORKED: _____

ACTIVITY CONDUCTED: _____

RESULT (S) ie. FIR #, ARREST (S), BCI #, etc.: _____

OFFICER(S) ASSIGNED	DATE	MANHOURS	SUPERVISOR

SHIFT COMMANDER DATE

PROBLEM IDENTIFICATION WORKSHEET

DATE: _____ OFFICER: _____

LOCATION: _____ POST #: _____

ORGANIZATION: _____

CONTACT PERSON(S)/PHONE(S) _____

_____

PROBLEM/CONCERN: _____

_____

Police Department Problem? Yes 0 No 0

If YES, Unit Contacted: Date _____ Time _____

Contact Person: _____

Comments:

Referral to Other Agency: Yes 0 No 0

If YES, Agency Contacted: Date _____ Time _____

Contact Person: _____

Comments:

DEPT. OF AGING	828-8482	ORPHANS COURT	583-6516
ANIMAL CONTROL	592-6111	PAROLE AND PROBATION	583-6550
CIRCUIT COURT	494-2687	PEOPLE'S COUNSEL	494-2188
CLERK OF THE COURT	494-2601	PERMITS AND LIC.	494-3900
CIVIL DEFENSE	494-3040	PERSONNEL OFFICE	494-3135
COUNTY COUNCIL	494-3196	PLANNING & ZONING	494-3211
COUNTY DEVELOPMENT	494-3317	POST OFFICE	962-2492
CRIMINAL JUST. COODIN	494-4230	PUBLIC WORKS	494-3300
DISTRICT COURT	321-3355	HIGHWAYS BUREAU	494-3940
DEPT. OF EDUCATION	494-4074	UTILITIES BUREAU	494-3911
BOARD OF ELECT. SUPER	494-3161	RECREATION & PARKS	494-3806
COUNTY EXECUTIVE	494-2450	REGISTER OF WILLS	583-6680
FIRE DEPT.	494-4500	SHERIFF'S OFFICE	494-3151
HEALTH DEPT.	494-3740	SOCIAL SERVICES	494-2811
JUVENILE SER. ADMN.	321-3700	STATES ATTORNEY	583-6600
LABOR COMM.	494-3190	SUPPORT/CUSTODY DIV.	583-6566
LAW OFFICE	494-4420	TRAFFIC ENGINEERING	494-3554
DEPT. OF LIBRARY	296-8500	COMMISSION FOR WOMEN	494-2757
LIQUOR LIC. COMM.	494-3191	STATE HWYS.	333-1100
OCCUPATIONAL TRAIN.	494-2008	MD. STATE POLICE	486-3101