TECHNICAL REPORT OF THE JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION ON

Statewide Staffing Standards for the Funding of Commonwealth's Attorneys

TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA



HOUSE DOCUMENT NO. 70

COMMONWEALTH OF VIRGINIA RICHMOND 1990

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Preface

Item 13 of the 1988 and 1989 Appropriations Acts directed JLARC to review staffing standards and funding for constitutional officers in Virginia. This report, the third in a series, addresses staffing standards for Commonwealth's attorneys. Other reports in the series address staffing standards for sheriffs, clerks of court, commissioners of revenue, and treasurers. The last report in the series addresses issues related to the funding of the constitutional offices.

The staffing standards for Commonwealth's attorneys developed for this report are based on measures of workload that have clear relationships to the staffing of the Commonwealth's attorneys' offices. The measures used include locality population, crime rate, and several others. The proposed standards can be used by the Compensation Board to more equitably allocate positions statewide. Application of these standards results in a statewide increase of 159 positions over the current Compensation Board recognized positions.

The issues involved in allocating positions to the constitutional officers are complex. Therefore, it will be necessary to review the proposed standards in more detail with the General Assembly, the State Compensation Board, the constitutional officers, and local governments. To begin that process of review, Senate Bill 248 was introduced in the 1990 Session of the General Assembly. This legislation, which puts into effect a new funding method, can be the starting point for discussions on the staff proposals.

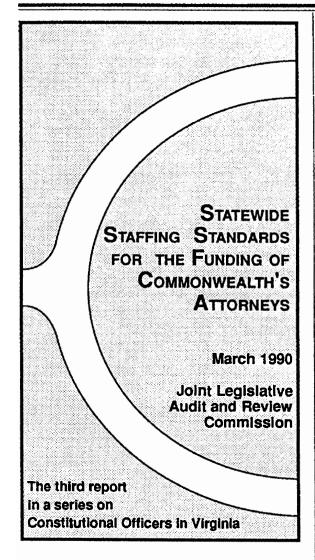
We would like to express our appreciation for the cooperation and assistance extended to us by Virginia's Commonwealth's attorneys; Mr. Walter Felton, Administrative Coordinator of the Commonwealth's Attorneys' Services and Training Council; and the staff of the State Compensation Board.

Philip A. Leone

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Director

JLARC Report Summary



Article VII, Section 4 of the Virginia Constitution provides for five locally-elected county and city officers. These officers are commonly referred to as "constitutional officers." The constitutional officers provide a number of valuable services at the local level, ranging from criminal justice services to the assessment and collection of local taxes.

Item 13 of the 1988 and 1989 Appropriations Acts directed that JLARC study and recommend "workload standards and

policies to be utilized for the allocation of positions to the locally elected constitutional officers." This report discusses workload and staffing standards for Commonwealth's attorneys. The workload and staffing of the other offices, and the funding of all constitutional officers, are discussed in companion JLARC reports.

It is important to note that the proposed standards were prepared as the first part of a larger effort focused on the development of a more systematic and equitable method for funding the constitutional officers. The standards were not developed as a method for measuring total need. Rather, they represent a method for equitably distributing available funds based on observed differences in workload across the 121 Commonwealth attorney offices.

The Current Process Does Not Result in Equitable Staffing Allocations

The current process for funding Commonwealth's attorneys and other constitutional officers is a traditional budgeting and reimbursement process that has undergone little change in the past 50 years. As a result, the allocation of resources is based primarily on the staffing requests that are submitted by each individual officer. Although the Compensation Board obtains some workload data for Commonwealth's attorneys from the Virginia Supreme Court, standards are not available to use in making staffing decisions for Commonwealth's attorneys. The Compensation Board considers staffing requests on a case-by-case basis.

As a result of the lack of staffing standards, there are significant discrepancies between Compensation Board recognized positions and the workload levels in many offices. Compensation Board recognized positions are the positions that the State officially approves for State and/or local government support. Some offices with substantially higher workload levels than others receive fewer recognized positions. Other offices have similar recognized staff levels but very different workloads.

The table below illustrates inequities in Compensation Board recognized positions for selected Commonwealth's attorney offices, along with the effects of the proposed staffing standards.

Staffing Standards Have Been Developed to Base Staffing on Actual Workload

In developing staffing standards for Commonwealth's attorneys, two primary goals were considered: (1) equity and (2) efficiency. The goal of equity can be promoted through the use of standards which are based on relative differences in the actual workload of the various offices. The goal of efficiency can be met through the use of a system which allows the State to easily apply the staffing standards across all Commonwealth's attorney offices.

The study approach employed to meet the goal of equity was to first identify the

total number of full-time equivalent (FTE positions) that were used to perform the work in different service categories, such as the prosecution of State criminal code violations. For each of these service categories, a statistical analysis was used to examine the relationship between the reported FTE positions for these categories and various workload indicators, such as the population of the locality, or local crime rate. An extensive analysis of caseload statistics was also conducted.

Based on the results of this analysis, JLARC staff were able to select the set of indicators that best explained variation in staffing levels, and then use these quantified measures as the staffing standards for the relevant service category.

Once these standards were identified, the goal of efficiency was promoted through the use of the standards to establish the staffing level for each office in the State. The advantages of this approach over the current process are:

 The standards are based on the impact of measurable workload indicators on current staffing levels and can be consistently applied across all offices based on differences in

Examples of Commonwealth Attorney Offices in Which Greater Equity Would be Achieved by Using Standards

	M	Compensation	Proposed			
	Population	Crime Index	Circuit Court <u>Caseload</u>	District Court Caseload	Board Approved <u>FTEs</u>	Standard- Based <u>FTEs</u>
Colonial Heights	17,500	502	227	5,584	2.5	2.4
Salem	24,200	956	517	5,897	2.5	3.5
Buchanan	34,200	391	219	5,940	5.0	3.7
Campbell	46,900	1,037	808	10,754	4.0	5.0
Lynchburg	69,900	3,587	1,318	21,434	10.0	8.8
Chesapeake	147,100	7,016	1,586	43,931	11.0	16.3

workload. This promotes equity in the allocation of resources.

- The standards can be easily applied across the offices, thereby promoting efficiency in the allocation of resources.
- The standards can be used by the State to readily document the basis for its staffing decisions.
- The standards take into account the most important factors affecting workload without requiring collection of data at too burdensome a level of detail. Much of the data required to implement the standards are already collected on an on-going basis.

The staffing standards would change the number of positions that are recognized by the State across all offices, and in the individual offices. Statewide, the standards indicate that the Compensation Board should recognize 706.3 positions for the Commonwealth's attorneys (714.2 positions if the part-time policy choices discussed at the end of Chapter II are implemented). This represents an increase of 159 positions more than are currently recognized by the Compensation Board.

A detailed listing of current and proposed recognized positions for each Commonwealth's attorney's office can be found on pages 11 and 12 of this report. The ten offices with the largest increases in legal and support staff based on the staffing standards are shown in the table below.

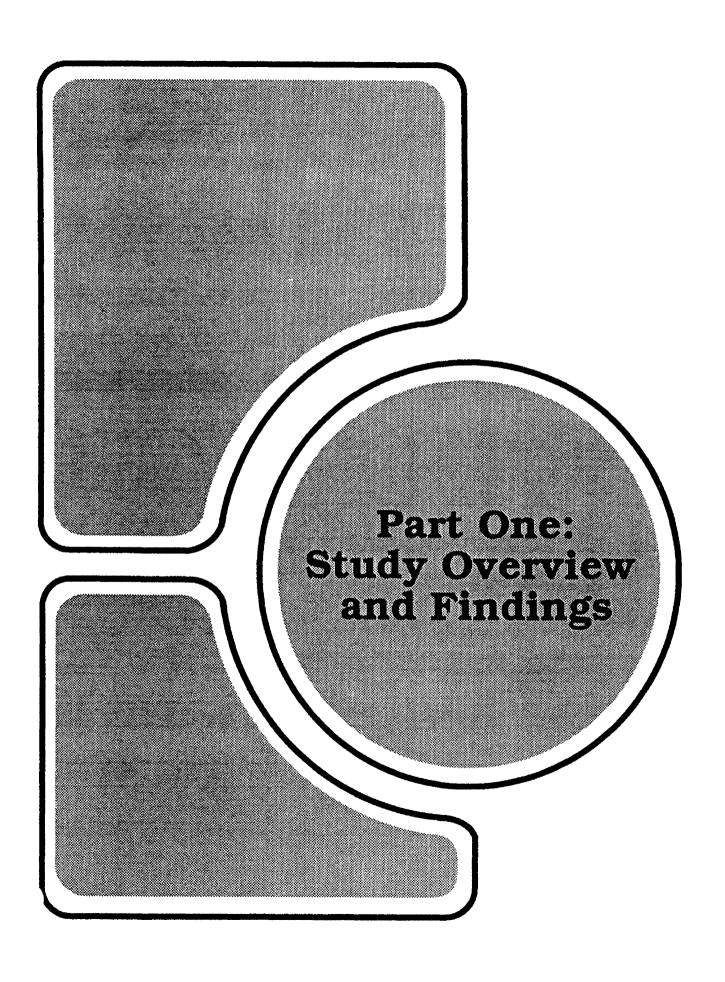
LEGAL POSITIONS		SUPPORT POSITIONS		
Office	Increase in Recognized <u>FTEs</u>	Office	Increase in Recognized <u>FTEs</u>	
Norfolk	13.2	Fairfax	5.8	
Virginia Beach	12.1	Richmond City	4.2	
Richmond City	10.1	Arlington	3.4	
Arlington	5.4	Norfolk	3.4	
Newport News	5.1	Roanoke City	2.7	
Chesapeake	4.1	Newport News	2.0	
Fairfax	3.9	Henrico	1.9	
Portsmouth	3.8	Hampton	1.8	
Hampton	3.2	Hanover	1.8	
Chesterfield	2.9	Prince William	1.7	

More Commonwealth's Attorneys Should Have Full-time Status

Seventy-two of the 121 Commonwealth's attorneys in Virginia (60 percent) are compensated by the State on a parttime basis. The JLARC analysis of workload and staffing indicated that in 35 of the part-time offices, there is an estimated workload of 40 hours or more per week of legal staff work. The conclusion from the analysis is that more Commonwealth's attorneys should be compensated on a full-time basis (and not engage in private practice work). The offices recommended for full-time status are listed on pages 15 and 16 of this report.

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I. Study Overview

Article VII, Section 4 of the Virginia Constitution provides for five locallyelected county and city officers: Commonwealth's attorneys, circuit court clerks, commissioners of revenue, treasurers, and sheriffs. These officers, because of their reference in the State constitution, are commonly referred to as "constitutional officers."

The constitutional officers provide a variety of services at the local level. For example, among other services, Commonwealth's attorneys represent the State in the prosecution of criminal cases, circuit court clerks administer court cases, sheriffs operate the local jails, and commissioners of revenue and treasurers assess and collect taxes.

This report presents an analysis of workload and staffing standards for the Commonwealth's attorneys. The final analysis of the part-time status of some Commonwealth's attorneys is also presented. Workload and staffing standards for the other officers are discussed in companion reports.

This chapter overviews Commonwealth Attorneys in Virginia, describes the need for staffing standards, and discusses the study origin and approach. Chapter II provides study findings and conclusions. Following Chapter II, the technical analysis which led to the study findings is presented.

Commonwealth's Attorneys in Virginia

Commonwealth's attorneys represent the State in the prosecution of cases in juvenile and domestic relations court, general district court, circuit court, and the State court of appeals. The Code of Virginia requires Commonwealth's attorneys to prosecute felonies and states that Commonwealth's attorneys may at their own discretion also participate in the prosecution of misdemeanors.

There are currently 121 Commonwealth's attorneys in Virginia, of which 49 serve on a full-time basis and 72 serve on a part-time basis. Most localities in Virginia have their own Commonwealth's attorney; however, 15 Commonwealth's attorneys serve both a city and a surrounding county. The Code of Virginia requires that Commonwealth's attorneys in localities with populations of more than 35,000 serve on a full-time basis. Commonwealth's attorneys in localities of 35,000 or less are to serve on a part-time basis, with one exception. Cities with a population of 17,000 or more may have a full-time Commonwealth's attorney, with the approval of the city council and the Compensation Board. Attorneys that are elected on a part-time basis are paid a lower salary and are allowed to maintain a private practice in addition to their prosecutorial duties.

State and Local Government Support of Constitutional Officers

Under the current structure for funding, the State and local governments provide funding for Commonwealth's attorneys. State funding support for these offices is provided by general fund appropriations, and is administered by the State Compensation Board. The Compensation Board is a three-member board, consisting of a chairman appointed by the Governor, the Auditor of Public Accounts, and the State Tax Commissioner. The Compensation Board also has ten approved staff positions.

State Role in Funding Positions. Section 14.1-51 of the Code of Virginia establishes the duty of the State Compensation Board to fix the salaries and expenses for constitutional officers. To fulfill its duty to fix office expenses, the Compensation Board must first determine the costs it will "recognize" in each office. A major component of the Board's determination of recognized costs pertains to the staff positions that the Compensation Board will recognize for the Commonwealth's attorneys. Recognized positions under the current system are positions that the Compensation Board officially approves for State and/or local government funding. For the Commonwealth's attorneys, the State pays 100 percent of the recognized salary costs for the principal officer, and for State-recognized staff.

Recognition of Positions by the Compensation Board. State financial support for personnel costs in Commonwealth's attorney offices has increased by about 49 percent since 1984. During this period, the number of positions recognized by the Compensation Board increased by about 12 percent. The Compensation Board has used some standards in making decisions about the recognition of staff positions for sheriffs, but not for any of the other constitutional officers. For the Commonwealth's attorneys, the Compensation Board states that factors such as the budget requests of the officers, locality population, and court caseload are considered. The Compensation Board also states that final staffing decisions have been constrained by the availability of State funds.

In 1988, the Compensation Board began to collect workload data from the circuit court clerks, commissioners of revenue, treasurers, and directors of finance. Data for certain workload indicators have been collected from these offices by the Compensation Board for calendar years 1987 and 1988. The Compensation Board has not collected any workload data from the Commonwealth's attorneys. The Compensation Board has indicated that this is because caseload data from the Supreme Court are available.

<u>Local Government Role in Funding Positions</u>. There is no local government share for the State-recognized salary costs of the recognized positions of Commonwealth's attorneys. However, local governments may choose to supplement the number of positions or the salaries that are recognized by the Compensation Board. Thus, local governments may provide their Commonwealth's attorneys with locally-funded positions that are not recognized by the Compensation Board, and are purely local add-on positions.

The Need for Staffing Standards

The current process for funding the constitutional officers is a budgeting and reimbursement process. As a result, the allocation of resources is based primarily on requests for staffing which are submitted by each individual constitutional office. Staffing standards are not currently used in the process of determining the recognition of staff positions for Commonwealth's attorneys. Because of a lack of standards, there are significant discrepancies between Compensation Board recognized staffing levels and workload levels in many offices.

Table 1 provides some illustrations of Commonwealth's attorney offices for which there are discrepancies between recognized staffing levels and workload levels. For example, the Commonwealth's attorneys in Colonial Heights and Salem each have 2.5 FTE positions. However, Salem has 38 percent more population, almost twice the number of Uniform Crime Reporting (UCR) index offenses, more than twice the circuit court caseload, and an equivalent district court caseload. The second comparison for Commonwealth's attorneys shows two offices, Buchanan County and Campbell County. Campbell has a greater workload in every category, but Buchanan has one more FTE position. The third comparison for Lynchburg and Chesapeake shows two offices with similar staffing levels but substantially different workloads.

Clearly, the staffing allocations shown in Table 1 raise questions about the equity of the current process for recognizing positions. The current staffing allocations are not consistent with the levels of workload.

The use of staffing standards in determining staffing levels can address this problem. Staffing standards can be applied objectively and consistently across the offices. When staffing standards are used, the State can readily document the basis for its staffing decisions. It can be demonstrated that staffing allocation decisions are not based on subjective perceptions of need, or on the persistence with which offices seek additional positions. The purpose of this report is to provide staffing standards that the State can use in making equitable State funding decisions.

Study Mandate

In 1988, the Joint Subcommittee on the Compensation Board and State Support of Constitutional Offices completed its review of State financial support for the constitutional officers (House Document 29, 1988). As a result of concerns raised in House Document 29, the General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to conduct a more detailed review of the staffing and funding of constitutional officers.

The study mandate (Appendix A), contained in Item 13 of the 1988 and 1989 Appropriations Acts, reflects a recognition by the General Assembly that the current process for determining staffing and funding could be more systematic and equitable.

Need for Staffing Standards for Commonwealth's Attorneys

			Compensation		
	•		Circuit	District	Board
		Crime	Court	Court	Approved
	Population	Index	Caseload	Caseload	FTEs
Colonial Heights	17,500	502	227	5,584	2.5
Salem	24,200	956	517	5,897	2.5
Buchanan County	34,200	391	219	5,940	5.0
Campbell County	46,900	1,037	808	10,754	4.0
Lynchburg	69,900	3,587	1,318	21,434	10.0
Chesapeake	147,100	7,016	1,586	43,931	11.0

Sources: The University of Virginia's Center for Public Service 1988 provisional population estimates; the number of index offenses reported for 1988 in the State Police's Crime in Virginia report; JLARC staff analysis of applicable cases commenced in 1988 in circuit court and district courts, based on Supreme Court data; and Compensation Board recognized position data for 1989-90.

Item 13 requires a JLARC study of constitutional officer staffing and funding, and has four major components, including:

- workload standards and policies to be used in allocating positions,
- the status of part-time Commonwealth's attorneys in Virginia,
- the level of State and local participation in funding positions,
- an analysis of alternative methods and agencies for administering the funding.

This report focuses on the part of the mandate pertaining to workload and staffing standards for Commonwealth's attorneys. Also addressed is the part-time status of Commonwealth's attorneys, which was the subject of an interim JLARC report in the fall of 1988.

Study Approach

Several research activities were conducted to determine staffing standards for Commonwealth's attorneys. The study approach to developing standards was to

identify the staff time that is spent by the offices in providing each type of service, and to analyze the relationships between the staff time and workload indicators for that service. The data necessary for the analyses were collected by surveying all of the Commonwealth's attorneys and by obtaining data from other State agencies.

Research was also conducted to identify staffing standards from other sources such as professional organizations. Most of the organizations contacted for this study did not have staffing standards available. The National Institute of Justice (NIJ) has published caseweights for prosecutor offices, and these caseweights were used in developing a weighted caseload measure that was examined in the JLARC study as a workload indicator. Other than the NIJ caseweights, there were not empirically tested standards available that could be applied to Virginia's Commonwealth's attorneys. As a result, the JLARC staff analysis does not use any professional standards. Instead, the standards developed for this study represent a method for equitably distributing available resources based on observed differences in actual workload across the offices.

Regression analysis and another standard statistical technique called correlation analysis -- discussed in Chapter III -- were used to examine the relationships between staff time and different workload indicators. Regression analysis is a research technique that has been used by such agencies as the Administrative Office of the U.S. Courts and the Center for Public Service at the University of Virginia. This technique provided the basis for the staffing standards developed by JLARC staff. The technique was used to quantify the relationships between staff time and the workload indicators that were best related to staffing.

II. Study Findings and Conclusions

The technical analysis for this study -- which is detailed in Part Two -- identified relationships between the staffing in Commonwealth's attorney offices and the workload of the offices. By using the results of the statistical analysis of these relationships, staffing standards have been developed and proposed for each of the seven service categories for Commonwealth's attorneys. The standards can be used to determine staffing levels for the offices that the State can use in making its funding decisions. The standards recognize the number of positions in each office that would be equitable relative to the other offices, based on the workload indicators examined.

The staffing standards were also used to analyze the issue of the part-time status of Commonwealth's attorneys. The standards indicate that many of the Commonwealth's attorneys that are currently employed on a part-time basis have full-time workloads.

RESULTS OF STAFFING ANALYSIS

Figure 1 summarizes the factors that are included and excluded as special adjustments in the staffing standards for each of the service categories. Factors that were tested for a service category and included as a special adjustment are shown with a "check." Factors tested but not included are shown with a "dot" in the service category column. The second part of this report discusses the statistical rationale for including and excluding these factors.

Although certain workload indicators were excluded from the staffing standards, the staff time spent on all activities is still captured by the standards. This is because the total time that is spent on all activities in each service category is allocated through the regression equations to the workload indicators that are included in the staffing standards.

Using the legal and support position staffing standards, a total of 706.3 FTEs are calculated for the 121 Commonwealth's attorney offices (Table 2). As the table illustrates, the largest proportion of the staffing, 66 percent, is contained in the service category composed of prosecution of violations of the State criminal Code.

The legal and support staff FTEs derived from the staffing standards represent an increase over the current Compensation Board recognized FTEs and the current State and local FTEs. For FY 1990, the Compensation Board recognizes 547.4 FTEs in the Commonwealth's attorney offices, while the current State and local staffing is 630.4 FTEs. The number of positions derived from the staffing standards is, however, 40.6 FTEs less than the number of FTEs the Commonwealth's attorneys indicated they needed on their surveys. The Commonwealth's attorneys felt they needed 746.9 FTEs.

Figure 1

Summary of Workload Factors Examined for Use in Commonwealth's Attorney Staffing Standards (Legal Staff Positions)

Key:					Services	3		
Special Adjustments Main Staffing Standards Tested but No Special Adjustment in Staffing Standards Not Applicable	de	A PORT OF THE PROPERTY OF THE	Coverage Advisory	Louis Ady,	Charles to the Control of the Contro	Roaling Ciric and	Ortice Administra	und surroy
Factors Included as Spe	cial Adj				8			
Population*					1			
Population (economy-of-scale effect)	1	•			•	•		
Crime rate	1	•			•			
Presence of judicial mandates		1						
Population density	- - - -							
Factors Examined but B	ecluded	as Speci	al Adjus	tments i	n the Sta	ndards		
Number of felonies	•							
Number of weighted felonies	•							
Weighted number of total cases	•	•						
Presence of DOC facility	•	•			•			
Number of serious incidents, DOC facilities	•			•				
Presence of MHMR facility	•	•			•			
Presence of local attorney		•	•	•		•		
Presence of local victim witness coordinator					•	•		
Non-administrative FTEs				<u> </u>		<u> </u>	•	

Source: JLARC staff analysis of survey data and data from secondary sources.

^{*}Staffing standard is based on staff per capita.

Number of Commonwealth's Attorney Positions Based on Staffing Standards

	Number of FTEs*	Percentage
Prosecution of State Criminal Code Violations	462.9	65.5%
Prosecution of Local Ordinances	83.8	11.9
Office Administration and Budgeting	67.2	9.5
Legal Assistance to State Agencies	40.0	5.7
Civic and Public Relations Duties	30.0	4.3
Legal Advice to Local Officials -Other than Conflict of Interest Act -Conflict of Interest Act	15.1 _7.3	2.1 <u>1.0</u>
TOTAL STATEWIDE STAFFING DERIVED FROM STANDARDS	706.3**	100%
COMPENSATION BOARD RECOGNIZED POSITIONS, FY 1990	547.4***	
CURRENT POSITIONS, STATE AND LOCAL	630.4	
POSITIONS OFFICERS WANT	746.9****	

^{*}Data includes the principal officers, legal staff, and support staff.

Source: JLARC staff analysis of staffing data.

Table 3 shows the ability of staffing standards to improve equity in the distribution of positions when these standards are applied to the same offices used in illustrations in Chapter I. Colonial Heights and Salem, for example, each have 2.5 Compensation Board recognized FTE positions. Yet, Salem had 38 percent more population, almost twice the crime rate, more than twice the circuit court caseload, and about the same general district court caseload. When the staffing standards are

^{**714.2} positions if the part-time policy choices discussed at the end of Chapter II are implemented.

^{***}Data includes recognized full-time positions for FY 1990, and the conversion of temporary funds to full-time equivalent positions.

^{****}Data based on current State and local positions plus additional positions identified by the offices responding to the JLARC survey.

Examples of Commonwealth Attorney Offices in Which Greater Equity Would be Achieved by Using Standards

	┌ Mea	asures o	Compensation	Proposed		
	Population	Crime Index	Circuit Court Caseload	District Court Caseload	Board Approved <u>FTEs</u>	Standard- Based FTEs
Colonial Heights	17,500	502	227	5,584	2.5	2.4
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Chesapeake	147,100	7,016	1,586	43,931	11.0	16.3

Sources: The University of Virginia's Center for Public Service 1988 provisional population estimates; the number of index offenses reported for 1988 in the State Police's Crime in Virginia report; JLARC staff analysis of applicable cases commenced in 1988 in circuit court and district courts, based on Supreme Court data; Compensation Board recognized position data for 1989-90; and JLARC proposed staffing standards.

applied, Salem receives 1.4 times as many positions as Colonial Heights (3.5 in Salem compared to 2.4 in Colonial Heights), reflecting Salem's larger population and higher crime rate.

Chapter I also showed that the Commonwealth's attorney in Buchanan County had one more FTE position than the Commonwealth's attorney in Campbell County, even though Campbell's population, crime rate, circuit court caseload, and district court caseload are larger. When the staffing standards are applied, Campbell receives more positions (5.0 positions in Campbell compared to 3.7 positions in Buchanan).

Chesapeake had only one more Compensation Board position than Lynchburg, even though the office served more than twice the population and had twice the crime rate, a 20 percent larger circuit court caseload, and twice the district court caseload. When the staffing standards are applied, Chesapeake receives more positions (16.3) than Lynchburg (8.8).

Thus, the three sets of examples illustrate that the staffing standards allocate the positions to more equitably reflect workload. Table 4 shows the allocation of positions using the staffing standards to each of Virginia's Commonwealth's attorney offices.

Current and Proposed State Recognized FTE Positions

	Chada Dana		•	O4 - 4 - TO	
0.00	State Recogni			_	nzed Positions
Office	Current	Proposed.	Office	Current	Proposed
Accomack	2.227	3,537	Highland	1.000	1.000
Albemarle	6.000	6.865	Isle of Wight	2.000	3.160
					5.680
Alleghany/Covington Amelia	2.197	2.684	James City/Williamsburg		1.170
	1.000	2.000	King and Queen	0.728	
Amherst	1.529	3.386	King George	1.810	2.000
Appomattox	1.027	1.453	King William	0.767	2.000
Arlington/Falls Church	16.000	24.847	Lancaster	1.105	2.094
Augusta	3.064	5.093	Lee	2.000	2.929
Bath	0.897	1.000	Loudoun	8.633	7.701
Bedford/Bedford	4.544	4.703	Louisa	2.000	2.312
Bland	1.500	1.367	Lunenburg	1.041	1.447
Botetourt	2.171	3.066	Madison	1.500	2.000
Brunswick	2.000	2.000	Mathews	1.000	2.000
Buchanan	5.010	3.668	Mecklenburg	1.500	3.524
Buckingham	1.500	2.000	Middlesex	1.000	2.000
Campbell	4.000	5.028	Montgomery	5.016	8.212
Caroline	1.000	2.319	Nelson	1.000	2.000
Carroll/Galax	2.166	3.315	New Kent	1.000	2.000
Charles City	1.000	1.216	Northampton	1.539	2.000
Charlotte	1.116	2.000	Northumberland	1.500	2.000
Chesterfield	15.379	17.624	Nottoway	1.500	2.000
Clark	1.527	2.057	Orange	1.655	2.522
Craig	0.959	1.000	Page	2.552	2.594
Culpeper	2.021	3.408	Patrick	2.000	2.297
Cumberland	1.027	2.000	Pittsylvania	5.000	5.317
Dickenson	2.000	2.304	Powhatan	1.000	2.010
Dinwiddie	2.030	2.525	Prince Edward	1.030	2.193
Essex	0.850	2.000	Prince George	2.000	3.137
Fairfax/Fairfax	24.000	33.763	Prince William/Manassas	17.000	20.372
Fauquier	4.478	4.647	Pulaski	4.000	4.323
Floyd	1.614	2.000	Rappahannock	1.062	1.365
Fluvanna	1.027	2.000	Richmond (County)	1.000	1.335
Franklin (County)	4.000	4.471	Roanoke (County)	6.000	7.419
Frederick	4.497	4.746	Rockbridge/Lexington	2.460	3.215
Giles	1.500	2.041	Rockingham/Harrisonbur		7.698
Gloucester	2.071	3.656	Russell	3.000	3.131
Goochland	1.767	2.000	Scott	2.036	2.924
Grayson/Galax			Shenandoah	2.040	3.337
	1.216	2.389			
Greene	1.000	2.000	Smyth	2.000	3.400 3.206
Greensville/Emporia	1.500	2.146	Southampton/Franklin C	-	3.296
Halifax/South Boston	4.000	3.659	Spotsylvania	5.449	5.967
Hanover	4.000	6.259	Stafford	5.543	5.449
Henrico	18.000	20.718	Surry	1.000	1.208
Henry	4.000	6.231	Sussex	1.500	2.000
		(Continues o	n next page)		

Current and Proposed State Recognized FTE Positions

	State Recogni	zed Positions	<u> </u>	State Recognize	ed Positions
<u>Office</u>	Current	Proposed	<u>Office</u>	Current	Proposed
Tazewell	5.000	4.722	Hopewell	2.650	3.661
Warren	3.587	3.557	Lynchburg	10.000	8.789
Washington	4.039	4.745	Martinsville	3.057	2.906
Westmoreland	1.707	2.000	Newport News	14.000	21.178
Wise/Norton	5.027	4.825	Norfolk	32.114	48.712
Wythe	1.798	3.322	Petersburg	8.228	7.441
York/Poquoson	5.000	6.262	Portsmouth	16.000	20.609
Alexandria	15.497	18.773	Radford	1.000	2.000
Bristol	1.500	2.578	Richmond (City)	31.000	45.266
Buena Vista	1.000	1.366	Roanoke (City)	13.000	14.805
Charlottesville	5.031	7.427	Salem	2,533	3.507
Chesapeake	11.000	16.334	Staunton	1.524	3.349
Clifton Forge	1.000	1.000	Suffolk	8.273	7.015
Colonial Heights	2.519	2.426	Virginia Beach	25.401	38.815
Danville	7.386	6.245	Waynesboro	1.615	2.715
Fredericksburg	5.433	3.300	Winchester	5.267	3.589
Hampton	13.000	18.009			
			TOTALS	547.369	714.167

Source: Compensation Board recognized position data and temporary funding data for 1989-90; and JLARC analysis of workload and staffing.

STATUS OF PART-TIME COMMONWEALTH'S ATTORNEYS

Senate Joint Resolution (SJR) 55 required JLARC to study the part-time status of the majority of Virginia's Commonwealth's attorneys. An interim JLARC staff report on the subject of part-time status was released in November 1988. The interim report addressed the qualitative aspects of part-time status, and contained a preliminary quantitative analysis that examined total attorney hours and the possible need for full-time status based on workload. The need for full-time status was examined in greater detail during this study.

Sixty percent of Virginia's Commonwealth's attorneys are compensated on a part-time basis, with the understanding that private practices may be maintained by the officers to supplement their incomes (Table 5). In the fall of 1988, JLARC staff surveyed all Commonwealth's attorneys regarding the part-time status issue. Approximately 44 percent of the part-time attorneys felt that the workload of their localities justified full-time status. Also, many part-time attorneys had concerns about whether they could provide on a part-time basis the quality of services they would like

- Table 5 --

Current Status of Commonwealth's Attorneys

Counties with Full-time Commonwealth's Attorneys

Albemarle	Chesterfield	Hanover	Montgomery	Spotsylvania
Augusta	Fauguier	Henrico	Pittsylvania	Stafford
Buchanan	Franklin	Henry	Pulaski	Tazewell
Campbell	Frederick	Loudoun	Roanoke	Washington

Cities with Full-time Commonwealth's Attorneys

Alexandria	Fredericksburg	Newport News	Roanoke
Charlottesville	Hampton	Norfolk	Salem
Chesapeake	Hopewell	Petersburg	Suffolk
Colonial Heights	Lynchburg	Portsmouth	Virginia Beach
Danville	Martinsville	Richmond	Winchester

Counties & Cities Where One Full-time Commonwealth's Attorney Serves Both

Arlington County/Falls Church City	Prince William County/Cities
Bedford County/Bedford City	of Manassas & Manassas Park
Fairfax County/Fairfax City	Rockingham County/Harrisonburg
Halifax County/South Boston	Wise County/Norton
James City County/Williamsburg	York County/Poquoson

Counties with Part-time Commonwealth's Attorneys

Accomack	Clarke	Greene	Mecklenburg	Prince George
Amelia	Craig	Highland	Middlesex	Rappahannock
Amherst	Culpeper	Isle of Wight	Nelson	Richmond
Appomattox	Cumberland	King George	New Kent	Russell
Bath	Dickenson	King & Queen	Northampton	Scott
Bland	Dinwiddie	King William	Northumberland	Shenandoah
Botetourt	Essex	Lancaster	Nottoway	Smyth
Brunswick	Floyd	Lee	Orange	Surry
Buckingham	Fluvanna	Louisa	Page	Sussex
Caroline	Giles	Lunenburg	Patrick	Warren
Charles City	Gloucester	Madison	Powhatan	Westmoreland
Charlotte	Goochland	Mathews	Prince Edward	Wythe

Cities with Part-time Commonwealth's Attorneys

Bristol	Clifton Forge	Staunton
Buena Vista	Radford	Waynesboro

Counties & Cities Where One Part-time Commonwealth's Attorney Serves Both

Alleghany County/Covington	Greensville County/Emporia
Carroll County/part of Galax*	Rockbridge County/Lexington
Grayson County/part of Galax*	Southampton County/Franklin City

^{*}Galax City is split between two Commonwealth's attorneys.

Source: Compensation Board data, and JLARC staff analysis.

to provide. Twenty-six respondents (41 percent) had a major concern with having insufficient time, while another 19 attorneys (30 percent) had a minor concern. Only 16 attorneys (25 percent) reported that they did not have a concern with insufficient time to provide the quality of services they would like to provide.

Many national professional associations recommend full-time status for prosecuting attorneys. The American Bar Association, the National Association of Attorneys General, the National Advisory Commission on Criminal Justice Standards and Goals, and the National District Attorneys Association have all recommended full-time status for prosecution work.

There are four reasons why full-time status is recommended for prosecuting attorneys:

- part-time prosecutors may not have the time or the incentive to devote enough attention to official duties,
- part-time prosecutors may have conflicts or appearances of conflicts between their prosecutorial and private practice work,
- the complexity of criminal law requires full-time concentration and specialization,
- full-time status will lead to increased professionalism in the prosecution position.

As noted in Chapter IV, the JLARC regression analysis for Commonwealth's attorney legal staffing compared the relationship between workload indicators and the time that is spent by the Commonwealth's attorney's legal staff providing services. Based on the JLARC standards, many of the current part-time offices are estimated to require full-time work. A total of 35 offices are estimated to require 40 or more hours of legal staff work per week (Table 6). The Commonwealth's attorneys in these offices are regarded as full-time equivalent positions by the staffing standards and should be strongly considered for full-time status.

The fact that the majority of Commonwealth's attorneys are currently parttime has an influence on the regression analysis. The hours of work that are estimated by the regression analysis may be conservative indicators of FTE needs, due to competing demands on the time of the part-time attorneys between their private practices and the Commonwealth's attorney office. Therefore, an additional 24 offices, with an estimated 30-39 hours per week of legal staff work derived from the standards, should also be given consideration for full-time status (Table 7).

In addition to concerns about legal staff needs in the part-time offices, there are also concerns about support staffing. Current support staffing levels in some part-time offices are insufficient to enable local citizens and others to contact the Commonwealth's attorney on a timely basis. Five offices do not have permanent part-

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Part-time Commonwealth's Attorney Offices Requiring 40 or More Hours of Legal Staff Work per Week

Accomack

Alleghany/Covington

Amherst Botetourt Bristol Caroline

Caroline Carroll/Galax

Clarke

Culpeper Dickenson

Dinwiddie Giles

Gloucester

Grayson/Galax Greensville/Emporia

Isle of Wight Lancaster

Lee

Louisa

Mecklenburg

Orange Page Patrick

Prince Edward
Prince George

Rockbridge/Lexington

Russell Scott

Shenandoah

Smyth

Southampton/Franklin

Staunton Warren Waynesboro

Wythe

Source: JLARC staff analysis of Commonwealth's attorney offices.

time support personnel, and the Compensation Board provides only limited temporary funding for support staff. Consideration should be given to providing all part-time Commonwealth's attorneys with at least a permanent part-time secretary.

Furthermore, a change in the status of the 59 current part-time Commonwealth's attorneys shown in Tables 6 and 7 would have an impact on support staffing needs. Therefore, consideration should also be given to changing the status of the part-time office support positions in these offices to full-time positions, so that a minimum of one FTE of support staffing is provided. The implementation of these two floors for support staffing would add an estimated 4.3 FTE positions statewide above the increase already calculated by the staffing standards for support staff in Commonwealth's attorney offices.

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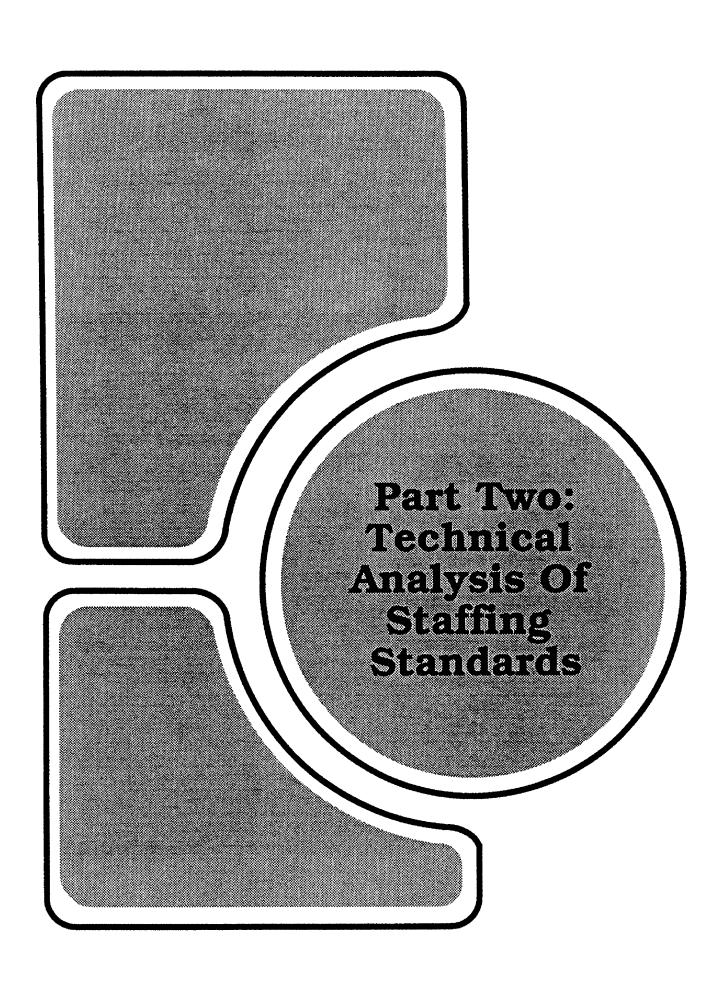
Part-time Commonwealth's Attorney Offices Requiring 30 to 39 Hours of Legal Staff Work per Week

Amelia Madison
Brunswick Mathews
Buckingham Middlesex
Charlotte Nelson
Cumberland New Kent
Essex Northampton
Floyd Northumberland

Fluvanna Nottoway
Goochland Powhatan
Greene Radford
King George Sussex

King William Westmoreland

Source: JLARC staff analysis of Commonwealth's attorney offices.



III. General Approach to the Development of Standards

In order to determine staffing standards for Commonwealth's attorneys, data on staffing and workload were subjected to rigorous statistical analyses to determine their interrelationships. Correlation and regression analyses -- standard statistical techniques -- were used to determine which of the workload indicators described in Part One of this report were most closely related to the staffing of Commonwealth Attorney offices, so that these indicators could be used in developing staffing standards.

This chapter describes in general terms the technical approach used, beginning with some basic definitions of correlation and regression analysis, and moving to a discussion of how these techniques were applied. The next chapter will discuss in more specific terms how the analysis derived staffing standards within the different service categories.

Overview of Correlation and Regression Analyses

In a staffing analysis, it can generally be expected that the greater the amount of work, the greater the amount of staff time that is required. This expectation illustrates the difference between an independent and a dependent variable. In this example, the amount of staff time is the dependent variable, because it is expected that the staff time that is required depends on, or is an outcome of, the amount of work that is performed. On the other hand, the amount of work is the independent variable, because it is not dependent on the amount of staff time required.

Correlation and regression analyses are commonly used statistical techniques for measuring the relationships between factors, such as the number of staff and workload. Correlation analysis is a standard statistical technique which measures the strength and direction of the relationship between two variables. It can be used to measure the strength of the relationships between all possible pairings of the factors under study. It can show whether there is a positive relationship between the variables (as the one variable increases, the other variable increases); whether there is a negative or inverse relationship between the variables (as the one variable increases, the other variable decreases); or whether there is no measurable relationship between the variables.

Regression analysis is a standard statistical technique which can be used to further analyze the relationship between a dependent variable and one or more independent variables. It has been used as a technique to determine staffing or funding formulas at various levels of government. For example:

- The Administrative Office of the U.S. Courts uses regression analysis to produce staffing formulas for clerks of court in the U.S. District Courts.
- The State uses regression analysis to determine law enforcement expenditures under Title 14.1, Article 10 of the Code of Virginia.
- The Center for Public Service at the University of Virginia uses regression analysis to produce population estimates, which in turn are used in State funding formulas such as the composite index for education.

Regression analysis produces an equation which best summarizes how much impact the independent variables have in increasing or decreasing the dependent variable. The equation contains a "constant," which represents the value of the dependent variable when all the independent variables are equal to zero. The equation also contains "coefficients" for each independent variable. The coefficients indicate the weight that each independent variable has in causing the dependent variable to increase or decrease.

In addition to the equation that is produced, regression analysis provides a measure of the strength of the relationship between the dependent variable and the independent variables. This measure is designated as the R², a statistic which can range from 0 to 1. The statistic indicates the percentage of the variation in the dependent variable which is explained by the independent variables, based on the regression equation. For example, if a staffing regression equation has an R² of .40, then it means that the combination of independent variables (workload indicators) account for 40 percent of the difference that can be observed in the dependent variable (staffing) from one locality to the next.

The objective of using regression analysis in a staffing study is to include in the regression model the workload factors that explain variations in the staffing levels. There are factors other than workload factors that may explain variations in staffing, such as the effectiveness of offices in gaining positions from the Compensation Board, or the levels of service that offices choose to provide. These are factors that affect current staffing, but should not be part of staffing standards. Thus, the objective of the regression analysis is not to capture 100 percent of the variation in staffing between the offices. Such a model would continue staffing exactly as it is. The objective of the regression analysis is to capture the variation that is related to the workload performed.

Collection of Staffing and Workload Data for the Analysis

The first step in developing staffing standards was to collect appropriate data on staff time and workload of the Commonwealth's attorneys. To obtain this data, JLARC staff surveyed all of the Commonwealth's attorneys and collected data from a number of secondary sources.

<u>Survey Data</u>. To develop staffing standards, data were needed on how time is spent in the offices, and on workload. The State does not collect time allocation data from Commonwealth's attorneys, and most officers do not have records of the staff time spent. Therefore, the Commonwealth's attorneys were requested to provide estimates of the proportion of their time and their staff's time that is spent providing different services.

JLARC staff developed detailed listings of office activities, through reviews of the Code of Virginia; interviews with Commonwealth's attorneys, the staff of the Compensation Board, the staff of the Commonwealth's Attorney's Services and Training Council, and other individuals knowledgeable about the offices; and a review of Commonwealth's attorney survey responses to a previous legislative study. For the previous legislative study (House Document 29, 1988), the officers provided information on a wide range of activities that they perform.

The detailed listings of activities developed by JLARC staff were organized by the staff into "service categories." The service categories were groupings of similar activities. The purpose of the service categories was to organize the activities into a manageable number of categories, such that the Commonwealth's attorneys could provide estimates of the staff time spent on the categories.

JLARC staff then developed a comprehensive survey instrument to send to the Commonwealth's attorneys. The survey instrument requested time estimates for each of the service categories. To obtain greater consistency in responses, detailed listings of examples of the activities that should be included in each service category were provided as part of the survey.

JLARC staff sent pre-test surveys to 14 offices. Information from this pre-test was used to modify the final survey before it was sent to all of the State's Commonwealth's attorneys. The final survey was sent to all Commonwealth's attorneys who did not receive the pre-test. The overall response rate for the pre-test and the final survey was 86 percent. After the surveys were returned, JLARC staff contacted the offices as necessary to clarify responses or correct inaccurate data. In addition, all of the Commonwealth's attorneys who did not return the survey were contacted by JLARC staff and the Commonwealth's Attorneys' Services and Training Council to further encourage them to respond.

The Commonwealth's attorneys were asked to report on the survey the staff time of all positions, both State and locally funded, in their offices, so that total staff performing the work could be taken into account. The principal officers were asked to allocate to the service categories the percentage of their own time, their legal staff time, and their support staff time that is spent on the service categories.

Workload Data Obtained from Other Sources. Data from many different State agencies were relevant to the study. For example, data collected by the Virginia Supreme Court on caseloads in circuit courts, general district courts, and juvenile and domestic relations courts were obtained. Other data obtained from State agencies in-

cluded: population estimates from the University of Virginia's Center for Public Service; crime statistics from the Virginia State Police; correctional facility data from the Department of Corrections; and data on mental health and retardation facilities from the Department of Mental Health, Mental Retardation, and Substance Abuse Services.

Use of Staffing and Workload Data to Develop Standards

There were several components to the analysis of staffing standards. First, the data in almost all service categories were standardized. Standardization of the data involved transforming the workload and staffing data into "rates," such as work per unit, or number of staff per unit. For the analysis of legal staff in the offices, the population of the locality served by the Commonwealth's attorney was used as the standardizing unit. For the analysis of support staffing, the number of legal staff in the office was used as the standardizing unit.

After standardizing the data, the relationships could be examined between the amount of workload per capita and the staff time per capita. Some workload indicators had a stronger intuitive basis for their expected relationship with per-capita staffing than others. However, all workload indicators were tested using regression analysis.

Assessing Potential Standardizing Units. In examining the impact of different workload indicators on staffing, it is useful to control for the effect that size alone has on workload and on staffing. By using a factor to control for size, it is possible to identify for each workload indicator the effect that a high, moderate, or low amount of workload per unit has on staffing per unit.

There should be an intuitive link between a factor that is selected to control for size, and the workload that is generated. In addition, correlation analysis can be used to help assess a standardizing factor, by providing a statistical measure of the strength and direction of the relationship between the potential standardizing factor and the staff time that is spent.

Correlation analysis indicated that for most legal staff service categories, the population of the locality had a fairly strong statistical correlation with staffing, and with the other workload indicators as well. The population of the locality that is served also had a strong intuitive link with the workload of the offices. These correlations appear intuitively correct: the demand for the services of the offices largely comes from the locality's population.

Thus, locality population was used to control for size in all of the service categories for legal staff. This was done by dividing locality population into the number of full-time equivalent (FTE) staff (the dependent variable), and into all other potential workload indicators (the independent variables).

Correlation analysis also indicated that the number of legal staff in the office had a high correlation with support staffing in the service categories — a correlation higher than population. The number of legal staff also has a strong intuitive line with support staffing. Thus, the number of legal staff was used to standardize support staffing.

The correlation analysis was not used in the final selection of workload indicators for use in the staffing standards. Changes in the relationship of workload indicators to staffing can occur when several variables are tested simultaneously. A regression analysis, using the data in its standardized form, was applied to examine combinations of indicators, and to determine the staffing standards.

<u>Examining Workload Indicators at the Statewide Level.</u> After standardizing the data, the next step was to identify the most important workload indicators, based on analysis of the data for all the offices. Regression analysis was applied to identify the most important indicators. Logarithmic transformations of the data were performed, to accommodate for the skewness of the data.

Two criteria were applied in selecting workload indicators for further examination. One criterion was that the direction of the regression coefficients had to indicate a meaningful association with staffing levels, when controlling for other selected workload indicators. For example, if a potential indicator was expected to have a positive effect on staffing levels, and the regression coefficient was indeed positive, then the indicator met the criterion. On the other hand, if the regression coefficient for the indicator was negative, showing a counterintuitive effect, then the workload indicator was not examined further because it did not appear to show a meaningful relationship with staffing levels.

The second criterion was the strength of the association between the potential workload indicator and staffing levels, when controlling for other selected workload indicators. The strength of this association was measured by the change in the R² statistic when the potential indicator was added to the regression model. For example, if a potential workload indicator appeared to show at least a marginal association with staffing levels (that is, if it increased the R² by .02 or more) when controlling for other selected indicators, then it was examined further. Conversely, if an indicator showed a very weak association with staffing levels (with an increase in the R² of less than .02), this indicator did not help explain the differences in staffing levels, beyond using the other selected workload indicators. Therefore, this weak factor was not selected for further examination at the population strata level.

Examining Workload Indicators by Population Strata. The next step in the analysis was to examine how the remaining indicators performed once the offices were placed into smaller comparison groups. The offices were stratified into four groups, according to the size of the population in the locality served. The four groups were: 12,000 and below; 12,001 to 26,000; 26,001 to 100,000; and more than 100,000. The selection of the four groups was based on the distribution of the localities in Virginia by population. The localities with populations of more than 100,000 represented a logical

grouping at the high end of the distribution. The boundaries defining the other three population groups were chosen based on the population levels that would divide the remaining localities into three groups of roughly equal size. The use of four strata was appropriate to capture meaningful differences between offices based on size while maintaining enough localities within each group to allow for statistical analysis.

In each of the comparison groups, a separate regression equation was estimated. Within the comparison groups, the regression analyses that were performed were linear rather than logarithmic. At the stratum level, there is substantially less difference between linear and logarithmic regression results. This occurs because the spread of the data within each group is less than the spread in the data statewide. For each group, a linear regression can be used to quantify a linear relationship that is tailored for that group.

Based on the regression analysis, if a potential workload indicator showed counterintuitive effects across most strata (such as negative regression coefficients that were expected to be positive), then there was reason to doubt how stable and reliable an indicator it would be for adjusting staffing levels. These indicators were not used. However, if a potential indicator showed a strong, intuitive effect in two or more strata, yet showed a counterintuitive effect in the remaining one or two strata, then the indicator was handled as a special case. Such an indicator was included in the strata in which it had an intuitive association, but dropped from each stratum in which it exhibited a counterintuitive association.

<u>Examining Economy-of-Scale Effects</u>. Regression analysis was used to test for the existence of economy-of-scale effects in several Commonwealth's attorney service categories. The expected economy-of-scale effect is that offices which handle greater volumes of work may use less staff per work unit than offices that handle smaller volumes of work. Thus, an economy-of-scale effect was expected to show a negative relationship between the work volume and the staff required per work unit.

In the regression analysis, the most frequently used method of examining economy-of-scale effects involved the use of population. There were two steps. First, as was generally done throughout the analysis, the number of staff was standardized by population. This was done so that per-capita staffing could be examined as the dependent variable. Then population was used as an independent variable, to examine the relationship between population and per-capita staffing. The presence of an economy-of-scale effect was indicated if per-capita staffing decreased as population increased.

<u>Use of Regression Equations as Staffing Standards.</u> As a result of the statistical analysis, JLARC staff were able to select the workload indicators with meaningful and intuitive relationships to staffing. The values of the regression coefficients in the regression equations, derived from stratifying the offices into the four comparison groups, quantify the relationship between the selected workload indicators and staffing levels. The regression equations are used in the study as the staffing standards (see Appendix B).

Some workload indicators were excluded from the staffing standards for a service category, yet they represented activities that are performed in the offices. It is important to understand that this does not mean that the staffing standards fail to include staff time for these activities. The total time that is spent on all activities in the service category are allocated through the regression equation to those workload indicators that are included in the staffing standards.

IV. Staffing Standards for Commonwealth's Attorneys

JLARC staff conducted an analysis in the fall of 1988 of the relationship between various workload indicators and the total hours per week of attorney work in part-time and full-time Commonwealth's attorney offices. This previous analysis indicated that population and crime rate had a strong relationship with total attorney hours. Other factors examined had very weak or counterintuitive effects.

In the current analysis for this report, the duties of the Commonwealth's attorney offices were divided into service categories. Data were collected for the staff time spent by the offices in these service categories, and for measures of workload that might affect staff time in the service categories. The service category data were then used in developing staffing standards for funding Commonwealth's attorney offices.

Separate analyses were conducted for legal staff and support staff. Legal staff positions were defined as Commonwealth's attorneys, assistant Commonwealth's attorneys, and paralegal assistants. Support staff positions were defined as secretarial staff, clerical staff, and victim-witness coordinators.

Within the service categories, population was used to standardize the workload and staffing data for legal staff. The number of legal staff in the office was used to standardize the workload and staffing data for support staff. The two factors used had a strong intuitive relationship with the type of staff to be analyzed. Population had a strong correlation with most legal staff service categories. The number of legal staff had a strong correlation — exceeding that of population — with support staff.

Because the number of identified workload indicators was manageable for the planned regression analysis, it was not necessary to screen indicators using correlation analysis. Therefore, regression analysis was performed next, first using statewide data, and then separating the offices into population groups.

This chapter discusses the development of staffing standards for legal staff and support staff, and the results of the staffing analysis.

STAFFING STANDARDS FOR LEGAL POSITIONS

Data were collected from the Commonwealth's attorneys on the legal staff time that is spent on seven service categories. The seven service categories were:

- prosecution of violations of the State criminal code,
- prosecution of violations of local ordinances,
- legal advice to local government officials on conflicts of interest,

- legal advice and assistance to local government on other issues,
- legal advice and assistance to State agencies and other State entities,
- civic and public relations responsibilities,
- office administration and budgeting.

Relationships were then examined in each service category between legal staff time per capita and various workload indicators.

State Criminal Code Prosecution

The first service category that was identified for Commonwealth's attorney offices was the prosecution of violations of the State criminal code. The staff time reported in this service category by the Commonwealth's attorneys included all pretrial, trial, and post-trial work associated with the prosecution of State criminal misdemeanors and felonies. Pre-trial and post-trial work was defined to include: legal research, indictment preparation, victim-witness contacts, case preparation and trial of cases, bond revocations, extraditions, detainers, and briefs and responses to petitions for appeals.

Eight factors were tested for a possible relationship to the legal staff time per capita that is devoted to prosecution of violations of the State criminal code. Two factors were included in the standards as a result of the analysis.

<u>Factors Included as Special Adjustments in the Standards.</u> The two key variables used in the staffing standards were:

- crime rate, or the number of offenses for seven indicator crimes in the locality in 1988 relative to the locality's 1988 population,
- locality population as an economy-of-scale effect, in which staffing per capita decreases as the population of the locality served increases.

The crime rate variable was created using the State Police's count of offenses for the 1988 Uniform Crime Report, and the University of Virginia's Center for Public Service's provisional 1988 population figures. The seven indicator crimes that are included in the count of offenses are murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft, and arson.

Crime rate was expected to have a positive relationship with Commonwealth's attorney staffing in the service category. It was assumed that the higher the crime rate of the locality, the higher the per-capita staffing that would be devoted by the Commonwealth's attorney office in the prosecution of violations of the State criminal code. Locality population as an economy-of-scale factor, on the other hand, was expected to have a negative relationship with per-capita staffing.

The regression analysis at the statewide level identified crime rate and population as an economy-of-scale effect as the two variables that required further

examination. In the statewide model, these two variables accounted for 18.4 percent of the variation in per-capita staffing for the service category. When the two variables were examined further in each of the four population strata, they were also found to have a positive relationship with per-capita staffing. The relationship was particularly strong for the stratum of localities with population greater than 100,000, where the factors explained 83 percent of the variance in legal staff FTEs per capita. As a result of the strata analysis, crime rate and population as an economy-of-scale effect were included in the staffing standards for State prosecution work.

Factors Excluded as Special Adjustments. Six variables were examined but not used in the staffing standards. Three of these factors were caseload measures: the number of felony cases per capita; the weighted number of felony cases per capita (weighted by the average time spent per type of felony); and the total number of cases per capita, weighted by the average time spent per type of case. The other three rejected factors were the presence of a Department of Corrections (DOC) facility, the number of serious incidents in DOC facilities, and the presence of a Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMR) facility.

The caseload measures that were examined were based on the court caseload statistics of the Supreme Court. With the assistance of the Commonwealth's Attorneys' Services and Training Council and the president of the Commonwealth's Attorney Association, JLARC staff identified the types of court caseload that Commonwealth's attorney offices could prosecute. However, JLARC staff found that the court caseload data could not be further refined to identify the number of cases by type that each office actually prosecutes. This level of data is not obtained by the Compensation Board, nor kept by the large majority of Commonwealth's attorneys. Neither are records kept on the time spent per type of case. However, JLARC staff did obtain estimates from the Commonwealth's attorneys so that weighted caseload measures could be tried in the analysis.

For all the caseload measures tested, it was expected that the more cases per capita an office had, the more legal FTEs per capita would be required. For caseload measures which were weighted, it was expected that the more difficult and time-consuming cases would increase per-capita staffing for State prosecution work.

Of the three caseload measures, the number of felonies per capita showed the most potential for use at the statewide level of analysis. In a logarithmic model by itself, the number of felonies per capita explained 8.3 percent of the variation in percapita staffing. However, when added to a model with crime rate and population as an economy-of-scale effect, the number of felonies per capita only explained an additional 1.3 percent of the variation, and its standardized coefficient was substantially weaker than crime rate.

The other two variables, in which caseload was weighted, were also tested and rejected at the statewide level. For the variable of weighted felony cases per capita, the felonies were weighted by the statewide average time spent per type of felony, calculated from survey data provided by the Commonwealth's attorneys. For the variable of total weighted cases per capita, the felony cases were weighted by the National

Institute of Justice (NIJ) caseweight of 2.7 hours per felony; misdemeanors were weighted by the NIJ standard of .2 hours per misdemeanor; and all other types of cases were weighted by the statewide average amount of time reported by the Commonwealth's attorneys for each type of case. Neither of the weighted caseload variables, however, performed better than crime rate and population in explaining per-capita legal staffing.

The presence of DOC facilities and the presence of DMHMR facilities were also rejected as variables at the statewide level. The presence of the DOC and DMHMR facilities was assumed in the fall of 1988 to have a positive effect on total attorney hours. However, the 1988 analysis found that no strong positive relationships existed when these variables were tested to explain total attorney hours. Since total attorney hours was used as the dependent variable in the 1988 analysis, the effect of the presence of these facilities was tested again in the current analysis using only time spent on State prosecution work as the dependent variable. Once again, however, the expected relationships between the presence of the facilities and increased staffing were not supported by the regression analysis.

To further test the effect of the presence of a Department of Corrections facility, two additional analyses were conducted for localities with and without the facilities. First, the number of serious incidents reported within Department of Corrections facilities was tested in the regression model to see if there was a relationship between the number of incidents and per-capita staffing. This analysis also showed no relationship between the independent variable and per-capita FTEs.

Second, all localities were compared and rank ordered on their crime rate and felonies per capita. This comparison illustrated that the workload indicators for localities with a DOC facility are not greater than the workload indicators for the localities without a DOC facility. Localities with a correctional facility had an average of .018 felonies per capita and an average crime rate of 23.473 per 1,000 persons. Localities without a correctional facility had an average of .019 felonies per capita and an average crime rate of 29.335 per 1,000 persons.

Prosecution of Local Ordinances

The second service category that was identified was the prosecution of local ordinances. The staff time reported in this service category included all pre-trial, trial, and post-trial work associated with prosecuting local misdemeanors and local traffic infractions. Pre-trial and post-trial work for local prosecutions was defined to include: legal research, indictment preparation, victim-witness contacts, case preparation and trial of cases, briefs and responses to petitions for appeals and prosecutions of appeals, bond revocations, extraditions, and detainers.

Seven factors were tested for a possible relationship with the legal staff time per capita that is devoted to local prosecution work. One factor, the presence of judicial mandates, was shown to have an effect on the legal staff time per capita that is spent on local prosecution work.

Factor Included as a Special Adjustment in the Staffing Standards. Discussions with Commonwealth's attorneys and the Commonwealth's Attorney Services and Training Council indicated that in some jurisdictions, judges request the presence of the Commonwealth's attorney or an assistant attorney in court for cases in addition to those prescribed by the Code of Virginia. These judicial mandates may impose greater work than the Commonwealth's attorneys would choose in exercising their own discretion. Therefore, it was assumed that the presence of judicial mandates for the appearance of Commonwealth's attorneys in court would increase the level of legal staffing that would be used for the prosecution of local ordinances.

JLARC staff collected survey data in the fall of 1988 that could be used to test this assumption. The Commonwealth's attorneys were asked to report whether they are required by the judges in their jurisdiction to perform specific duties that are not statutorily mandated.

In the regression analysis at the statewide level, the presence of judicial mandates explained 6.2 percent of the variation in per-capita staffing for the prosecution of violations of local ordinances. At the population strata level, the strongest effect of judicial mandates could be seen in those localities with populations of 12,000 and below. The addition of judicial mandates to the regression model for these localities explained an additional 18 percent of the variation in legal staff FTEs per capita devoted to local ordinance prosecution. Based on the regression results, the presence of judicial mandates was included in the staffing standard for the prosecution of local ordinances.

<u>Factors Excluded as Special Adjustments</u>. Six workload factors were examined but were not included in the staffing standards:

- crime rate.
- weighted number of cases per capita,
- presence of a DOC facility,
- presence of a DMHMR facility,
- population (as a measure of economy-of-scale effects),
- presence of a local government attorney.

Crime rate and the weighted number of cases per capita were the same variables as were tested in the service category of State criminal code work. Both of these variables were expected to have a positive effect on staff per capita. However, the regression analysis showed not even a marginal relationship.

For the weighted number of cases variable, an effort was made as part of the study to collect data that would enable the staff to divide the caseload data between State and local cases, so that even more specific workload indicators could be tested in the service categories. However, the data were not available.

The presence of a DOC facility and the presence of a DMHMR facility were also assumed to have a positive effect on per-capita staffing for local prosecution work.

However, the regression results for these variable were negligible at the statewide level.

In addition, two variables, population as an economy-of-scale factor and the presence of a local government attorney, were expected to decrease the need for legal staff FTEs per capita in the service category of local ordinance work. It was expected that the localities with local government attorneys would require less legal assistance per capita for local prosecution work from the Commonwealth's attorney office. However, when population as an economy-of-scale factor and the presence of a local government attorney were tested in the regression analysis, they had a negligible effect on per-capita staffing.

Legal Advice on the Virginia Conflict of Interest Act

The third service category identified was legal advice and assistance to local government officials on the Virginia Conflict of Interest Act. The *Code of Virginia*, in §2.1-639.23, specifies that Commonwealth's attorneys must "render advisory opinions" to local governing bodies or local officers and employees on whether facts in a case violate the Virginia Conflict of Interest Act. Two variables were thought to potentially affect the legal FTEs per capita assigned to this service category: presence of a local government attorney, and population (used as a measure of potential economy-of-scale effects).

The presence of a local government attorney was expected to negatively affect the legal FTEs per capita devoted to this service category. The expected relationship was that the presence of a local government attorney would reduce the amount of time the Commonwealth's attorney spends interpreting and advising local officials on the Conflict of Interest Act. Population, used as a measure of potential economy-of-scale effects, was also thought to affect per-capita staffing. Since the amount of time that is devoted to this activity is not very large in any locality, it was expected that the FTEs per capita would generally decrease as population increases.

The two variables were tested individually and together in the regression analysis to determine if they had an effect on per-capita legal staffing. The analyses, however, showed that neither variable had a significant effect in explaining additional variation in legal staff FTEs per capita. Therefore, the mean legal FTEs per capita in each of the four population strata was used as the standard for this service category.

Legal Advice and Assistance to Local Government on Other Issues

The fourth service category was legal advice and assistance to local government officials on issues other than the Virginia Conflict of Interest Act. During initial interviews with Compensation Board staff and Commonwealth's attorneys, it was mentioned that one of the areas where Commonwealth's attorneys spend their time is consulting with local government officials and local law enforcement officials on

various issues. Examples include consultations with local sheriff and police departments on arrest procedures, and advice to local government officials on zoning cases and employee relations problems. Three variables were expected to potentially affect the legal FTEs per capita assigned to the service category: presence of a local government attorney, presence of a DOC facility, and population (used as a measure of potential economy-of-scale effects).

The presence of a local government attorney was expected to negatively affect per-capita legal staff needed in the service category. It was assumed that if a local attorney were present, the amount of responsibility that the Commonwealth's attorney office had to bear for legal advice to local governments and local law enforcement entities would be less, because the local attorney could assume the workload. Population as an economy-of-scale factor was also expected to have a negative effect.

The presence of a DOC facility was expected to have a positive effect on staffing. For example, if prisoners in a DOC facility escaped and the sheriff's department assisted in the search and arrest, the Commonwealth's attorney could be called upon to assist in rendering legal advice.

All three of the variables tested were found to have a negligible effect on percapita staffing. Therefore, the mean legal staff FTEs per capita in each of the four population strata was used as the staffing standard for this service category.

Legal Assistance to State Agencies

The fifth service category examined was legal advice and assistance to State agencies and other State entities. Examples of the work in this service category include:

- certification of habitual offenders for the Department of Motor Vehicles,
- welfare fraud contract obligations for the Department of Social Services,
- concealed weapons permits,
- expungements of criminal records,
- child support enforcement,
- extradition requests,
- involuntary commitments on behalf of DMHMR,
- vehicle forfeitures.

Five variables were initially tested in regressions at the statewide level to determine whether they had an effect on per-capita legal staff devoted to this service category: population (used as a measure of potential economy-of-scale effects), crime rate, presence of a DOC facility, presence of a DMHMR facility, and presence of a local victim-witness coordinator.

The presence of both DOC and DMHMR facilities was expected to have a positive relationship with per-capita staffing. Inmate and patient escapes, involuntary

commitments, and prisoner assaults could result in the Commonwealth's attorneys spending more time consulting with State officials in these institutions. Crime rate also was expected to positively affect per-capita legal staff due to the fact that crimes within these facilities are included in the crime index. On the other hand, the presence of a victim-witness coordinator was expected to negatively affect per-capita legal staff. Victim-witness coordinators could assist the Commonwealth's attorneys with the workload associated with victim/witness testimony in various types of cases, including child support enforcement cases and involuntary commitment cases.

These variables were tested singularly and in combination to determine if they had an effect on per-capita legal staff time spent assisting State agencies. However, after population had been taken into account through standardization, the relationship between any of these independent variables and staff time was negligible. Therefore, the mean per-capita legal FTEs in each of the four population strata was used as the standard for this service category.

Civic and Public Responsibilities

The sixth service category identified was civic and public relations responsibilities. Civic and public relations responsibilities were defined to include: public education, speaking engagements, membership on criminal justice panels, neighborhood watch programs, and advising and assisting local citizens. Four factors were examined for a possible relationship to the legal staff time per capita that is devoted to civic and public responsibilities. As a result of the analysis, one factor, population density, was included in the staffing standard for the largest population stratum.

Factor Included as a Special Adjustment in the Staffing Standard. The assumption for population density as a factor was that the Commonwealth's attorneys in more densely populated localities might face a greater demand for staff time per capita for assisting and advising citizens. The factor was examined in the regression analysis at the statewide level and in the four population strata.

For three of the population strata (12,000 and below, 12,001-26,000, and 26,001-100,000), the effect of population density was counterintuitive and did not warrant addition of the variable to the regression model for the standards. Therefore, the mean per-capita legal staff FTEs in these three strata was used as the staffing standard for civic and public relations responsibilities.

However, in the population stratum consisting of 100,001 or more persons, population density explained a substantial percentage of the variation in legal staff FTEs per capita. The addition of population density to the regression model for this stratum explained an additional 44 percent of the variation in staffing. Therefore, for this population stratum, population density was used in the staffing standards for the civic and public relations service category.

Factors Excluded as Special Adjustments. Three other factors were expected to have an effect on legal staff FTEs per capita. The presence of a local government attorney was expected to negatively affect per-capita staffing due to the fact that these attorneys could also assist and advise citizens and perform other public relations work. The presence of a local victim-witness coordinator was also expected to negatively affect per-capita staffing. It was expected that the coordinators could also relieve the Commonwealth's attorney of some of the workload associated with advising and assisting citizens. It was also expected that population, as a potential measure of economy-of-scale effects, would have a negative effect on per-capita legal staff.

Based on the results of the regression analysis, none of these factors were included in the staffing standards. The regression analysis at the statewide level indicated that none of these variables had even a marginal effect on per-capita staffing.

Office Administration and Budgeting

The last service category identified was office administration and budgeting. Two variables were expected to have a possible effect on the legal staff FTEs per capita for this service category: total office FTEs per capita, and population (used as a measure of potential economy-of-scale effects). Office size in FTEs per capita was expected to positively affect per capita staffing for administration and budgeting, because it was expected that in offices with larger staffs, more time would have to be spent overseeing the operations of the office. In addition, it was expected that at some point there would be an economy-of-scale effect, in which per-capita staffing would decrease relative to population.

Both of the independent variables were tested in the regression analysis. Neither variable had an additional effect in explaining legal staff FTEs per capita. Therefore, the mean per-capita legal staff FTEs for each of the population strata was used as the standard for office administration and budgeting.

STAFFING STANDARDS FOR SUPPORT POSITIONS

The seven service categories that were identified for the legal staff in Commonwealth's attorney offices were also used to determine support staff standards. For six of the seven service categories, correlation analysis indicated that the correlation between the support staff FTEs in the service category and the total legal FTEs in the office was higher than the correlation between support staff FTEs and population. For example, for the service category of prosecution of violations of State law, the correlation between support staff FTEs and total legal FTEs was .812, while the correlation between support staff FTEs and population was .591.

In addition, it is a common practice in the legal profession to assign support staff based on support-to-attorney ratios. National organizations discuss

support staffing in terms of ratios of support staff to attorneys. For example, the National District Attorneys Association recommends a ratio of not less than one secretary per two attorneys.

Therefore, support staff FTEs were standardized by the number of legal FTEs instead of population. In each service category, four separate means for the ratios between support staff FTEs in the category and total legal staff were calculated. These mean ratios were for the four population strata. In each population stratum, the mean ratio was calculated of support staff FTEs in the service category relative to total legal staff.

The mean ratios were developed using data for the number of support FTEs and legal FTEs that are actually in the offices. However, once the mean ratios were developed, the next step was to determine how many support positions should be recognized in each office based on the ratios. The best approach was to base the number of support positions on the number of legal positions that are derived from the staffing standards for each office. In this way, the support positions are a reflection of the legal staffing level that is justified based on workload. Therefore, to obtain support staffing numbers for each office, the mean support-to-attorney ratio for the office's stratum was multiplied by the number of legal staff that were derived for that office from the legal staffing standards (see Appendix B).

Appendix A

(Language in Item 13 of the Appropriations Act mandating a study of Constitutional Officers is shown below).

1989 Appropriations Act Language

The Joint Legislative Audit and Review Commission shall conduct a study of state support for locally elected constitutional officers. Such study shall include but not necessarily be limited to: (i) the status of part-time Commonwealth's Attorneys, as requested by SJR 55 (1988); (ii) workload standards and policies to be utilized for the allocation of positions to the locally elected constitutional officers funded through Items 70, 71, 72, 73, 74 and 75 of this Act, (iii) the level of state and local participation in the funding of positions allocated through these items, and (iv) an analysis of alternative methods and agencies for administering these items. In evaluating proposed staffing standards for Sheriffs, the Commission shall consider jail staffing separately from law enforcement and courtroom security requirements. When formulating its recommendations with regard to the level of state and local participation, the Commission shall consider the relative benefit derived from the services provided, the financial ability of the localities to provide support and the relative differences in salary levels in northern Virginia. The Commission shall report on its progress to the 1989 Session of the General Assembly and complete its work no later than November 15, 1989. Further, the Commission shall submit its recommendations, if any, to the 1990 Session of the General Assembly. In carrying out this review, the Compensation Board, Department of Corrections, Department of Personnel and Training, and the Department of Planning and Budget shall cooperate as requested and shall make available records, information and resources necessary for the completion of the work of the Commission and its staff.

Appendix B

JLARC Staff Proposed Staffing Standards

POPULATION STRATA 1: 0-12,000

Localities in Strata

Amelia Bath B1 and Buena Vista Charles City Charlotte Clarke Clifton Forge King William Craig Cumber land Essex Floyd Greene Highland King & Queen Northumberland Rappahannock Richmond Lancaster Madison Mathews Middlesex New Kent

Surry Sussex

Legal Staff Standards

37

State Prosecution: [.000077035 + (-.000000002582 x Population) + (.00000006503 x Crime Rate Index)] x Population

Local Prosecution: (.0000)8004 x Population) if Judicial Mandates

(.000004356 x Population) if no Judicial Mandates

Office Administration: (.000004428 x Population)

Advice to Local Officials (COI): (000002357 x Population)

Advice to Local Officials (Other Issues): (00006420 x Population)

Civic Responsibilities: (.000006871 x Population)

Assistance to State Agencies: (.000007973 x Population)

Support Staff Standards

State Prosecution: (.58686236 x Predicted Legal Staff FTEs)
Local Prosecution: (.07145843 x Predicted Legal Staff FTEs)
Office Administration: (.20895658 x Predicted Legal Staff FTEs)

Advice to Local Officials (COI): (00734312 x Predicted Legal Staff FTEs)

Advice to Local Officials (Other Issues): (.04946284 x Predicted Legal Staff FTEs)

Civic Responsibilities: $(.03901353 \times Predicted Legal Staff FTEs)$

Assistance to State Agencies: (01909601 x Predicted Legal Staff FTEs)

8

Appendix B (continued)

JLARC Staff Proposed Staffing Standards

POPULATION STRATUM 2: 12,001-26,000

Localities in Stratum

Alleghany	Appomattox	Botetourt	Bristo1	Brunswick	Buckingham	Caroline	Colonial Heights
Culpeper	Dickenson	Dinwiddie	Fluvanna	Fredericksburg	Giles	Goochland	Grayson
Greensville	Hopewell	Isle of Wight	King George	Lee	Louisa	Lunenburg	Martinsville
Nelson	Northampton	Nottoway	Orange	Page	Patrick	Powhatan	Prince Edward
Radford	Rockbridge	Salem	Scott	Southampton	Staunton	Warren	Waynesboro
Westmoreland	Winchester	Wythe					

Legal Staff Standards

Support Staff Standards

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State Prosecution: (.62876263 x Predicted Legal Staff FTEs)
Local Prosecution: (.06835836 x Predicted Legal Staff FTEs)
Office Administration: (.18112742 x Predicted Legal Staff FTEs)
Advice to Local Officials (COI): (.00487337 x Predicted Legal Staff FTEs)
Advice to Local Officials (Other Issues): (.00838813 x Predicted Legal Staff FTEs)
Civic Responsibilities: ( 02555418 x Predicted Legal Staff FTEs)
Assistance to State Agencies: ( 04352062 x Predicted Legal Staff FTEs)
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Appendix B (continued)

JLARC Staff Proposed Staffing Standards

POPULATION STRATUM 3: 26,001-100,000

Localities in Stratum

Accomack	Albemarle	Amherst	Augusta	Bedford	Buchanan	Campbell	Carroll
Charlottesville	Danville	Fauquier	Franklin	Frederick	Gloucester	Halifax	Hanover
Henry	James City	Loudoun	Lynchburg	Mecklenburg	Montgomery	Petersburg	Pittsylvania
Prince George	Pulaski	Roanoke City	Roanoke Cnty.	Rockingham	Russell	Shenandoah	Smyth
Spotsylvania	Stafford	Suffolk	Tazewell	Washington	Wise	York	

Legal Staff Standards

State Prosecution: [.00003909 + (-.000000000317 x Population) + (.0000005958 x Crime Rate Index)] x Population

Local Prosecution: (.00001068 x Population) if Judicial Mandates (.000008303 x Population) if no Judicial Mandates

Office Administration: (.000003110 x Population)

Advice to Local Officials (COI): (.000000907 x Population)

Advice to Local Officials (Other Issues): (.000001783 x Population)

Civic Responsibilities: (.000003082 x Population)
Assistance to State Agencies: (.000003884 x Population)

Support Staff Standards

State Prosecution: (.55458163 x Predicted Legal Staff FTEs) Local Prosecution: (.09112123 x Predicted Legal Staff FTEs) Office Administration: (.10265764 x Predicted Legal Staff FTEs)

Advice to Local Officials (COI): (.00341480 x Predicted Legal Staff FTEs)

Advice to Local Officials (Other Issues): (.00321616 x Predicted Legal Staff FTEs)

Civic Responsibilities: (.02825191 x Predicted Legal Staff FTEs)
Assistance to State Agencies: (.05035565 x Predicted Legal Staff FTEs)

Appendix B (continued)

JLARC Staff Proposed Staffing Standards

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POPULATION STRATUM 4: 100.001+
   Localities in Stratum
        Alexandria
                      Arlington
                                    Chesapeake
                                                    Chesterfield
                                                                  Fairfax
                                                                                  Hampton
                                                                                                  Henrico
                                                                                                                Newport News
        Norfolk
                      Portsmouth
                                    Prince William Richmond
                                                                   Virginia Beach
   Legal Staff Standards
        State Prosecution: [.000004409 + (- 0000000000 x Population) + (.000001265 x Crime Rate Index)] x Population
        Local Prosecution: (.00001179 x Population) if Judicial Mandates
                           (.000007230 x Population) if no Judicial Mandates
        Office Administration: ( 000004060 x Population)
        Advice to Local Officials (COI): (.000000991 x Population)
        Advice to Local Officials (Other Issues): (.000001899 x Population)
        Civic Responsibilities: [ 0000007728 + (.000000000751 x Population Density)] x Population
        Assistance to State Agencies: ( 000004718 x Population)
   Support Staff Standards
        State Prosecution: ( 38355722 x Predicted Legal Staff FTEs)
        Local Prosecution: (.08708584 x Predicted Legal Staff FTEs)
        Office Administration: (.09213855 x Predicted Legal Staff FTEs)
        Advice to Local Officials (COI): (.00151688 x Predicted Legal Staff FTEs)
        Advice to Local Officials (Other Issues): (.00215527 x Predicted Legal Staff FTEs)
        Civic Responsibilities: (.02707613 x Predicted Legal Staff FTEs)
        Assistance to State Agencies: (.01948362 x Predicted Legal Staff FTEs)
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