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**ELECTRONIC OFFENDER
MONITORING IN VIRGINIA:
EVALUATION REPORT**

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EXECUTIVE SUMMARY

This report provides a detailed assessment of Virginia's experience with electronic monitoring programs - a program in which an offender serves his/her period of incarceration at home with supervision provided by a combination of computer technology and structured personal contacts. The report contains a brief history of the national experience and an historical overview of program implementation in the Commonwealth. A major portion of the report analyzes client data collected from the various programs operating within the Commonwealth in order to generate caseload statistics and describe program operation and the types of offenders placed on electronic monitoring. The report also provides an analysis of the costs of operating such programs.

Six electronic monitoring programs currently operating in the Commonwealth are included in the analysis. The Fairfax and Norfolk programs have been operating since 1986. The remaining four programs (Arlington, Chesterfield, Frederick, and Richmond) began placing offenders in late 1989 and early 1990. The six programs have placed a total of 449 offenders on electronic monitoring as of June 30, 1990 with 64 offenders under active supervision on this date. As a result of the 1990 Appropriations Act, three additional local programs will begin placing offenders by the end of this year (Loudoun County, City of Virginia Beach, and Rappahannock Security Center).

The assessment contained in the report indicates that the computer technology coupled with sound selection criteria and proper staffing can impact on a locality's jail population and the cost of incarceration without impacting on public safety. Approximately 90 percent of the offenders placed on electronic monitoring since 1986 successfully completed their community sentences. The vast majority of the offenders unsuccessfully terminated were removed from participation due to violations of program rules and regulations. Only two offenders were terminated due to the commission of new offenses while on electronic monitoring and only one offender was terminated due to an unexplained absence of sufficient duration to qualify as an attempt to escape.

The cost analysis indicates that the average daily cost per offender on electronic monitoring is significantly less than the average daily cost of incarceration. The operational costs, however, vary widely between the programs. The key factors accounting for the varying costs are the type of equipment utilized, its method of acquisition, equipment utilization rate, and the staffing pattern employed by a particular program.

The 374 participants examined in the report served a total of 17,411 days on electronic monitoring since 1986. Assuming these offenders were "true" diversions from jail, this represents a significant savings in jail days served by a relatively small population of offenders. Each of the programs, however, appear to be underutilizing their service potential if the primary focus is placed on a comparison of the average daily caseload in relation to the number of monitoring units available. The report, however, suggests that this a simplistic and unreasonable measure of program success. Suggested measures of program success are the protection of public safety, the cost of electronic monitoring compared to the cost of incarceration, the extent of net-widening, and whether the program meets the needs of the local criminal justice system and its larger community.

The report also identifies and corrects several misconceptions that have arisen regarding the potential impact which electronic monitoring can offer localities faced with jail overcrowding and the spiralling costs of incarceration. First, electronic monitoring programs will not significantly reduce a locality's jail population. Electronic monitoring should be properly viewed as one tool available to the criminal justice system in its efforts to deal with the problem. Secondly, electronic monitoring programs are not self-sustaining. Supervision fees alone are not sufficient to cover total program costs. Thirdly, these programs are not solely defined by the acquisition of equipment. Electronic monitoring should be viewed as a "program" that requires sufficient staff in order to divert as many offenders as possible in a manner that does not compromise public safety.

It is recommended that the Commonwealth continue to fund electronic monitoring programs at the current level of \$300,000 per year in order to allow for moderate expansion guided by research and evaluation findings as they become available. It is also recommended that some form of funding for on-going programs be considered after the initial grant period expires, particularly in the area of program staffing.

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I N T R O D U C T I O N

The Department of Criminal Justice Services (DCJS) is currently responsible for providing grants to local governments for the purpose of establishing pilot programs of electronic offender monitoring. The Department was first given the responsibility for overseeing the development of such programs through passage of the 1989 Appropriations Act. As a result of this act, DCJS has funded four local programs that are currently in operation. A total of three new programs funded by the 1990 Appropriations Act will begin operating during Fiscal Year 1990/91. In addition to programs funded through DCJS, two local programs have been operating since 1986. The Department has and will continue to monitor these programs in the future.

Among other budgetary directives, DCJS was charged by Item 511 of the 1989 Appropriation Act to present a progress report on the programs funded during Fiscal Year 1989/90. A written progress report was presented to the Chairman of the House Appropriations and Senate Finance Committees on October 1, 1989. Department staff also appeared before the Senate Finance Committee on November 16, 1989 in order to discuss the progress report in more detail. The Department was further charged in Item 511 to present an evaluation report to the respective committees. This report complies with that directive.

METHODOLOGY

The purpose of this report is to provide a more detailed assessment of Virginia's experience with electronic offender monitoring. In order to provide a degree of perspective, a brief history of the national experience is contained in the report. The report also contains a historical overview of program implementation in the Commonwealth. The largest portion of the report contains an analysis of client data in order to generate caseload statistics and the types of offenders participating in Virginia's local programs. A financial section is included that analyzes

the costs of the various programs. Finally, conclusions and recommendations are offered at the end of the report.

The primary data source for the report was a statistical information packet that the four programs funded through DCJS in FY 89-90 were required to complete for each offender placed in the respective programs. These packets were sent to DCJS on a monthly basis for computer input and analysis. In order to broaden the scope of the report, participation was sought and obtained from the two programs operating since 1986 for inclusion in the evaluation. These programs began submitting the monthly data packets in January, 1990. Site visits were made to all six programs in order to gather supplementary data and verify the accuracy of the client data submitted on a monthly basis. The Department was also able to collect data on virtually all placements made by the two programs operating since 1986.

As stated above, the client data packet was completed for each offender placed in the respective programs since their inception. The report focuses on those offenders who have been terminated from the programs, successfully or unsuccessfully, as of June 30, 1990. Client data was collected on the following broad topic areas: offender demographic information, type of offense and referral method, violations, length of placement and reason for termination, and supervision fees collected.

HISTORICAL OVERVIEW

EARLY SYSTEM DEVELOPMENT

The concept of using telecommunications technology to monitor the whereabouts of individuals is not new. The first description of such a system appeared in 1964 (Schwitzgebel, Schwitzgebel, Pahnke and Hurd, 1964). The technology described by the authors was designed to monitor the location of parolees on a twenty-four hour basis. The first use of an electronic monitoring system occurred during 1964 in Massachusetts and was used to track parolees, mental patients, and research volunteers (Schwitzgebel, 1969).

The first uses of electronic monitoring equipment by a criminal justice agency occurred in Albuquerque, New Mexico (1983) and Palm Beach County, Florida (1984). The system developed and experimented with in New Mexico was inspired by a Spiderman comic strip read by a district court judge. The system implemented in Palm Beach County is generally regarded as the first implementation of an electronic monitoring program in the United States. This program incorporated community supervision as an extension of the limits of confinement for reliable work release participants. Unlike other programs around the country, the Palm Beach County program was not experimental and continues to operate today.

Since the modest beginnings in 1964 and the use of such technology by the criminal justice system in 1984, the utilization of telecommunications technology to monitor offenders has increased rapidly. There are currently approximately sixteen manufacturers of equipment offering an array of different system types and degrees of sophistication. In addition, a number of firms have appeared that market monitoring systems and/or provide contract monitoring services to localities. The following section discusses the historical growth of monitoring programs across the United States.

THE NATIONAL EXPERIENCE

The first publication of national electronic monitoring caseload statistics appeared in 1987 (Friel, Vaughn, del Carmen, 1987). The authors, under the auspices of the National Institute of Justice, were able to identify ten electronic monitoring programs operating in eight states. These ten programs had a total of 95 offenders under electronic monitoring on a single day in April, 1986. Since their implementation, a total of 370 offenders had been served by the ten programs included in the study.

The number of programs and offenders under supervision increased significantly during the next two years (Schmidt, 1988). A one-day census conducted by the author in February, 1987 revealed that electronic monitoring programs existed in twenty-one states. A similar one-day census conducted in February, 1988 found such programs in 32 states. A total of 826 offenders were being monitored in 1987. The number of offenders being monitored in 1988 nearly tripled when the one-day census revealed 2,277 offenders. Michigan and Florida were responsible for 46% of the offenders being monitored on the day of the census. Florida, however, had the greatest diversity in terms of the types of agencies operating such programs. Programs in Florida were operated by the Florida Department of Corrections, local jurisdictions, private agencies, and by federal authorities.

The most recent census statistics describe the state of electronic monitoring programs in 1989 (Renzema and Shelton, 1990). A one-day census for mid-February, 1989 found that electronic monitoring programs were operating in 47 states, the District of Columbia, and Puerto Rico. The number of offenders being monitored in 1989 nearly tripled from the previous year's population (1988 = 2,277, 1989 = 6,490). Preliminary figures from a similar one-day census in 1990 reveals that approximately 12,000 offenders were being monitored. As was the case in 1988, Michigan and Florida were responsible for a significant portion of the offenders monitored in 1989 (34%).

Renzema and Skelton not only replicated and updated the earlier censuses cited, but also significantly expanded upon the available knowledge concerning the utilization of electronic monitoring. Their work represents the most complete source of information on the types of programs operating throughout the United States and the offenders served. The following are the more significant findings discussed in their publication.

- Type Of Offenders - In 1987, 75 percent of the offenders being monitored were probationers. In 1989, the percentage of probationers being monitored had fallen to 25 percent. The largest growth has been for those offenders termed to be in the "back end of the system" (i.e., inmates or parolees). These offenders comprised 18 percent of those monitored in 1987 compared to 52 percent in 1989.
- Equipment Popularity - The utilization rate of the three major types of monitoring equipments has changed since 1987. The most common equipment used in 1987 was the passive or programmed contact system (56%). The most common equipment used in 1989 was the active or continuous signaling equipment (54%). Passive system usage had decreased to 37 percent while hybrid systems were used by 9 percent of the programs.
- Supervision Fees - Approximately two-thirds of the programs collect supervision fees from their participants. The average monthly fee collected was \$200.
- Program Staffing - Approximately 51 percent of the agencies added employees in order to staff their electronic monitoring program. The average number of employees added per program reporting such information was approximately five. In terms of coverage, only 35 percent of the programs were able to attain 24-hour coverage. The next most common coverage (28%)

*work
release*

consists of computer-generated pager calls to a staff member in cases of curfew violations during non-business hours. Twenty-two percent of the programs possess business-hour staffing only.

- Problem Areas - Forty-seven percent of the problems cited by the surveyed programs concerned equipment function. The second most commonly cited problem concerned incompatibilities with antiquated or poorly maintained telephone systems. *whos equiptment?*
- Offender Characteristics - As discovered by Schmidt, electronic monitoring is increasingly being used with offenders guilty of serious offenses. In 1987 approximately 33% of the offenders monitored were guilty of major traffic offenses compared to 19% in 1989. Utilization rates are increasing for property offenses (1987 = 18%, 1989 = 22%), drugs (1987 = 13.5%, 1989 = 22%), and crimes against the person (1987 = 6%, 1989 = 12%).
- Success Rates - Approximately 75% of the offenders either completed their terms successfully or were removed for administrative reasons. Approximately 21% were removed as a result of technical violations while 4% were removed because of new offenses.
- Length of Placement - The average length of time spent on electronic monitoring was 79 days. Approximately 8% of the offenders were monitored for more than six months.

THE HISTORY OF ELECTRONIC MONITORING IN VIRGINIA

Electronic monitoring programs were first established in the Commonwealth in 1986. Item 547 of the 1986 Appropriations Act authorized the Department of Corrections to appropriate \$100,000 to the City of Norfolk and \$100,000 to Fairfax County for the purpose of testing the feasibility

of electronic home arrest devices. The localities each selected two different systems for testing purposes. The 1987 Appropriations Act provided an additional \$43,800 to the City of Norfolk and \$20,000 to Fairfax County so that the testing of equipment could continue. Although state funding for the programs was terminated as of June 30, 1988, each of the programs have continued to operate supported by offender supervision fees and, in the case of Fairfax County, supplemented by local revenue sources.

The Department of Criminal Justice Services was first given responsibility for the development of electronic monitoring programs by way of the 1989 Appropriations Act. Item 511 of the Act authorized DCJS to expend \$300,000 to "provide grants or establish contracts with local governments for pilot programs of electronic offender monitoring." The Department was directed to establish such a program in Arlington County and at least one core city, one suburban, and one rural jurisdiction. The localities funded and the amount of money awarded were as follows: Arlington County (\$80,630), Frederick County (\$82,287), Chesterfield County (\$34,470), and Richmond City (\$100,000). Although Frederick County serves as the administering locality, this program actually serves the entire Twenty-Sixth Judicial Circuit.

The Department was funded an additional \$300,000 in the 1990 Appropriations Act for the purpose of establishing electronic monitoring programs during Fiscal Year 1990-91. Awards have already been made to the Rappahannock Security Center (\$62,316), Loudoun County (\$41,800), and the City of Virginia Beach (\$63,613). Each of these three programs anticipate placing their first offenders in October or November, 1990. The Department will award the unexpended funds by the end of the calendar year. *H*

The 1990 Appropriations Act also authorized the Department to award \$100,000 to the Parole Board for the purpose of establishing a pilot program for monitoring parolees. The appropriation was reduced to \$94,719 due to the recent budget cuts mandated by the Governor for FY 90-91. The Parole Board will target offenders who would not normally be paroled because of their risk level. Electronic monitoring will also be used as

*Equipment
Richmond*

an option for handling technical violators. The Parole Board will procure home monitors for individual parolees and utilize the existing central computers of the Frederick County and Richmond City programs to monitor parolee curfews. The Parole Board anticipates that the first offender placement will occur in October, 1990.

STATUTORY HISTORY

Although electronic monitoring programs have been operating in the Commonwealth since 1986, specific statutory authorization for such programs did not occur until the 1989 Session. The lack of statutory authorization was a major reason for low caseloads experienced by the Fairfax County program since its implementation. A number of judges within the Fairfax County court system were reluctant to place offenders in the electronic monitoring program without specific statutory authorization. House Bill 1123, sponsored by Delegate Vincent F. Callahan, Jr., created Section 53.1-131.2 in order to remedy those concerns.

House Bill 1123 provided the sentencing judge with the ability to assign offenders to home/electronic incarceration programs under the supervision of the sheriff or the administrator of a local or regional jail. The bill also provided the sheriff or administrator of a local or regional jail the authority to place persons sentenced to jail with less than two months to serve into such programs without prior judicial approval. The bill further prescribes the penalty for certain types of offender misconduct and authorizes the collection of supervision fees.

Section 53.1-131.2 was subsequently amended by House Bill 240 during the 1990 Session. The bill, also sponsored by Delegate Callahan, expanded the pool of offenders sheriffs and administrators of local or regional jails are able to place without prior judicial approval. These authorities are now able to place persons with less than two months to serve who have been sentenced to prison but are actually serving their sentence in the local jail.

PROGRAM DESCRIPTIONS

This section of the report provides descriptions and comparisons of the six electronic monitoring programs operating throughout the Commonwealth as of June 30, 1990. The section concentrates on the general subject areas of program operation, offender selection, and monitoring equipment utilized by each of the programs.

A. ADMINISTRATIVE STRUCTURE AND STAFFING

All of the programs, except for Frederick County, are operated by the Sheriff's Office of the particular locality. The Frederick program is administered by the Frederick County government and operated on a daily basis by the Division of Court Services located in Winchester. This program serves offenders sentenced by the various courts within the Twenty-Sixth Judicial Circuit.

Several different types of staffing arrangements are found within the various programs. The Chesterfield, Fairfax, and Frederick programs have a full-time staff position dedicated to perform program duties. Unlike the Chesterfield and Frederick programs, Fairfax did not assign staff full-time to their program until long after the program's inception (January 1, 1990). Prior to this date electronic monitoring duties were in addition to the normal responsibilities of the Fairfax County Pre-Release Center staff. Since Frederick County is not operated by a Sheriff's Office and its jail deputies, this program relies on its single staff member to respond to curfew violations detected during non-business hours. Although the other two programs possess a full-time staff member, jail deputies play a role in detecting and responding to curfew violations after normal business hours.

Electronic monitoring duties in Arlington, Norfolk, and Richmond are added to duties already performed by existing staff. Electronic

monitoring duties in Arlington are carried out by two deputies in addition to the duties required of them in administering the Sheriff's work release, outside work detail, and "community work in lieu of weekend incarceration" programs. The majority of the electronic monitoring duties in Norfolk are performed by the Work Release Supervisor with limited roles played by two Work Release Counselors. Electronic monitoring duties in Richmond are equally shared by two existing deputies assigned to its work release program. Similar to Chesterfield and Fairfax, jail deputies in each of these three localities play a role in detecting and responding to violations occurring after normal business hours.

B. SERVICES AREAS

The Norfolk and Richmond City programs are the only programs that serve a judicial circuit comprised of a single jurisdiction. These programs serve offenders under the jurisdiction of the various court levels within their cities. The Arlington and Fairfax programs serve dual jurisdictional judicial circuits (Arlington= Arlington and the City of Falls Church, Fairfax= Fairfax County and Fairfax City). The Chesterfield program serves offenders sentenced in the localities of Chesterfield County, Prince George County, and the City of Colonial Heights. The Frederick program serves offenders sentenced by the courts in this county along with the remaining courts within the Twenty-Sixth Judicial Circuit (Counties= Clarke, Page, Rockingham, Shenandoah, Warren; Cities = Harrisonburg and Winchester).

Although the majority of the placements come from the courts located in the above cited localities, each of the programs place offenders who reside outside of these localities. Since all of the electronic monitoring systems utilize telephone lines to enforce curfew restrictions, offenders can theoretically reside anywhere within the Commonwealth. For practical purposes, however, most of the programs place restrictions on the area in which participants may reside. The Richmond program is the most restrictive in that participants must be city residents. The

Arlington and Fairfax programs place residents within the general Northern Virginia area while the Norfolk program places offenders residing in the Hampton Roads area and within local calling distance from the program office. The Chesterfield and Frederick programs are the only programs that do not specifically cite residence restrictions in their operating procedures. The Frederick program is the only program who has placed offenders across state lines (West Virginia).

C. ELECTRONIC MONITORING EQUIPMENT

Table 1 displays descriptive information about the types of electronic monitoring equipment in each of the six localities. As can be seen in the table, a variety of vendors and types of systems are currently being utilized. Passive systems are used in three of the localities. Passive systems (commonly referred as "programmed contact" systems) monitor offenders by way of random or scheduled computer-generated telephone calls placed to the offender's residence. Upon answering the telephone, the offender is required to insert his/her bracelet into a verifier attached to the telephone line of the dwelling. A successful connection indicates to the computer that the offender was home at the time of the telephone call. In most cases, the offender is also required to repeat or provide information in response to a taped message that accompanies the computer call. Offender responses are recorded at the program office for review in order to further verify the offender's presence or to detect the possible use of drugs or alcohol.

Although classified as a passive system, the Mitsubishi equipment used by Arlington and Frederick operates in a slightly different manner. Offenders monitored by this system are not required to wear a bracelet. Offender presence is verified through the use of a visual monitor installed in the residence. This system requires the offender to position himself in front of the monitor, activate it, respond verbally and/or physically to the taped message, and transmit a "picture" of the offender to the central computer. The picture can be reviewed by staff upon transmittal or stored in the computer for later review by staff.

TABLE 1

ELECTRONIC MONITORING EQUIPMENT FEATURES

PROGRAM	NAME OF VENDOR	TYPE OF SYSTEM	NUMBER OF MONITORS	METHOD OF ACQUISITION	ANNUAL COSTS	COST PER DAY
Arlington	Mitsubishi	Passive (Visual)	20	Lease/Purchase	\$24,480	\$3.35
Chesterfield	Hitek	Passive	30	Lease	\$25,740	\$2.35
Fairfax	Hitek	Hybrid	25	Lease	\$37,350	\$4.09
Frederick	Mitsubishi	Passive (Visual)	22	Lease	\$24,480	\$3.05
Norfolk	BI, Inc.	Active	25	Purchase	\$13,688 ¹	\$1.50
Richmond	VOREC	Hybrid	50	Purchase	\$ 6,500 ¹	\$0.36

¹Only includes the annual cost of the maintenance agreement for the purchased system.

Norfolk is the only locality using an active system. Active systems (commonly referred to as "continuous signalling" systems) maintain continuous contact with the offender compared to the intermittent contact of passive systems. The active system consists of a transmitter worn by the offender and a receiving unit attached to the offender's telephone lines. The transmitter is in constant communications with the receiving unit. If communication is broken, the receiving unit informs the central computer of this fact. Norfolk's system was originally acquired through a lease arrangement and then upgraded to a lease/purchase option. The system was purchased as of November, 1988. The program originally possessed twenty home monitoring units. An additional twenty-five units were purchased in February 1990.

The Fairfax and Richmond programs are currently using hybrid systems which combine features possessed by passive and active systems. Although these systems operate primarily in an active mode, the passive mode is invoked when the active communication link is broken. This allow the computer to verify whether the loss in signal is the result of a violation or whether the signal was broken due to "dead" spots in the

home or interrupted by background radio frequencies. The Fairfax program initially used the Hitek passive system until May, 1990 when it was upgraded to a hybrid system.

Table 1 also provides the annual equipment costs for each program according to the current acquisition method in effect. Recognizing that the annual costs are influenced by the number of monitoring units and system type, Table 1 indicates that the Fairfax program has the highest annual equipment costs. The Norfolk and Richmond programs are the least expensive due to the fact that their systems are owned by the program. The annual costs for these systems are for the purchase of a maintenance agreement with the vendor.

Finally, Table 1 presents the daily cost per monitoring unit for each of the programs. As is the case with the annual equipment costs, the programs who own their equipment have the lowest daily unit costs. The daily costs presented, however, are based on total utilization of the monitoring units over the course of a year. The actual costs may increase significantly depending on the utilization rate a particular program attains. A later section of the report will discuss actual costs relative to the utilization rate and total program operating costs.

D. SELECTION PROCEDURES

All of the programs, of course, prioritize public safety. When program staff make placements, all of the programs except Chesterfield attempt to select offenders already participating in minimum security programs such as work release. The primary rationale often cited by the localities for such an approach is that these programs allow for a period of observation in order to estimate an offender's trustworthiness and chance of success. All of the programs state that staff placements are done in a conservative manner in order to avoid negative public reactions to highly visible and/or numerous failures. Secondly, the conscious effort to only release offenders with high chances of success is partly

driven by the amount of time required to select and place offenders. Estimates made by program staff as to the amount of time required to screen, interview, train, and physically place offenders range from two to eight hours per offender.

The programs were asked to estimate the percentage of placements, made by staff, that were participating in minimum security programs at the time of placement. All of the staff-placed offenders in Norfolk were selected from the work release program. All of the staff-placed offenders in Richmond were participating in work release or an inmate work detail squad prior to placement. Approximately 90 percent of the offenders placed by staff in Fairfax were housed in the Pre-Release Center with each offender actively participating in work release at the time of placement. The remaining ten percent of the Fairfax staff placements are offenders with medical needs, family hardships, or those with short sentences selected from the general jail population housed in the Adult Detention Center. In Arlington and Frederick, approximately 65 percent of the staff placements are selected from the work release program with 35 percent selected from the general jail population. Conversely, approximately 75 percent of the Chesterfield staff placements are selected from the general jail population with 25 percent selected from the work release program, primarily because the work release population is not large enough to provide a sufficient number of offenders for home arrest.

The actual mechanics for staff placement do not differ significantly between the programs. The general procedure followed is that program staff scan rosters of the eligible population pool in order to identify offenders who appear to qualify for participation on the basis of offense and/or length of sentence left to serve. These offenders are screened further by examining the offender's prior record, circumstances of the offense, jail files, and through personal interviews. In some cases the identification of potential participants may be initiated through a referral for consideration by jail staff or non-judicial authorities outside the jail such as probation and parole officers.

The Fairfax program utilizes the most complex system for identifying and screening program placements. The first level of screening is performed by staff working in the Pre-Release Center. In general, offenders identified for possible placement must have had at least one successful home furlough, have a case management rating of 3.1 or higher, no major institutional violations, and completed all mandatory classes during their time in the Pre-Release Center. Offenders identified at this lower level are then referred to a Management Team that makes the final decision.

Despite the release authority granted the Sheriff under Section 53.1-13.2, not all of the programs release offenders to electronic monitoring without prior judicial approval. The Norfolk and Richmond programs seek judicial approval before actual placement. The Chesterfield program seeks prior approval from both the sentencing judge and the Commonwealth Attorney. The Fairfax program notifies the sentencing judge that release will occur on a specified date unless objection is voiced. The Arlington and Frederick programs place offenders and then notify the sentencing judge of this fact.

E. ELIGIBILITY AND EXCLUSION CRITERIA

Table 2 displays the major eligibility and exclusion criteria used by each of the programs when making staff placements into electronic monitoring. The list of criteria must not be looked upon as complete or inflexible. While not specified in a particular program's operating procedures, factors unique to a particular situation may preclude an offender's placement. For example, Frederick is the only program that specifically denies placement of spouse abusers. While not specifically cited, another program may deny a spouse abuser under the grounds of not possessing a suitable home environment. In terms of flexibility, the programs may allow an offender possessing an exclusion factor to participate when mitigating factors are considered. According to the various programs, most deviations from criteria for participation occur in direct court placements. Due to caveats discussed above, the following discus-

TABLE 2

ELIGIBILITY AND EXCLUSION CRITERIA

CRITERIA	PROGRAM					
	ARLINGTON	CHESTERFIELD	FAIRFAX	FREDERICK	NORFOLK	RICHMOND
<u>REQUIREMENTS FOR ELIGIBILITY</u>						
Voluntary	X	X	X	X	X	X
Satisfactory Jail Behavior	X	X	X		X	
No Substance Abuse History					X	
Suitable Home/Job Environment			X		X	X
Postive Motivation	X				X	
Free of Detainers, Pending Charges	X	X	X	X	X	X
Minimum Time to Serve			X	X		X
Employment	X	X	X	X	X	X
No Prior EM Revocations	X	X	X	X		
18 Years of Age or Older		X				
Supportive Community Ties			X			
Telephone Service	X	X	X	X	X	X
<u>PRIOR HISTORY (Cause for Exclusion)</u>						
a. Crimes Against Children				X		
b. Drug Distribution		X		X	X	
c. Escape		X	X	X	X	X
d. Failure to Appear					X	
e. Sexual Offense			X	X		
f. Spouse Abuse				X		
g. Violent Offense	X	X	X	X		
<u>PRESENT OFFENSE (Cause for Exclusion)</u>						
a. Drugs		X			X	X
b. Failure to Appear					X	
c. Organized Crimes					X	
d. Sexual Offense	X	X	X	X	X	X
e. Spouse Abuse				X		
f. Violent Offense	X	X	X	X	X	

sion will only focus on the broad commonalities and differences between the programs.

The programs are in agreement that the offender must participate voluntarily, have telephone service, be free of detainers or pending charges, and be employed or willing to seek work. Each of the programs require that the telephone service must be devoid of such features as call waiting, call forwarding, or remote access. Offender employment is common since the majority of staff placements are selected from work release. For unemployed offenders, the Chesterfield, Fairfax and Richmond programs require their participants to provide verification of their efforts to secure employment. If employment is not found or sought, the Richmond program requires its participants to perform community service during their time on electronic monitoring. Unless otherwise specified, unemployed offenders are placed under twenty-four hour home detention by each of the programs.

Four of the programs specifically cite an offender's behavior or participation in programs while incarcerated as a consideration when making placement decisions. Four of the programs specifically preclude offenders previously revoked from electronic monitoring. Three of the programs specifically consider the suitability of the offender's home or job environment as a criterion for placement. Cohabitation is considered an unsuitable home environment by the Fairfax program. Three of the programs target offenders with a minimum length of time left to serve as one of their criteria (Frederick = 30 days, Fairfax = 60 days, Richmond = 90 days).

Table 2 indicates that a wide variety of offenses on an offender's prior record serve as a reason for exclusion from the program. Among these, the most common prior offenses are offenders with a prior history of escape or attempted escape and offenders with prior violent offenses in their background. Three of the programs exclude offenders with a prior history of drug distribution.

Offenders are also excluded from placement for a wide variety of current criminal behavior. None of the programs allow offenders with sexual offenses to participate. Five of the programs specifically preclude violent offenders from consideration. Three programs exclude offenders convicted of drug distribution charges from consideration.

F. CURFEW ENFORCEMENT AND STAFF CONTACT

Table 3 displays the frequency of computer-generated telephone calls which each of the programs employ to verify the offender's presence in the home during established curfew hours. The programs using passive systems (Arlington, Chesterfield, Frederick) utilize different computer contact strategies and/or frequency of contact to verify curfew adherence. Both the Arlington and Frederick programs classify their participants into minimum, medium, and maximum security levels. However, the frequency of daily calls made within each security level differ slightly. These programs re-classify offenders into other security levels based on the length of time left to serve and/or behavior patterns while on electronic monitoring. Chesterfield County, on the other hand, adjusts the number of computer-generated calls solely on the basis of time spent on electronic monitoring.

Computer-generated calls are unnecessary for the monitoring of curfew in the program utilizing an active system (Norfolk). Although technologically unnecessary, the programs possessing hybrid systems (Fairfax and Richmond) utilize the passive feature of their systems in order to place daily computer-generated telephone calls. These daily calls provide an additional safeguard and serve as a reminder to the offender that he/she is under surveillance, a fact that is not readily apparent in active systems.

Table 3 also indicates that none of the programs rely solely on the computer equipment to monitor curfew. Each of the programs supplement computer curfew checks with home/job site visits and personal telephone

calls to the offender. The most frequent use of telephone calls occurs in Norfolk. Staff in this program make daily telephone calls to the job site while jail deputies make telephone calls to the offender's home during the evening hours. Although the frequency varies, each of the programs make unannounced visits to the offender's home. Each of the programs, except Chesterfield, also make unannounced visits to the offender's job site.

TABLE 3
COMPUTER ENFORCEMENT AND STAFF CONTACT

PROGRAM	COMPUTER		STAFF		
	DAILY CALLS	OFFICE VISIT	PERSONAL CALLS	HOME VISITS	JOB VISITS
Arlington	Level I = 6-11 Level II = 4-7 Level III = 2-5	Weekly	Once/Week	Once/Week	Once/Week
Chesterfield	1st Week = 12-15 2nd Week+ = 8-12	Weekly	Random	Random	None
Fairfax	Continuous plus 1-3	Weekly	3-4/week	1-2/week	Once/Week
Frederick	Maximum = 6-8 Medium = 4-6 Minimum = 2-4	Weekly	Random	1-2/Placement	1-2/Placement
Norfolk	Continuous	Weekly	Job-Daily Home-Daily	Once/Bi-Weekly	Once/Week
Richmond	Continuous plus 2	Weekly	Job-Weekly	Once/Week	Random

Each of the programs also require participants to make a weekly visit to the program office. The general purposes of these visits are to discuss program progress with the offender and collect the supervision fee. Depending on the particular program, the office visits are also for the purpose of checking the monitoring equipment for signs of tampering or malfunction and conducting drug or alcohol tests. Several of the programs require the submission of such verifying documents as pay stubs, monthly telephone bills, or medical/program attendance forms during the office visit.

G. SUBSTANCE ABUSE TESTS

Table 4 summarizes the patterns of drug and alcohol testing required by each of the programs. The table simply describes the offenders tested and the frequency of testing. As can be seen in the table, each of the programs incorporate drug test as a requirement for participation. The most extensive drug testing is done by the Fairfax program. None of the Fairfax participants, even if direct court ordered into the program, are released to the community until they test negative for the presence of drugs. Participants are then required to submit to drug testing twice a week, once during the office visit and once during a home visit. All participants in Arlington are required to submit to weekly testing. All participants in Chesterfield and Richmond are tested on a random basis.

The Frederick and Norfolk programs, on the other hand, only require drug testing for a small portion of their participants. Both programs test all participants at the time of initial placement. However, only those offenders with a history of drug abuse are required to submit to further testing. According to these programs, approximately twenty percent of the Frederick participants are tested for drugs while approximately five percent of the Norfolk participants are tested. When required, Norfolk conducts a drug test during each weekly office visit while Frederick tests its offenders two or three times during their period of program participation.

As was the case with drug testing, the Fairfax program also has the most extensive alcohol testing requirements. All of this program's participants are tested twice a week, once during the office visit and once during a home visit. Arlington requires all of its participants to submit to a weekly alcohol test. Richmond tests its participants on a random basis. As was the case with drug testing, Frederick and Norfolk only test those offenders with a history of abuse (approximately 5 percent of the participants in each program). Norfolk conducts alcohol tests weekly. Frederick tests on a random basis. Chesterfield only tests for alcohol if such use is suspected by program staff during a home visit.

TABLE 4
USE OF SUBSTANCE ABUSE TESTS

PROGRAM	DRUG TESTS		ALCOHOL TESTS	
	WHO IS TESTED	WHEN TESTED	WHO IS TESTED	WHEN TESTED
Arlington	All participants	Weekly	All participants	Weekly
Chesterfield	All participants	Randomly	If suspected	During home visits
Fairfax	All participants	Weekly office visit Weekly home visit	All participants	Weekly office visit Weekly home visit
Frederick	a. Initial placement b. Those with history of abuse	a. At placement b. Randomly	Those with history of abuse	Randomly
Norfolk	Those with history of abuse	Weekly	Those with history of abuse	Weekly
Richmond	All participants	Randomly	All participants	Randomly

H. SUPERVISION FEES

All of the programs require their participants to pay a supervision fee during their time on electronic monitoring. In addition, each of the programs make provisions to waive or reduce the standard fee in case of

unemployment, indigency, or financial hardship. The standard fee amounts vary widely between the programs. Norfolk charges the lowest daily fee (\$5.00 per day). Norfolk participants are also responsible for the expense of special adapters necessary for the installation of the monitoring equipment. The Norfolk program is unique in that it is the only program that collects fines and costs for the court during the offender's participation in the program. Fairfax charges the highest supervision fee at \$10.00 per day. Chesterfield charges \$5.50 per day. Arlington charges \$7.00 per day. Frederick and Richmond charge their participants one hour of their salary for each day in the program. For example, an offender making \$5.00 an hour will pay \$5.00 for each day he/she is on electronic monitoring. The Frederick program, however, establishes a \$7.00 per day minimum and a \$10.00 per day maximum range to guide the fee determination.

THE USE OF ELECTRONIC MONITORING IN VIRGINIA

INTRODUCTION

This section of the report presents the findings resulting from analysis of the data collected from each of the six electronic monitoring programs currently operating in the Commonwealth. The section addresses the general topic areas of offender characteristics, methods of placement, lengths of program participation, and an assessment of the impact such programs have on jail populations and the costs of incarceration.

The data presented herein describes virtually all offenders who have participated in and completed their sentences in such programs as of June 30, 1990. (Eleven case files of offenders placed by the Norfolk program in 1986 were unavailable for data collection.) The section is divided into two subsections. The first subsection reports aggregate historical data from all six programs. The second subsection focuses only on the four programs that have been operating for at least six months at the time of data collection. This subsection will provide comparisons between the four different programs and their method of operation.

A. HISTORICAL DATA

1. Caseload Information

Since 1986 a total of 449 offenders have been placed in electronic monitoring programs throughout the Commonwealth. As could be expected, the Fairfax and Norfolk programs have placed the largest number of offenders since their establishment in 1986 (161 and 138 offenders respectively). A total of 385 offenders had completed their terms, successfully or unsuccessfully, as of June 30, 1990. On this day 64 offenders were participating in such programs throughout the Commonwealth. The Chesterfield program had the highest number of offenders participating on June 30 (19 offenders)

with Frederick recording the second highest participant count (15 offenders). The Fairfax program was supervising 13 offenders while Norfolk had 12 offenders. The two newest programs, Arlington and Richmond, were supervising a significantly smaller number of offenders (three and two respectively).

2. Offender Characteristics

The majority of the offenders placed in electronic monitoring programs are male (83.4%) and white (63.3%). A little over one-third (36.1%) of the participants are black. The average offender is 30.3 years old with the age at placement ranging from 14 to 70 years old. (The Fairfax program has monitored several juveniles at the request of the Juvenile and Domestic Relations Court). The gender and age statistics of Virginia electronic monitoring participants do not differ significantly from those reported in the Renzema and Shelton census cited earlier. The national percentage of male participants in 1989 was between 87 and 90 percent while the average age was 29.1 years. Unlike other programs operating throughout the country, the portion of Virginia participants 17 years of age or under is significantly less than that found elsewhere (1.4% vs. 5.9%).

Over 60 percent (61.6%) of the offenders examined are single and never married or single by virtue of a divorce or death of a spouse. The remaining offenders are married (30.8%) or separated at the time of program placement (7.6%). In terms of living arrangements, 41.9% of the offenders are residing with other family members or, in the case of single parents, with their children. A little over one-third (35.6%) are residing with their spouses and children with no extended family members living in the domicile. Approximately 11 percent (10.9%) of the offenders are cohabitating. The remaining offenders live alone (4.3%) or share a residence with non-relatives (7.3%). The average number of household members, including the offender, is 3.4 members.

A majority of the offenders (82.1%) are employed during a significant portion of their home arrest sentence. Of the 374 cases examined, annual income data was only available for 114 cases. Based on this limited number of cases, it was found that the income of the offenders range from a low \$4,000 to a high of \$72,000 per year. The median annual income is \$17,000 (Mean = \$19,032).

Each of the programs were asked to provide information on an offender's prior history of criminal convictions. We must caution the reader that the information presented below may undercount the extent of offender prior criminal conviction histories. Program accessibility to the various data sources containing this information varies between and within the programs. For example, nearly a quarter of the offenders had prior history searches done on local records only while approximately one-half were based on combinations of local, state, Department of Motor Vehicle, or federal data sources.

Recognizing the above caveat, it was found that a quarter (25.3%) of the participants did not possess a prior criminal conviction history. Nearly one-quarter (23.3%) had one or two criminal convictions prior to placement in electronic monitoring. Approximately 10 percent of all participants had ten or more prior criminal convictions with 50 the highest number of prior convictions encountered. Of those offenders with a prior conviction history, the average number of prior convictions was 5.5 offenses.

When broken down by offense type it was found that 24.3% of the offenders had a felony conviction history, 56.4% had a misdemeanor conviction history and 30.1% had a criminal traffic conviction history. The latter category is where the risk of undercounting is most likely to have occurred since only about three percent of the offenders had Department of Motor Vehicle records available for coding criminal traffic offenses other than driving while intoxicated or driving after being declared an habitual offender.

3. Placement and Referral Information

Approximately 60 percent (59.4%) of the offenders in the six programs were under the jurisdiction of the Circuit Court, 32.4% were under the jurisdiction of the General District Court, and 3.2% were under Juvenile and Domestic Relations Court jurisdiction. The remaining five percent were under the jurisdiction of federal courts, the U.S. Bureau of Prisons, or Community Diversion Incentive/Virginia probation authorities. One offender was placed at the request of the State of California.

Program staff were required to indicate the referral source for each placement into their program. The categories for this piece of information fall into two basic groups, offenders identified by program/jail staff versus those placed or referred by authorities outside of the local program/jail. Offenders identified by program/jail staff comprise the largest referral source for participants (57.0%). Over one-third (37.0%) of all participants were identified under the authority granted to non-judicial personnel under Section 53.1-131.2 while 18.4% were Virginia offenders, identified by program/staff, who had more than two months to serve and thus fall outside of the statutory release authority. A small percentage (1.6%) of the participants are federal inmates housed in Virginia jails and identified by program staff.

The remaining participants (43 percent) are placed or referred to the program by authorities outside the local program/jail. A small portion of all placements (1.3%) are referred for possible placement by the U.S. Bureau of Prisons or CDI/probation authorities. A little over 40 percent (41.6%) of all participants are direct court-ordered into the program by the sentencing judge. Of these 152 such placements, 64.5% are placements or referrals made at the time of sentencing. The remaining direct court orders are situations where the sentencing judge orders or requests placement some time during the incarcerative sentence.

The manner in which direct court orders are carried out varies between the programs. In some localities, placements are made by the sentencing judge with little or no input by staff as to the offender's suitability under the program's criteria for participation. In other localities the convention followed is that judicial approval for placement in lieu of incarceration is noted in the sentencing order with final determination of eligibility residing with program staff.

The literature on electronic monitoring makes frequent reference to the potential such programs offer jail administrators in managing special needs offenders such as the handicapped, seriously ill, or mentally impaired offender. Even when not compounded by overcrowding, the management of such offenders can pose severe problems in terms of security, inmate safety, transportation, and budgetary concerns. Electronic monitoring offers a viable option for placing such offenders in a setting more conducive to their health and safety.

In order to determine whether electronic monitoring is used as such an option, the programs were asked to indicate whether an offender's physical or mental health was the primary reason for program placement. It was found that 4.8% of the placements are made for the primary purpose of diverting special needs offenders from the jail. The extent of such usage may actually be higher since this information was only recently asked of the Norfolk and Fairfax programs. Determining whether a placement was primarily for medical reasons was difficult to ascertain from the historical files maintained by these two programs. Of the eighteen medical diversions we were able to document, the most common reason for diversion was pregnancy (five cases) and for offenders with ambulatory problems (three cases).

In terms of offense type, felony offenders are the group most likely to be placed in electronic monitoring. These offenders

comprise 46.9% of the placements made since 1986. Traffic offenders comprise 36.7% of the placements while misdemeanants comprise 16.4% of the placements. Of the 137 traffic offenders, 87 were convicted of driving while intoxicated as the primary offense.

Table 5 displays the primary offenses of the participant groups according to major crime categories. As can be seen in the table, offenders convicted of a major traffic offense comprise the largest group of participants in electronic monitoring programs in Virginia. In addition to the 87 convicted of driving while intoxicated, the next largest group of offenders within this category were driving on a suspended/revoked license (20 cases) and driving after being declared an habitual offender (16 cases).

TABLE 5
DISTRIBUTION OF PARTICIPANTS BY
OFFENSE CATEGORY

OFFENSE CATEGORY	NO. OF CASES	PERCENT
Against the Person	14	3.8%
Drugs	64	17.2%
Fraud	23	6.2%
Major Traffic	137	36.7%
Property	87	23.3%
Sex	2	0.5%
Weapons	5	1.3%
Other	41	11.0%
TOTALS	373	100.0%

Nearly one-quarter of the participants (23.3%) are convicted of property offenses. Most of the offenders within this category are convicted of grand larceny (22 cases), petit larceny (20 cases), burglary

(18 cases), and embezzlement (18 cases). Offenders convicted of drug offenses comprise 17.2% of the participants. Of these 64 cases, 30 were convicted of felony sale and 27 were convicted of felony possession charges. Only 4.3% of the participants were convicted of crimes against the person or offenses of a sexual nature.

4. Sentencing Information

Nearly 90 percent (89.2%) of the participants are placed on home arrest after serving a portion of their jail sentence or directly placed in such programs in lieu of actually serving a jail sentence. Three percent of the participants were actually serving a prison sentence at the time of their placement in electronic monitoring. A little over five percent of the participants are placed in such programs as a condition of pre-trial release (1.9%) or release pending sentencing (3.5%). The remaining participants are pre-trial/pre-sentence releasees continued on home arrest when sentenced (1.7%) or offenders actively serving a probation/CDI sentence (0.8%) at the time of placement on home arrest.

The jail sentences originally imposed on program participants ranged from two days to 425 days. The average jail sentence was 160.3 days (Median = 120 days). Approximately 47 percent of the participants received a jail sentence of six months or more.

5. Supervision Conditions

An attempt was made to determine the amount of freedom electronic monitoring participants are allowed during their time on home arrest. The codification of this information was problematic in that offender schedules change frequently depending on the nature of their employment or circumstances in their home life. In order to achieve consistency in data collection, the following information

reflects the amount of freedom allowed a participant upon initial placement in the programs.

Approximately 85 percent of the offenders (84.4%) are allowed some freedom of movement in the community during program participation. Sixty-nine percent were only allowed to leave home in order to work or seek employment. Fifteen percent were allowed various combinations of absence from the home in order to work, perform household errands, or attend rehabilitative programs. Approximately sixteen percent were required to remain in their homes at all times. For those offenders allowed to leave home, the average hours of freedom per week is approximately 58 hours. This represents 34.5% of the total hours comprising a seven-day week.

6. Success Rates

Approximately 90 percent of the participants successfully completed their home arrest sentences. Over three-quarters (77.3%) of all participants were terminated successfully due to expiration of their sentence. An additional 12.8% of the participants were successfully terminated for various administrative reasons. Thirty-five of these 47 participants terminated administratively were granted early release from their sentences by the sentencing judge. Other common administrative releases found were offender requests to cease participation, the discovery of pending charges after program placement, and early release by virtue of discretionary parole.

A total of 37 participants (9.9%) were terminated unsuccessfully from the programs. This failure rate is significantly lower than the 25 percent failure rate found by Renzema and Shelton in their 1989 national census. Thirty-four of the failures were terminated due to violation of program rules and regulations. One offender was terminated due to an unexplained absence of sufficient duration to qualify as an attempt to escape. Two offenders were terminated

unsuccessfully due to the commission of a new offense during program participation. One of these offenders was arrested for distribution of drugs while the other offender was arrested for drinking in public.

The 34 offenders terminated unsuccessfully for technical violations were removed for a variety of reasons. The most common was the use of alcohol (10 cases). Nine offenders were terminated because they left their home or work earlier than scheduled and failed to inform program staff of the deviation. The third most common reason for technical violation was drug use by the offender (6 cases). The remaining reasons for technical violations were repeated failure to answer the telephone, excessive busy signals, taking the telephone off the hook, and failing to report a change in work status. Only one offender was removed due to his/her tampering with the monitoring equipment.

Significant differences exist in the failure rate of offenders direct court-ordered by the sentencing judge versus those identified and/or screened by program staff. Twenty-five of the 152 offenders direct court-ordered (16.4%) were terminated unsuccessfully compared to eleven of the 213 offenders (5.2%) placed after program staff review. The reader, however, is cautioned that this observation is based on a low number of program failures in each referral category. Although it is too early to statistically validate such a phenomenon, the data does tend to bolster the claims of several staff that direct court placements tend to be more problematic and prone to violation than those offenders screened and placed by program staff.

7. Length of Program Participation

The 374 participants in such programs had a length of stay in home arrest ranging from one day to 332 days. A little over ten percent (11.1%) of the offenders participated in such programs for

one week or less. Only 5.6% of the offenders were placed in such programs for more than four months. The average length of stay is 46.6 days (Median = 36 days). The average length of stay for Virginia programs is significantly shorter than the 79 days found by Renzema and Shelton in their 1989 census.

8. Impact on Jail Populations and Incarceration Costs

The 374 participants served a total of 17,411 days in electronic monitoring programs since 1986. Assuming these offenders are "true" diversions from jail, this represents a significant savings in jail days served by a relatively small population of offenders. However, if Virginia programs operate similar to other programs throughout the country, some degree of net-widening may be occurring. Widening the net in the criminal justice setting refers to situations where offenders placed in alternative programs (in this case an alternative to jail program) are those who would have been treated less punitively in the absence of the alternative program. In the case of electronic monitoring, net-widening is present if offenders who would normally receive sanctions such as fines, court costs, or probation are now placed in such programs due to their availability. Although a case can be made that certain offenders who traditionally receive community sanctions require enhanced supervision, the intent behind Section 53.1-131.2 and the recent funding of such programs is that electronic monitoring programs are to be alternatives to jail or prison. The intent is violated if participants are not truly "jail bound."

Based on the experience of other programs throughout the country, the greatest danger of net-widening occurs when offenders are placed at the request of authorities outside the institution operating the program. In particular, net-widening is most likely to occur in programs who have a high percentage of their clients placed by the judiciary at the time sentencing. As mentioned

earlier, approximately 98 of the 374 total participants were ordered into the program at the time of sentencing. If any of these placements were not truly "jail bound", the actual jail days saved may be significantly less than the 17,411 days recorded by participants. Unfortunately, the analysis of pre-program and post-program implementation sentencing practices in each of the localities was beyond the scope of this report. However, it would be safe to say that some degree of net-widening is most likely occurring but we are unable to gauge its extent.

If we disregard the impact of possible net-widening, the six electronic monitoring programs have reduced the cost of incarceration by diverting offenders from incarceration and the collection of supervision fees. Since 1986 a total of \$87,727.45 has been collected from participants in the six programs. Only 14.7% of the 374 participants did not pay supervision fees. Of those who paid the costs of supervision, the total amount paid by a single individual ranged from \$3.50 to \$2,160.00. The average amount collected per placement was \$234.56. If offenders who did not pay are excluded, the cost becomes \$275.01 per placement.

B. PROGRAM COMPARISONS

1. Caseload Comparisons

Table 6 displays the major summary caseload measurements for each of the four programs compared in this section of the report. As can be seen in the table, the most recently established programs (Chesterfield and Frederick) exceed the two programs operating since 1986 in almost all of the categories of caseload measurement displayed. The Chesterfield and Frederick programs had a higher number of offenders in their programs on June 30th, placed more offenders per month, and had a higher average daily caseload than the Fairfax and Norfolk programs. In addition, the total number of program completions and days

served on electronic monitoring in the Chesterfield and Frederick programs are not much less, given the length of time the programs have been operating, than the programs operating since 1986.

TABLE 6
COMPARISON OF CASELOAD
MEASUREMENTS

PROGRAM	CASELOAD ON 6/30/90	TOTAL PLACEMENTS	PLACEMENTS/ MONTH	TOTAL COMPLETIONS	TOTAL DAYS SERVED ¹	AVG. DAILY CASELOAD ²
Chesterfield	19	53	7.6	34	1,826	8.9
Fairfax	13	161	3.4	148	6,596	4.6
Frederick	15	65	9.3	50	2,256	10.8
Norfolk	12	138	3.1	126	8,492 ³	6.2

¹Includes all offenders placed since program implementation including those still participating as of June 30, 1990.

²Computed by dividing the total days served by the number of days each program has been operating.

³Includes the eleven offenders whose case files were unavailable during data collection.

There are several reasons that may account for the lower average daily caseloads of the longer operating programs. First and foremost is the fact that the Frederick and Chesterfield programs have a full-time staff position dedicated to the operation of electronic monitoring. The Norfolk program has never been able to operate with a staff position fully dedicated to electronic monitoring duties. Staff in this program operate electronic monitoring in addition to their Work Release Program with an average daily population of 49 inmates. In a like manner, the Fairfax program has added electronic monitoring to the duties that its Pre-Release Center staff normally perform. Only recently has Fairfax been able to dedicate a full-time staff position to operate the electronic monitoring program.

Although the availability of staff appears to be the primary factor for the different average daily caseloads, another factor helps to explain the differences found between the most recent and the longer operating programs. Frederick and Chesterfield had the benefit of being able to utilize a previously developed body of knowledge on both the technological and programmatic aspects of electronic monitoring while the Fairfax and Norfolk programs were implemented at a time when such programs were still in their infancy. Based on the greater availability of program descriptions and evaluations, the newer programs were better able to design their programs based on the experience of others, thereby avoiding a more conservative early operation period.

A final reason for the different average daily caseloads is that the Frederick and Chesterfield programs were implemented after the initial creation of Section 53.1-131.2. The lack of statutory authority for electronic monitoring was detrimental to the Fairfax program. According to officials in this locality, some members of their judiciary were reluctant to place offenders into the program without statutory authority. Section 53.1-131.2 not only provides statutory authority for judicial placement but also allows for placement by non-judicial authorities. The newer programs were able to avoid the period of judicial inactivity experienced by Fairfax and, from their inception, take advantage of the broadened placement authority.

The data indicates that the older programs, particularly Fairfax, have increased their average daily caseloads since Section 53.1-131.2 became effective. The Fairfax program had an average daily caseload of eleven offenders after the legislation's effective date compared to 2.4 offenders prior to July 1, 1989. The Norfolk program did not experience the judicial inactivity cited by Fairfax but has also experienced an increased average daily caseload. Prior to July 1, 1989, Norfolk had an average daily caseload of 4.9 offenders. Norfolk's average daily caseload has doubled to 9.8 offenders since the effective date of the legislation.

2. Offender Information

Table 7 displays selected offender information collected from the cases files maintained by each program. As can be seen in the table, the average age of the participants did not differ substantially between the programs. Although the majority of the participants are male, significant differences exist between the percentage of males placed by each program. The Norfolk program has the highest percentage of male offenders (92.2%). Males are 82 percent of the participants in the Fairfax and Frederick programs. Although in the majority, only 61.8% of the Chesterfield participants are male. The majority of the offenders in each program are employed during a significant portion of their electronic monitoring participation. The high is registered by Norfolk (96.5%). Frederick is lower at 82.0% while nearly three-quarters of the participants in the Chesterfield and Fairfax programs are employed.

TABLE 7

COMPARISON OF OFFENDER INFORMATION
BETWEEN PROGRAMS

PROGRAM	AVERAGE AGE IN YEARS	PCT. MALE	PCT. EMPLOYED	PCT. WITH PRIOR RECORD	AVERAGE NO. OF PRIOR CONVICTIONS
Chesterfield	28.2	61.8%	76.5%	73.5%	3.2
Fairfax	30.5	82.4%	72.3%	47.1%	4.1
Frederick	28.8	82.0%	82.0%	64.0%	2.6
Norfolk	31.7	92.2%	96.5%	94.8%	7.6

Table 7 also displays two measures of offender prior criminal history, the percentage of offenders with a prior conviction and the average number of convictions for those offenders with a prior history. On both measures it appears that the Norfolk program participants have a higher degree of prior criminal involvement.

Nearly 95 percent of the participants in this program have a prior criminal conviction history and for those offenders with a prior record, the average number of prior convictions is 7.6 offenses. Although the Fairfax program has the lowest percentage of offenders with prior conviction histories (47.1%), participants in this program with a conviction history have the second highest average (4.1 convictions).

3. Placement and Referral Information

As discussed in an earlier section of the report, the Chesterfield and Frederick programs serve multiple jurisdictions and/or sentencing courts. Although the Chesterfield program serves one independent city and two counties, 30 of this program's 34 participants were under the jurisdiction of the Chesterfield County court system. The Frederick program is designed to handle offenders under the jurisdiction of the entire Twenty-Sixth Judicial Circuit. In actuality, however, 45 of the program's 50 participants were under the jurisdiction of the Winchester City or Frederick County court systems.

Over one-half of the participants in each of the programs are under the jurisdiction of the Circuit Court. No substantial differences are found between the programs in terms of the percentage of offenders under the immediate jurisdiction of this court. In terms of offenders under the jurisdiction of the General District Court, the Fairfax program is much less likely to place offenders originally sentenced by this court (18.9%). Offenders under the jurisdiction of the Juvenile and Domestic Relations Court are rarely placed on electronic monitoring. The Fairfax program is the only program placing a significant number of offenders who are under the immediate jurisdiction of authorities other than the Virginia court system. The majority of these participants are federal offenders.

TABLE 8

COMPARISON OF PLACEMENT AND
REFERRAL INFORMATION

	PROGRAM				
	CHESTERFIELD	FAIRFAX	FREDERICK	NORFOLK	
COURT OF JURISDICTION	Circuit	58.8%	64.9%	56.0%	60.9%
	General District	38.2%	18.9%	42.0%	35.7%
	J& DR	2.9%	4.1%	-	3.5%
	Other	-	16.4%	2.0%	-
SOURCE OF REFERRAL	Direct Court Order	8.8%	77.4%	30.0%	15.7%
	Program Staff	91.2%	19.9%	68.0%	84.3%
	Other	-	2.8%	2.0%	-
TYPE OF REFERRAL	Felony	38.2%	63.3%	34.0%	40.9%
	Misdemeanor	29.4%	9.5%	28.0%	12.2%
	Traffic	32.4%	27.2%	38.0%	47.0%

Significant differences are found between the programs in terms of the manner in which offenders are placed or brought to the attention of program staff. As can be seen in Table 8, over three-quarters of the offenders in Fairfax are direct court-ordered into the program compared to 30 percent in Frederick, 16 percent in Norfolk, and only nine percent in Chesterfield. Of the 86 direct court orders made by a judge from the Fairfax County court system, 74 (86.0%) are placements made at the time of sentencing as opposed to placements made by the judiciary after the offender had already served a portion of his/her sentence. In other words, a significant portion of the direct court orders in Fairfax occur at the decision point the literature cites as most likely to result in net-widening. The Fairfax program is not alone in placing offenders via direct court orders occurring at the time of sentencing. All of the thirteen direct court orders made by members of the judiciary in Frederick were done at the time of sentencing. Approximately one-third of the direct court orders in Chesterfield and Norfolk are occurring at this key decision point.

Conversely, Table 8 indicates the percentage of offenders who are identified by staff from each of the programs. Aside from the obvious fact that programs with a low percentage of direct court orders will

have a high percentage of placements by staff, the significant aspect of this item is the varying proclivity of the programs to seek placement prior to the 60 days or less "trigger" specified in Section 53.1-131.2. All of the offenders identified by Frederick and Fairfax staff were placed under the release authority granted to non-judicial personnel by the Code of Virginia. The Chesterfield and Norfolk programs were more willing to identify candidates for release and seek prior judicial approval in order to release with more than 60 days to serve. Ten of the 31 staff placements in Chesterfield were for offenders with more than 60 days to serve while 56 of the 91 staff-identified offenders in Norfolk were released, with more than 60 days to serve, after judicial approval.

TABLE 9
COMPARISON OF PRIMARY OFFENSES

	PROGRAM			
	CHESTERFIELD	FAIRFAX	FREDERICK	NORFOLK
Against the Person	-	4.8%	4.0%	4.3%
Drugs	14.7%	24.5%	24.0%	8.7%
Fraud	5.9%	9.5%	2.0%	4.3%
Major Traffic	32.4%	27.2%	36.0%	47.0%
Property	35.3%	23.8%	28.0%	18.3%
Sex	-	-	-	0.9%
Weapons	-	1.4%	-	1.7%
Other	11.8%	8.8%	6.0%	14.8%

As can be seen in Table 9, a large percentage of the participants in each of the programs are those who fall into the category of major traffic offenders. Most of the offenders falling into this category are convicted of driving while intoxicated (Chesterfield=5 of 11, Fairfax=20 of 40, Frederick=11 of 18, Norfolk=41 of 54). Property offenders also comprise a large percentage of the participants in each of the programs. Finally, nearly one-quarter of the participants in the Fairfax and Frederick programs are convicted of drug offenses compared to 14.7% in Chesterfield and 8.7% in Norfolk. Of the 36 drug offenders in Fairfax, 24 were convicted of felony sales. Three of the twelve drug offenders in Frederick were convicted of felony sales.

4. Program Violations and Success Rates

Participant misconduct was measured by recording the total number of violations of program rules and the reasons for program termination. In terms of program violations, over three-quarters of the offenders in the Chesterfield, Norfolk, and Fairfax programs did not violate program rules during their electronic monitoring terms (Chesterfield = 91.2%, Norfolk = 85.2%, Fairfax = 82.4%). Sixty-eight percent of the Frederick offenders did not violate program rules during their participation. These are successful completions. Norfolk had the highest percent of offenders terminated for administrative reasons (30.4%). The majority of these offenders (32 of 35) were granted early release by the sentencing judge after demonstrated progress in the program plan devised for the offender. These too should be considered successful completions.

For those offenders who violated program rules, the average number of violations per offender is highest in Chesterfield (2.0) and Norfolk (1.8) while the lowest averages are found in Frederick (1.5) and Fairfax (1.1). These violations were generally curfew violations or improper use of the telephone. In terms of willingness to work with rule violators, each of the programs except for Fairfax warned and counseled offenders in response to a large number of the violations. Although based on a low number of violations, Chesterfield issued a warning in response to four of the six violations recorded. A warning was issued in response to 17 of the 24 violations recorded in the Frederick program while 24 of the 31 violations in Norfolk were followed up by a warning. On the other hand, Fairfax is less tolerant of offenders who violate program rules. Only two of the 28 violations in this program resulted in a warning to the offender. Other than a warning or revocation, Norfolk was the only program who utilized other responses to program violations. In two cases Norfolk offenders had their release date affected by the stripping of good time earned.

The failure rates varied significantly between the programs.

Norfolk had the lowest failure rate (4.4%) while Fairfax experienced the highest failure rate (15.6%). Frederick had a 12.0% failure rate. Chesterfield had a 5.9% failure rate. As mentioned in an earlier section of the report, the vast majority of the failures were due to technical violations rather than for escape or the commission of new offenses. Most of the technical violations in the Chesterfield, Frederick, and Norfolk programs are due to curfew violations or improper use of the telephone. In contrast, thirteen of the twenty-one failures due to technical violations in Fairfax were the result of alcohol or drug use by the offender.

5. Sentencing Information

The majority of the offenders in each of the programs were actively serving a jail sentence at the time of placement or direct court ordered in lieu of a jail sentence (Chesterfield = 97.1%, Frederick = 94.0%, Norfolk = 93.9%, Fairfax = 79.9%). Very few of the offenders in each of the programs were actively serving a prison sentence at the time of their placement. The percentage of offenders serving a jail sentence in Fairfax is lower due to the wider range of offenders served by this program. For example, nine percent of the offenders in this program were placed on electronic monitoring to await sentencing while 3.5% of the offenders were pretrial placements. Fairfax offenders were also sentenced to electronic monitoring after originally being placed on the program during their pre-trial or pre-sentence periods (3.5%).

6. Program Days Served

Table 10 displays the distribution of days served on electronic monitoring for each of the programs. Most of the offenders in Chesterfield, Fairfax, and Frederick are placed on electronic monitoring for less than 90 days. Nearly one-quarter of the offenders in Norfolk (21.7%) were on electronic monitoring for more than 90 days

while very short periods of participation characterize a significant number of the offenders placed by Fairfax and Frederick.

Nearly ten percent (9.4%) of the offenders in Fairfax and 20.0% of the offenders in Frederick had lengths of stay of seven days or less. All of the offenders in Chesterfield and Norfolk had lengths of stay of eight days or more. Finally, Norfolk offenders have the longest average lengths of stay (66.3 days) while Frederick offenders had the shortest (32.5 days). Chesterfield and Fairfax offenders had comparable average lengths of stay (41.7 days and 40.8 days respectively).

TABLE 10
COMPARISON OF LENGTHS OF PROGRAM
PARTICIPATION

	PROGRAM			
	CHESTERFIELD	FAIRFAX	FREDERICK	NORFOLK
1-30 days	38.2%	44.6%	54.0%	20.9%
31-60 days	29.4%	42.6%	40.0%	28.7%
61-90 days	29.4%	3.4%	6.0%	28.7%
91-120 days	2.9%	4.0%	-	10.4%
Over 120 days	-	5.4%	-	11.3%
Average Length of Stay	41.7 days	40.8 days	32.5 days	66.3 days
Median Length of Stay	35.0 days	33.0 days	29.0 days	61.0 days
Total Days Served	1418	6032	1624	7623

7. Supervision Fees Collected

Table 11 summarizes the amount of supervision fees collected by each of the programs. As can be seen in the table, the percentage of the offenders who pay all or a portion of the supervision fees established by the particular program is at least 90 percent or more in Chesterfield,

Frederick, and Norfolk. Approximately one-quarter (27.7%) of the offenders in Fairfax have the fee waived. For those offenders who pay a fee, Fairfax collects the highest average amount per placement (\$305.50). The Chesterfield program collects the lowest average amount per placement (\$220.82). The next section of the report will further examine the fees collected by each program in relation to its operational costs and the costs of incarceration in its locality.

TABLE 11
COMPARISON OF SUPERVISION FEE
COLLECTIONS

	PROGRAM			
	CHESTERFIELD	FAIRFAX	FREDERICK	NORFOLK
Percent Who Pay	100.0%	72.3%	90.0%	96.5%
Average Amount (All Placements)	\$ 220.82	\$ 220.87	\$ 238.65	\$ 280.80
Average Amount (Offenders Who Pay)	\$ 220.82	\$ 305.50	\$ 265.17	\$ 290.92
Total Amount Collected	\$7,508.00	\$32,688.38	\$11,932.50	\$32,292.57

PROGRAM COSTS

This section of the report compares the operating costs of the electronic monitoring programs and generates cost savings relative to the incarceration costs within each locality. The calculation and comparison of program costs, however, proved to be problematic due to the varying types of equipment and acquisition methods utilized by each of the programs. In addition, it was impossible to gather costs for all the budget categories that comprise total program costs. For example, none of the programs were able to provide the transportation costs of their programs. We were also unable to gather such costs as telephone service and drug testing for several of the programs.

Because of these data availability problems, this section will examine program costs in three ways. The first section describes the actual costs of the programs based solely on equipment costs. The second section discusses the total operating costs relative to the rate of utilization. This section also serves to illustrate the various costs that need to be considered by localities wishing to implement such programs. Since some of these costs will be one-time expenditures, the final section estimates the future annual operating costs for each of the six programs. The final section also calculates per day costs based on historical utilization rates.

A. EQUIPMENT COSTS AND ACTUAL DAILY COSTS

Table 12 displays the actual equipment expenditures for five of the six electronic monitoring programs operating within the Commonwealth. The equipment costs reflect total expenditures from program implementation through June 30, 1990. The table also displays the cost per day for each of the programs based on the total number of days participants spent in the particular program. The Richmond City program was excluded from this analysis due to the fact that this program purchased its electronic monitoring system. Including this one-time purchase in the calculation of Richmond's equipment costs per day would seriously distort the actual cost of operating this program.

TABLE 12

TOTAL EQUIPMENT AND ACTUAL DAILY COSTS

PROGRAM	TOTAL EQUIPMENT COSTS	TODAY DAYS IN EM	EQUIPMENT COST/DAY
ARLINGTON	\$ 10,200	668	\$15.27
CHESTERFIELD	\$ 15,330	1826	\$ 8.40
FAIRFAX	\$ 47,337	6596	\$ 7.18
FREDERICK	\$ 14,280	2256	\$ 6.33
NORFOLK	\$105,400	8492	\$12.41

As can be seen in the table, the equipment costs relative to its utilization ranged from a low of \$6.33 per day to a high of \$15.27 per day. The Arlington cost per day is misleading in that this locality did not begin to place offenders until February, 1990 and, like most new programs, has been experiencing a low rate of utilization during its initial period of operation. This program's cost per day should decrease significantly as the rate of utilization increases over time. The cost per day in Norfolk is also inflated in that the total equipment costs include the \$43,800 expended in 1988 to purchase the system under their lease/purchase option. The exclusion of this one-time expense would result in a significant reduction in this program's equipment costs per day.

Unlike Arlington and Norfolk, the equipment costs per day in Fairfax are somewhat deflated as a result of a situation unique to this locality. The Fairfax program experienced significantly lower equipment costs in 1987 and 1988 due to a large number of malfunctioning monitoring devices. The vendor only charged the program for the usable monitoring devices during a particular month. Unlike the other four programs, the cost per day relative to the utilization rate was not as adversely affected by unused devices simply because the Fairfax program was not paying for a portion of the devices acquired by the program. For example,

a program with twenty devices and an average daily caseload of ten offenders will have its daily equipments costs adversely affected by the ten devices not being utilized. In Fairfax, however, a similar situation may only result in five idle devices being paid for since the remaining five were malfunctioning and "off the books" for billing purposes.

B. TOTAL PROGRAM COSTS AND ACTUAL DAILY COSTS

Table 13 displays the total costs of operating the five programs discussed in the previous section. In addition to the caveats previously discussed, the operating costs displayed in Table 13 should not be regarded as definitive due to the fact that we were unable to collect the transportation costs for each of the programs. We were also unable to ascertain the telephone service costs and drug testing costs in all of the programs. Although not definitive, the table does serve to illustrate the fact that the daily operating costs can increase substantially when other program costs are considered.

The Frederick and Chesterfield programs registered the most significant increase in daily operating costs when expenses other than equipment are considered. When measured solely by equipment costs, the actual cost per day in Frederick was \$6.33 and \$8.40 in Chesterfield. When other program costs are considered, the actual operating cost per day increases to \$20.92 in Frederick and \$18.83 in Chesterfield. One reason for this significant increase is that both programs were able to create or dedicate a full-time staff position to perform electronic monitoring duties. The Frederick program's actual operating cost per day was also influenced by the one-time expense of purchasing a vehicle in order to perform various program activities.

The Arlington program also experienced a significant increase in daily costs when other operating costs are considered. The increase for this program was primarily due to the cost of purchasing twenty home breathalyzer units for the purposes of monitoring offender alcohol use.

TABLE 13

TOTAL PROGRAM AND ACTUAL DAILY COSTS
THROUGH JUNE 30, 1990

BUDGET ITEM	ARLINGTON	CHESTERFIELD	FAIRFAX	FREDERICK	NORFOLK
Monitoring Equipment	\$10,200.00	\$15,329.60	\$47,337.00	\$14,280.00	\$105,400.00
Maintenance	N/A	N/A	N/A	N/A	\$ 18,210.00
Auxillary Equipment	\$ 7,644.00	N/A	N/A	\$13,425.00	N/A
Personnel	N/A	\$14,831.25	\$ 9,150.00	\$16,583.39	N/A
Installation	\$ 140.00	\$ 167.70	\$ 279.00	\$ 66.95	\$ 147.75
Telephone Service	\$ 699.16	\$ 1,965.77	Unavailable	\$ 644.98	Unavailable
Office Supplies	\$ 255.47	\$ 1,831.38	\$ 435.50	\$ 1,964.91	\$ 359.32
Equipment Supplies	\$ 180.25	\$ 23.00	\$ 375.00	\$ 225.30	\$ 75.00
Drug Tests	\$ 404.45	\$ 232.21	\$ 3,452.00	Unavailable	Unavailable
TOTALS	\$19,523.33	\$34,380.91	\$61,028.50	\$47,190.53	\$124,192.07
TOTAL DAYS	668	1826	6596	2256	8492
COST/DAY	\$29.22	\$18.83	\$ 9.25	\$20.92	\$14.62

By having the offender breathe into these devices, program staff are able to ascertain the blood/alcohol content of the offender at the time the offender's "picture" is transmitted to the central computer. An increase in the program's utilization rate as staff gain operational experience and the exclusion of this one-time purchase from future cost computations should result in a significant reduction in the daily operating cost of this program.

C. ESTIMATED ANNUAL OPERATING COSTS

The two previous sections illustrate the difficulty of comparing program operational costs due to the varying lengths of program opera-

tion, low initial utilization rates, and the inclusion of one-time expenses incurred during program implementation. In order to provide a better understanding of the operational costs for each of the programs, an attempt was made to annualize the costs in a manner that excludes one-time expenditures and incorporates a more reasonable average daily caseload for several of the programs. As was the case in the previous two sections, the operating costs contained in Table 14 should not be looked upon as definitive due to the fact that several of the budget items are estimates and in several cases, the lack of baseline information made estimation of certain costs impossible.

Table 14 displays the anticipated annual costs for operating each of the programs. In most cases we were able to estimate annual costs for expenses such as telephone service, office supplies, equipment supplies (computer paper, data tapes, etc.), and drug testing. As can be seen in the table, personnel costs were only included for those programs which created or assigned staff full-time to operate the particular program. The rationale for excluding personnel from the operational costs of programs without full-time staff is that their assignment to electronic monitoring did not require the expenditure of additional funds. In terms of average caseload figures, the Chesterfield and Frederick figures reflect the actual average daily caseloads posted by these programs during their first seven months of operation. The Fairfax and Norfolk average daily caseloads reflect the higher caseloads these programs attained since July 1, 1989. Since Arlington and Richmond have only recently begun to place offenders, an assumed average daily caseload of one-half the number of monitors possessed was used to calculate daily operational costs per offender.

As can be seen in Table 14, the least expensive programs to operate on both an annual and a daily cost per offender basis are those programs that own their monitoring systems. The only significant costs these programs incur on an annual basis is the maintenance agreement purchased from the equipment vendor. It is estimated that the Richmond program will be able to monitor offenders for less than one dollar a day if an average daily caseload of twenty-five offenders is attained over the

TABLE 14

ESTIMATED ANNUAL OPERATING COSTS
AND ESTIMATED DAILY COSTS

BUDGET ITEM	ARLINGTON	CHESTERFIELD	FAIRFAX	FREDERICK	NORFOLK	RICHMOND
Monitoring Equipment	\$24,480	\$25,740	\$37,350	\$24,480	N/A	N/A
Maintenance	N/A	N/A	N/A	N/A	\$13,688	\$6,500
Personnel	N/A	\$25,425	\$43,920	\$24,580	N/A	N/A
Telephone Service	\$ 3,356	\$ 3,370	Unavailable	\$ 1,106	Unavailable	Unavailable
Office Supplies	\$ 765	\$ 200	Unavailable	\$ 770	Unavailable	\$1,200
Equipment Supplies	\$ 360	\$ 46	\$ 75	\$ 450	Unavailable	\$1,050
Drug Tests	\$ 809	\$ 464	\$ 1,713	Unavailable	Unavailable	Unavailable
TOTALS	\$29,770	\$55,245	\$83,058	\$51,386	\$13,688	\$8,750
TOTAL DAYS	10	9	11	11	10	25
COST/DAY	\$8.16	\$16.82	\$20.69	\$12.80	\$3.75	\$0.96

course of a year. The Norfolk program's estimated operating costs are \$3.75 per day if an average daily caseload of ten offenders is maintained over the course of a year. However, it must be pointed out that we were unable to estimate the cost for several budget items that would accurately describe the operating costs of these two programs. Although the actual operating costs of these programs would no doubt be higher, it is clear that programs who purchase their equipment will most likely realize significant savings during subsequent years of operation.

The programs with full-time staff, on the other hand, are the most expensive to operate on an annual basis (Fairfax = \$20.69, Chesterfield = \$16.82, Frederick = \$12.80). The high daily offender cost in Fairfax is largely determined by the comparably higher wages paid in the Northern Virginia area and the large number of drug tests conducted by this program. Even though the Chesterfield program has a full-time staff person, its daily cost per offender is largely determined by its low

utilization rate relative to the number of monitors possessed by the program. The Chesterfield program has attained an average daily caseload of nine offenders with twenty-one monitors unused on an average daily basis. The daily cost per offender day in this program would drop to \$10.10 if the average daily caseload increased to fifteen offenders.

D. COST SAVINGS

Among the several possible measures of program success or effectiveness, the one that seems to be most prominent is the claim that electronic monitoring programs are less costly than incarceration. Table 15 indicates that each of the electronic monitoring programs, except Frederick, possess actual average daily program costs that are significantly less than the average daily cost of incarceration within the particular locality. The Frederick program's actual daily program costs are higher than the daily incarceration costs due to the inclusion of one-time expenses such as a vehicle purchase. As displayed in Table 14, the estimated daily costs of this program drops to \$12.80 per offender day when one-time program expenditures are excluded.

TABLE 15
ESTIMATED COST SAVINGS ACHIEVED
BY ELECTRONIC MONITORING

PROGRAM	ACTUAL DAILY PROGRAM COSTS	AVERAGE DAILY JAIL COSTS 1	DAYS SPENT IN PROGRAM	JAIL COSTS	ADJUSTED PROGRAM COSTS	TOTAL SAVINGS
Arlington	\$29.22	\$40.94	668	\$ 27,348	\$17,076	\$ 10,272
Chesterfield	\$18.83	\$33.38	1826	\$ 60,952	\$26,873	\$ 34,079
Fairfax	\$ 9.25	\$43.20	6596	\$284,947	\$28,340	\$256,607
Frederick	\$20.92	\$15.00	2256	\$ 33,840	\$35,259	-\$ 1,419
Norfolk	\$14.62	\$23.38	8492	\$198,543	\$91,899	\$106,644

¹Source: July 29, 1989 presentation by the Compensation Board to the Commission on Prison and Jail Overcrowding. Frederick daily cost figure reflects the cost of housing an offender in the Work Release Center.

Table 15 also displays the total cost savings realized by the localities operating electronic monitoring programs. The column labeled "Jail Costs" is the product obtained by multiplying the number of days offenders spent in the particular program by the average daily incarceration costs within that particular locality. The figures contained in this column represent the total costs that each locality would have assumed had such diversions to electronic monitoring not occurred. The "Adjusted Program Costs" reflects the actual program operating costs displayed in Table 13 minus the supervision fees collected by the particular program. The far right-hand column in Table 15 reflects the total savings realized by each of the localities.

As can be seen in Table 15, the two longest-operating program (Fairfax and Norfolk) have resulted in significant savings to their localities through the diversion/removal of offenders from the local jail. The newly-established programs of Chesterfield and Arlington, despite the existence of one-time implementation expenses and initially low utilization rates, have already realized savings as a result of their electronic monitoring programs. Although currently operating at a loss compared to the cost of incarceration in the Work Release Center, the Frederick program is nearing the break even point after only seven months of operation.

Due to caveats discussed earlier and others to follow, the reader is cautioned that the total savings displayed in Table 15 should not be looked upon as definitive. First, the actual savings would be reduced if net-widening is occurring within a particular program. The cost of supervising offenders who are not truly "jail-bound" would be in addition to the amount saved by actual diversions from jail. Secondly, the daily incarceration costs reported for each locality, except Frederick, reflect the total cost of incarcerating offenders housed in both the general jail population and those residing or participating in work release. The actual cost savings would be lower due to the large number of program participants selected from work release, a program with significantly lower operating costs in comparison to the general jail population. In

the case of Frederick, the actual savings may be higher due to the fact that offenders are selected from existing jail populations within this program's catchment area. The various jails, in most cases, possess higher daily costs than that of the Work Release Center.

While we were unable to further refine the cost savings in order to better calculate actual savings realized by the programs, we can say at this time that electronic monitoring programs appear to reduce incarceration costs through the diversion of offenders at minimal risk to the community. In addition, most of the offenders participating in the various programs are employed, supporting their families, and contributing toward the cost of their supervision.

CONCLUSIONS AND RECOMMENDATIONS

This report provides a detailed assessment of Virginia's experience with electronic monitoring. The report provides a history of such programs both nationally and within the Commonwealth. A major portion of the report focuses on the programs currently operating within the Commonwealth. The programs are described and compared in terms of program operation, offender selection, and the equipment used to monitor offenders. Statistical data is presented in order to provide an understanding of offender demographic characteristics, methods of placement, lengths of program participation, and the impact that these programs have on jail populations and the costs of incarceration. The statistical data is presented in the aggregate and by individual program so that comparisons can be made. Finally, the report provides a detailed cost analysis of the programs in terms of equipment costs, total operational costs, and savings realized as a result of the programs. The following are the major conclusions of the report.

CONCLUSIONS

1. Virginia Within The National Perspective

Although Virginia established its first programs shortly after electronic monitoring began to be used by the criminal justice system, the Commonwealth lags behind many other states in terms of the number of programs operating, total number of offenders participating, and the range of agencies supervising offenders by means of electronic technology. However, beginning in 1989, the Commonwealth has experienced dramatic growth in the number of programs operating with a concomitant rise in the number of offenders served. Unlike other states, electronic monitoring in Virginia is a local program, primarily serving jail inmates. Except for the recent appropriation to the Parole Board and isolated cases within several local programs, the use of electronic monitoring as a supervision tool for probationers is non-existent.

2. Virginia Programs

The report demonstrates that the six programs currently operating possess many commonalities among them. The two most prominent of these commonalities are that most participants have been sentenced to jail and that most programs are run by the Sheriff's Office utilizing the release authority granted to non-judicial personnel under Section 53.1-131.2. The report also demonstrates that the programs vary widely in terms of the monitoring systems used, methods of equipment acquisition, type of offenders placed, time spent on home arrest, and general program operation.

The variations between the programs are appropriate to address local needs and are acceptable within state guidelines. It is recognized that electronic monitoring should be designed and operated in a manner that best meets the needs of the local jail, the local criminal justice system, and the community. From all indications, the programs appear to be designed and operated according to the needs of the localities which are presently funding or will be funding these programs after the initial grant period expires. The variations also provide a base of knowledge as to what works in particular environments. This knowledge base will serve the Department of Criminal Justice Services well in any future evaluation endeavors and in its present responsibility to provide technical assistance to current and future users of the technology.

3. Caseloads and Utilization Rates

The data indicates that the newly-established programs in Chesterfield and Frederick have a higher average daily caseload than the programs that have been operating since 1986. Several reasons were offered that could help explain this finding. The major reasons cited were the fact that the newly-established programs were implemented with full-time staff in place and began operation after Section 53.1-131.2 was

created. The report also indicates that the Fairfax and Norfolk programs have experienced a significant increase in their average daily caseloads since July 1, 1989.

Each of the programs, however, appear to be underutilizing their service potential if the primary focus is placed on a comparison of the average daily caseload in relation to the number of monitoring units available. This view, however, is a rather simplistic measure of whether the programs are operating to their fullest potential. First, it must be recognized that the daily caseload statistic is a calculated average that incorporates both high and low periods of program activity. These periods of program activity can be affected by the availability of staff to adequately monitor a particular number of offenders or, since jail populations are dynamic, it is also possible that a pool of eligible offenders may not always be present in the jail. Secondly, it is often unreasonable to expect that all the monitoring units a program possesses are available for use. Although the percentage will vary between different types of equipment and vendors, a rule of thumb often employed is that on a given day twenty percent of a program's monitoring units will be undergoing routine maintenance and repair.

In light of the above discussion, we believe the following questions are more appropriate measures of program functioning and effectiveness. Are offenders placed in such programs truly "jail bound"? Are the programs protecting public safety? Do the programs offer a less expensive method for sanctioning offenders than incarceration? Do the programs meet the needs of the local criminal justice system and its larger community?

4. Net-Widening

The data indicates that approximately one-quarter of the placements to electronic monitoring occurred as a result of direct court orders made at the time of sentencing. When individual programs were examined it was

found that over three-quarters of the direct court orders in Fairfax were made at the time of sentencing. Although we were unable to document whether these offenders were truly "jail bound", the literature indicates that this decision point is where the net is most likely to be widened.

Assuming that some degree of net-widening is occurring, judging this phenomenon undesirable is not an easy task. The portion of Section 53.1-131.2 specifying non-judicial release authority and language in the final report of the 1989 Commission on Prison and Jail Overcrowding indicates that electronic monitoring is designed to be an alternative to jail option rather than a means of enhanced supervision for offenders who typically receive community sanctions. In order to follow through on the intent to reduce potential net-widening, DCJS has incorporated this goal as part of the grant application and acceptance process currently utilized. As a result of this requirement, direct court orders at the time of sentencing are occurring significantly less often in the recently-established programs.

Despite legislative intent and DCJS' efforts to reduce net-widening, Section 53.1-131.2 does provide for judicial placements to electronic monitoring "if the defendant is convicted and sentenced to confinement in jail." Beyond this qualifying language, no mechanism exists to ensure that a particular offender would have been jail bound in the absence of the program. Although the presence of net-widening will reduce the actual impact such programs have on jail populations and the costs of incarceration, it is difficult to judge programs such as Fairfax negatively given the fact that this program is supported by local tax dollars and appears to meet the needs of the local criminal justice system. According to local spokespersons, the judiciary often uses electronic monitoring as a form "shock incarceration."

5. Success Rates and Protecting Public Safety

The programs operate in a manner that places the protection of public safety as a foremost concern. Each of the programs have established

selection criteria designed to identify offenders who pose the least threat to public safety. Although minor variations exist between individual programs, offenders who have a demonstrated history of violence, sexual offenses, and/or pose an escape risk are excluded from participation. Secondly, risks to public safety are minimized and potential for successful participation is enhanced through the graduated release mechanism employed by most programs. A large percentage of the staff placements are made after an offender has undergone a period of observation in such programs as work release prior to their actual release to the community. Finally, none of the programs rely solely on the computer equipment to verify an offender's curfew compliance. Each of the programs supplement the computer monitoring with a combination of personal telephone calls, home/job visits, and substance abuse tests.

The programs have been extremely successful in operating in a manner that minimizes the risks to public safety. Approximately 90 percent of the participants examined completed their electronic monitoring terms successfully. Of the 37 offenders termed program failures, only two were terminated due to the commission of a new offense and only one was terminated due to an attempt to escape. The remaining unsuccessful offenders were terminated due to technical violations of program rules and regulations. The ten percent failure rate of the Virginia programs was found to be significantly less than the 25 percent national rate discussed in the Renzema and Skelton national survey.

The failure rates between individual programs ranged from a low of approximately four percent to a high of approximately sixteen percent. The data lends credence to the argument that the disparate violation rates are probably more a function of selection and revocation policy decisions made by the various program staff than a case of technology success or failure. Compared to the programs with low violation rates, the program with the highest violation rate had the highest level of staff scrutiny, greatest extent of substance abuse testing, lowest use of warnings in response to technical violations and highest placements via direct court order as opposed to staff selection after observation in work release.

6. Impact on Jail Populations and the Cost of Incarceration

This assessment of electronic monitoring programs within the Commonwealth indicates that the computer technology coupled with sound selection criteria and proper staffing can impact on a locality's jail population and the cost of incarceration without impacting on public safety. However, there appear to be several misconceptions that have arisen regarding the potential impact which electronic monitoring can offer localities faced with jail overcrowding and spiralling costs of incarceration. These misconceptions must be corrected in order to properly understand the role of electronic monitoring within the criminal justice system.

The first misconception that has arisen is the view that electronic monitoring programs can significantly reduce a locality's jail population. This view is false both conceptually and in terms of the actual performance of the electronic monitoring programs examined in this report. Despite the best efforts of all concerned, the various programs are only diverting approximately nine to eleven offenders on a daily basis. This represents a small percentage of the jail population in each of the localities operating such programs. Secondly, the number of offenders that would need to be diverted in order to realize a significant decrease in a particular locality's jail population is most likely impractical. For example (on October 9 1990), the Fairfax County Jail held 840 offenders in a facility with an operational capacity of 589 offenders. Electronic monitoring alone would not be able to divert 250 offenders in order to bring this facility's population within its operational capacity. In all likelihood, a more modest goal of reducing this facility's population by ten percent through home arrest diversion would also be impractical. The diversion of 84 offenders on a daily basis would require a significant change in the types of offenders allowed to participate and the level of supervision provided. It is unlikely such an expansion could occur without some increase in the threat to public safety.

The above discussion should not be viewed as a suggestion that electronic monitoring is not a viable program for localities seeking solutions to their overcrowding problems. It is our conclusion that electronic monitoring can play a role in efforts to reduce or better manage jail populations. However, it must be recognized that electronic monitoring is only one tool available to the criminal justice system in its efforts to deal with the problem. Since the determinants of jail populations are complex and dynamic, there are no single solutions available that will result in a significant decrease in the number of individuals incarcerated within a particular locality.

The second misconception that appears to be developing is the notion that electronic monitoring programs are self-sustaining. This is demonstrated by the fact that the true cost of operating these programs entails more than the leasing or purchasing of equipment. Depending on the particular program's complexity, the actual cost of operating these programs can be significant. Although the programs cost less per offender day than incarceration, supervision fees alone do not appear to be sufficient to cover total program costs. For example, the program in question collected approximately \$33,000 in supervision fees since its inception compared to an estimated annual operating cost of approximately \$83,000. The Norfolk program fares a little better due to the fact that this program owns its monitoring system. Supervision fees appear to be sufficient to cover the annual equipment maintenance costs in this locality. However, maximum utilization of the monitoring technology is adversely affected by the fact that supervision fees alone will not support a staff position to adequately supervise a higher caseload. In this particular program, although it appears to be self-sustaining, the lack of an additional funding source precludes greater use of the technology.

The final misconception that needs to be addressed is the belief that these programs are largely defined by the acquisition of equipment. Despite their relatively low caseloads, these programs are very expensive in terms of operation. Placements on the technology do not simply

consist of hooking an individual up to a machine and sending him/her home. Each placement involves a time-consuming process requiring screening, interviewing, home inspections to determine suitability, data entry, and training. Once placed, on-going personal contact is required to supplement the monitoring system and intervene when the computer detect a violation. In short, electronic monitoring should be viewed as a "program" that requires sufficient staff in order to divert as many offenders as possible in a manner that does not comprise public safety.

RECOMMENDATIONS

1. State Support For New Programs

The Commonwealth, at a minimum, should continue to provide grants to localities in order to encourage expanded usage of the technology. The \$300,000 that was made available each of the past two fiscal years and currently budgeted for Fiscal Year 1991-92 allows for the implementation of four to six new programs each year. Given the fact that these programs can still be termed experimental, the Commonwealth may wish to continue the current funding levels in order to allow for moderate expansion guided by research and evaluation findings as they become available.

2. State Support For On-Going Programs

when?
The Commonwealth may also wish to consider a mechanism for funding on-going programs after the grant period expires. If such an option is chosen, initial funds provided by the Commonwealth could be for the purpose of acquiring monitoring equipment with subsequent funding to be generated by a combination of local tax dollars and supervision fees paid by participants. Supplementary funding by the Commonwealth appears to most needed in the area of program staffing.

3. The Need For Continued Evaluation

Despite the quantity of information contained in this report, the assessment should not be looked upon as definitive. Time and resources did not allow for detailed analysis of potential net-widening. In addition, examination of certain topics (e.g., characteristics of offenders who violate rules and regulations) could not be done due to the low number of cases available for analysis. Therefore, it is recommended that current and future electronic monitoring programs should be continually under examination.

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