THE FISCAL IMPACT OF NEW TOWN AND SUBURBAN DEVELOPMENT: AN ASSESSMENT OF THE EFFECTS OF RESTON AND WEST SPRINGFIELD ON FAIRFAX COUNTY, VIRGINIA

By

Ida D. Cuthbertson

Thesis submitted to the Graduate Faculty of the Virginia Polytechnic Institute and State University in partial fulfullment of the requirements for the degree of

MASTER OF URBAN AFFAIRS

APPROVED:

Adam W. Herbert

Adam W. Herbert, Chairman

Frank F. Ehrenthal

Frank F. Ehrenthal

Harold M. Harris, Jr.

Harold M. Harris, Jr.

Royce Hanson

Royce Hanson

November, 1973

ACKNOWLEDGEMENTS

Only through the assistance and encouragement of many people was this research possible. The author is especially indebted to her advisory committee: Adam W. Herbert, Chairman, Frank F. Ehrenthal, Royce Hanson, and Harold M. Harris, Jr. The writer's thanks go to the many Fairfax County civil servants and elected officials for their cooperation; to Yvonne Peterson, for clerical assistance; and to Jan Ketchum, typist and artist.
Any errors are, of course, the responsibility of the author.

TABLE OF CONTENTS

Chapter

I. Introduction 1

New Towns 1
Fiscal Impact Concept 6
Purpose of Research 8
Significance of Research 9
Previous Fiscal Impact Research 11
Methodology 15

II. The Setting: Reston, West Springfield and Fairfax County, Virginia 22

Fairfax County 22
Reston 33
West Springfield 37

III. Services Provided by Fairfax County: Three Rs and Other Things 43

Education 43
Other Services 52
General Government 54
Health 58
Judicial 61
Library 63
Parks 66
Public Safety 72
Public Works 79
Recreation 89
Social Services 90
Transportation 94
Water 96
Summary of Expenditures 97

IV. Revenues: Render Unto Fairfax Those Monies 99

Revenues From Local Sources 99
Local Property Taxes 104
Real Estate Tax 104
Personal Property Tax 115

TABLE OF CONTENTS Continued

Chapter

IV. Continued

Other Local Taxes 116
Business, Professional and Occupational Licenses 116
Cigarette Tax 117
Local Sales Tax 118
Motor Vehicle Licenses 120
Utility Consumption Tax 121
Other Local Revenue 123
Revenue from State and Federal Sources 125
Summary of Revenues 126

V. The Meaning of Fiscal Impact 128

Reconciliation of Revenues and Expenditures 128
Conclusions 134
Implications 138
Recommendations 148
A Final Comment 152

Sources Consulted 153

Appendix 168

Vita 179

LIST OF TABLES

Table

1. Population Characteristics in Eight Census Tracts, Fairfax County, Virginia, 1970 38

2. Selected Population Characteristics, Census Tracts 4042 and 4092 and Fairfax County, Virginia, 1970 .. 41

3. Education Levels of Reston, West Springfield and Fairfax County Pupils, by Percent, School Year 1970-71 45

4. Per-pupil Expenditure for School Operations, Average Pupil Membership and Planned Capacity For Schools Serving Pupils, FY71 47

5. Education Expenditures for Reston and West Springfield Pupils, FY71 50

6. Real Estate Tax and Education Expenditures, Reston and West Springfield, FY71 53

7. Expenditures for Services, Other than Education, Provided by Fairfax County, FY71 55

8. Reported Crimes, Selected Sub-Census Tracts, Fairfax County, FY71 75

9. Public Safety Expenditures, Reston and West Springfield, FY71 78

10. Organizational Structures of the Department of Public Works, Fairfax County, FY71 80

11. Attendance at Selected Recreation Programs, Reston, West Springfield and Fairfax County, FY71 . 91

12. Expenditures Allocated to Reston and West Springfield, FY71 98

13. Receipts of Fairfax County Government, FY71 100

LIST OF TABLES Continued

Table

14. Locally Produced Revenues, Fairfax County, FY71 .. 102

15. Local Tax Revenues for Fairfax County, FY71 103

16. Other Locally Collected Revenues, Fairfax County, FY71 105

17. Assessed Valuation, Reston and West Springfield, January 1, 1970 109

18. Assessed Valuation by Land Use, Reston and West Springfield, January 1, 1970 114

19. Revenues Generated by Reston and West Springfield, FY71 127

20. Fiscal Impact, Reston and West Springfield, FY71 . 130

CHAPTER I

INTRODUCTION

NEW TOWNS

The new town is the object of increased attention in the United States today. Beginning a decade ago interest focused on the new town, not as a mere curio to be viewed as a futuristic urban form, but rather as a present, feasible alternative to the sprawl city that results from sporadic urban growth. Attention is directed to new towns for a second, perhaps more compelling, reason. The U.S. Congress, in recognition of the

1) potential population increase through the end of this century,
2) the wasteage resulting from continuation of established patterns of urban development,
3) the necessity of utilizing better patterns of urban development and revitalization, and
4) the importance of new communities as an element of a national program for improved development patterns,

adopted the "Urban Growth and New Community Development Act of 1970".[1] Under its provisions public and private agencies receive financial assistance for the development of sound new communities. The new town[2] is therefore viewed at both the local and federal level as a viable urban form.

In discussions of forms of urban development the "new town" label has at times been erroneously attached to the large scale residential development offering little more than the usual level of amenity. Just as a town is more than a collection of houses, so is the new town, which is planned from its inception to provide for residential, commercial, industrial, social, recreational, and governmental activities, with land reserved for each of these purposes, so that balance is maintained among these elements over the entire time of development.[3]

---

[1] Urban Growth and New Community Development Act of 1970, Title VII, "Part B--Development of New Communities", Sec. 710, Public Law 91-609, 91st Congress, H.R. 19436, December 31, 1970.

[2] The terms "new town" and "new community" will be used interchangeably in this report.

[3] For a full discussion of the problem of defining the term "new town", see James A. Clapp, New Towns and Urban Policy: Planned Metropolitan Growth, (New York: Dunellen Publishing Co., 1971), pp. 47-53.

The Department of Housing and Urban Development (HUD) characterizes a new community as:

> ...including most, if not all, of the basic services, activities, and facilities normally associated with a city or town... a well-planned and harmonious whole, so as to be socially balanced and ... economically sound...attractive... contribute to the social and economic welfare of the entire area which it will importantly affect...variety of jobs ...a viable alternative to disorderly urban growth...increase the available choice for living and working for a full range of people and families of different compositions and incomes (including a substantial provision for housing for persons and families of low and moderate income) must be open to all, regardless of race, creed, color or national origin.[1]

The new town of today is not a new concept. The present generation of new towns in America, the post-World War II group, is but another phase in the evolution which began with Ebenezer Howard's garden city, Letchworth, Hertfordshire in 1903.[2] Howard conceived the garden city

---

[1] U.S. Department of Housing and Urban Development, Community Development Corporation, Assistance for New Communities, #24 CFR Part 720, Section 720.6 (Washington, D.C.: The Department, 1973).

[2] Frederic J. Osborn and Arnold Whittick, The New Towns: The Answer to Megalopolis (Cambridge: The M.I.T. Press, 1963), p. 56.

as an alternative to the overcrowded cities with congested, dehumanized living and working conditions.[1]

The American progression of that British experience began in 1929 with the construction of Radburn, New Jersey, a planned new community for 25,000 people.[2] Towns built by both private and public enterprise, such as Kohler, Wisconsin; Greenbelt, Maryland; Reston, Virginia; Park Forest South, Illinois; and Jonathan, Minnesota testify to the feasibility of new communities in the U.S.

Today the new town is a significant element on the American political scene. The new community has been adopted as a federal strategy with the passage of the aforementioned Urban Growth and New Community Development Act of 1970. The state of New York, through the Urban Development Corporation (UDC), engages in planning and construction of new towns. On the micro-political scale, the new town has been termed a laboratory for democracy.[3]

---

[1]Ebenezer Howard, Garden Cities of Tomorrow, (Cambridge, Mass.: M.I.T. Press, 1965), p. 42.

[2]Clarence S. Stein, Toward New Towns for America, (Liverpool: University Press of Liverpool, 1951), p. 37.

[3]Royce Hanson, New Towns: Laboratories for Democracy: Report of the Twentieth Century Fund Task Force on Governance of New Towns, Background paper by Royce Hanson (New York: The Fund, 1971), p. 9.

It offers an opportunity to experiment with innovative methods of providing services along with the challenge of designing a "private government" to deal with the unique problems which arise from joint-ownership of facilities, as well as those problems which arise in any rapidly growing community.

New communities are, potentially, a substantial national economic force. Legislation providing federal assistance to new communities allows for guarantee of developer's obligations of up to $50 million per community or $500 million to all new towns.[1] Socially, new towns can offer increased opportunity in terms of living and working conditions, to members of minority groups in new communities supported by HUD.

In spite of its apparent self-contained nature, the new town exists within the established contexts of state and local governments.[2] The new town's political relationships vis-a-vis other governmental units are formed well before the new town physically takes shape.

---

[1]Development Act of 1970, Urban Growth and New Community, Section 713 (d) and (e).

[2]The term, local government, refers to a sub-state government such as city, town, township, county.

The relationship between the proposed new town and local government crystallizes during the process of obtaining governmental approval for proposed development. Crucial questions arising at this time include those relating to the effect of the new community on local public finance. One such key question is, given the total demand the new town will make on this fiscal system, should this new town be approved?

This involves:

1) the sufficiency of the new town's fiscal resources for supporting education,
2) the sufficiency of these fiscal resources for providing other services, and
3) capital facilities needs, timing of construction, and provisions for their financing.

Hence a current new town issue, the concern of this research, is the effect of the new town on local government finance relative to the effect of another form of development.

THE FISCAL IMPACT CONCEPT

The effect of the new town on local governmental revenues and expenditures, the local fiscal impact of the new town, is prominent in the thinking of the groups involved in the decision of approving, modifying, or disapproving a proposed new town.

At the time when governmental approval is sought, the new town's fiscal impact can only be hypothesized. Many factors may influence revenues actually collected and expenditures actually made. These factors may be grouped in the following manner:

New Town Characteristics:
- total population
- age distribution of the population
- population density
- income level of residents
- mix of residential, commercial, industrial, and public land uses
- types of industry
- phasing of development of each land use
- resident's perceptions of needed services
- marketability and market absorption of the new town

The Local Setting:
- efficiency of government
- the political climate
- real estate assessment policies and practices
- state-local political and fiscal relations
- the states of the local and national economies
- structure of the fiscal system
- priorities as reflected by the expenditure pattern

The extent to which each factor of itself influences the fiscal impact of a new town on a particular local government cannot be determined *a priori*. However, through modeling techniques an estimate of a growing new town's fiscal impact over its development period may be made.

Such a prediction is currently required of proposed new communities for which HUD guarantee assistance is sought. Because of the short duration of this HUD program and its fiscal impact study requirement, no model has been validated with empirical data.

PURPOSE OF RESEARCH

The purpose of this research is to examine the fiscal impact of two forms of development, the new town and the conventional residential suburb. As an empirical study, the effect of the new town, Reston, and a dormitory suburb, West Springfield, on the local governmental body, Fairfax County, is assessed. This setting is advantageous in that this unique research is concerned with a single local government which has jurisdiction over the governmental services provided in both the new town and the suburb. Analysis of either case may stand alone, but the value of the study is enhanced by the comparative nature of the research.

Given the broader economic base of the new town, which by definition includes business, commercial and industrial activities concomitant with public facilities and residences, it is hypothesized that for the local government a more favorable fiscal impact would be produced by a new town than by a conventional dormitory suburb. This study is designed to examine the hypothesis that the ratio derived for Reston will be more favorable for Fairfax County than the ratio derived for West Springfield.

SIGNIFICANCE OF RESEARCH

The significance of this study is four-fold. Primarily the importance of this research relates to future land use policy. It presents the opportunity to public policy-makers to consider the fiscal effect of new town and sprawl in terms of land use. This in addition to the consideration of the fiscal effect of these two forms of development with regard to the provision of housing.

Continuing efforts in the U.S. Congress to encourage states to develop land use controls, as well as efforts made by several states regarding land use regulation, has prompted increased interest at the state level in the fiscal effect of various land use patterns. This research is thus relevant for state as well as federal policy-makers.

Second, an empirical study of new town fiscal impact provides insight for those who evaluate the fiscal impact models submitted to HUD. Approval for assistance in the federal New Communities program is contingent upon the filing of the required statement covering the development period of the new town.

Third, Fairfax County citizens and officials, as well as the developer and residents of Reston, have need for fiscal data concerning governmental activities in Reston, information which may be useful in planning Reston's future development. Similar information regarding the conventional subdivision provides a useful comparison.

The need to know the fiscal consequences of new town development is felt by the citizen, the governmental official and the developer, each for his own particular reasons. Cooperation within this triumvirate is required for a new community's successful growth and functioning. Greater understanding of mutual problems based on knowledge developed in studies of new towns, such as the one reported here, may lead to increased cooperation between the three concerned groups and to more effective community governance. This point is equally relevant for other types of land development. More efficent utilization of a locality's limited resources may result from knowledge developed in the study.

Finally, this study is one response to the need expressed by Donald J. Bogue for direct observation of urban economic events rather than inference from indirect data.[1] Unfortunately direct observation was not possible in all instances. This study does point up the need for governments to turn some of their vast accumulation of administrative data into grist for the research mill.

PREVIOUS FISCAL IMPACT RESEARCH

The original fiscal impact study is found in the first proposal for a new town. Ebenezer Howard's detailed description of his proposed garden city includes an analysis of the revenues derived from it and cost of its operation.[2]

In the U.S. local governmental expenditures and revenues for a defined geographic area have in the past been the subject of research, i.e., in evaluating the cost of slums, the possible effect of redeveloping inner city areas and the effect of annexation.

---

[1]"Comments" by Donald J. Bogue, in Perloff and Wingo, Issues in Urban Economics, p. 414.

[2]Howard, Chapters 2-5.

Studies conducted between 1930 and 1960 were reviewed in a compendium by Ruth Lowens Mace, who suggests self-serving research in some of the studies where conclusions coincided with the hypothesis.[1] Izard and Coughlin developed a model for predicting expenditures based on varying population densities, service levels, income levels and for revenues derived from various combinations of residential, industrial and commercial land uses over a 20 year period.[2] Economic literature since 1960 has included a variety of studies of parts of communities, such as the impact of new industry[3] or the impact of an hypothetical average single-family subdivision home with an average family.[4] The

---

[1]Ruth Lowens Mace, Municipal Cost-Revenue Research in the United States, A critical survey of research to measure municipal costs and revenues in relation to land uses and areas: 1933-1960 (Chapel Hill: University of North Carolina, Institute of Government, 1961).

[2]Walter Izard, and Robert E. Coughlin, Municipal Costs and Revenues Resulting from Community Growth (Wellesley, Mass., Chandler-Davis Publishing Co., 1957).

[3]U.S. Department of Agriculture, Economic Research Service, The Impact of New Industry on Local Government Finances in Five Small Towns in Kentucky, by Charles B. Garrison, Agricultural Economic Report No. 191 (Washington, D.C.: Government Printing Office, 1970).

[4]Metro Metrics, Inc., The Economics of Urban Growth: Costs and Benefits of Residential Construction (Washington, D.C.: The Corporation, 1971).

usefulness of the last study is limited since the result for one family in one house cannot be projected to the total population. One unpublished manuscript reports a longitudinal study of the impact of Columbia on Howard County, Maryland.[1]

The longer lifetime of British new communities suggests that studies of their fiscal impacts might provide useful prototypes. However, given the different circumstances of development and local governmental structure it would be erroneous to simply project British experience to the U.S. Journal articles and private correspondence[2] suggest impact favorable to the local governmental authority but these are statements of opinion rather than conclusions based on rigorous analysis.

The most recently completed analyses of fiscal impact are those predictive studies submitted to HUD as part of the application for financial assistance for new community development. These models show both revenues to be generated

---

[1]"Howard County and Columbia Expenditures and Revenues," January 21, 1971 (Xerox).

[2]"Finances of the New Towns," Town and Country Planning, 33 January, 1965 32, and correspondence with finance officers of Harlow, Essex and Stevenage.

by the proposed new community and services costs to be borne by local public bodies during the entire development period.

Fiscal impact research is one of several methodologies available for studying the effect of development on governmental finance. Two others are cost/benefit analysis and economic cost studies.[1] The economic cost study applies micro-economic analytic technique to expenditures and often deals with the marginal unit of service, often not taking into consideration the revenue side of public finance. A limitation of transferring this private sector technique to the public sector is that government rarely has the option, as does the private producer, of ending production at the point of intersection of two curves. A governmental service must be provided to its citizens regardless of increasing marginal cost. Cost/benefit analysis of a proposed project is based on hypothetical data. This methodology suffers from the disadvantages of unquantifiable variables and subjective determination of benefits.

---

[1]For a discussion of cost of services concepts see Werner Z. Hirsch, "The Supply of Urban Public Services," in Issues in Urban Economics, Harvey S. Perloff and Lowdon Wingo, Jr., (Baltimore: The John Hopkins University Press, 1968), p. 477. Cost/benefit is discussed by Julius Margolis, "The Demand for Urban Public Services," in the same volume, p. 527.

Either cost/benefit or economic cost studies may be used in conjunction with fiscal impact analysis, but in utilizing examination of the local government's total financial condition the fiscal impact analysis is the most useful of the three. Policy-makers, fully aware that decisions are not arrived at in a political vacuum, may utilize fiscal impact analysis along with political, economic, social and ecological studies in determining the course for future action.

METHODOLOGY

Analyses of fiscal year 1971 revenues and expenditures for Fairfax County and two of its unincorporated places, Reston and West Springfield, are at the heart of this impact study. Expenditures made by the County for services to residents of each area, non-residents employed there and the casual visitor are examined. Some of these services are provided within the study communities while others are made available to their residents at locations elsewhere in the County. Governmental services provided in each area to non-resident employees and casual visitors, such as public safety and public facilities are appropriate for inclusion.

Revenues arising from each study area are identified to the extent that this is possible, otherwise a proportional share of County funds is estimated as having been produced there. Sources of funds for governmental operations and construction of capital facilities include taxes, service charges and non-tax revenues.

Fiscal year 1971 was chosen since it was the most recent year for which final audited data for Fairfax County were available at the time when the study was initiated. The fiscal year, July 1, 1970, through June 30, 1971, followed by three months the U.S. decennial census enumeration. Although this pilot study covers only one year, the value of a longitudinal study must be recognized, especially in view of the need to identify the threshold year during its existence when a community "pays its own way".

The research design calls for comparison of Reston with a conventionally developing suburb. One area in Fairfax County, comparable to Reston in acreage and correspondingly rural in 1960, was tentatively chosen for comparative study, but upon investigation proved to be unsuitable since the absence of sewer trunk lines during the 1960s precluded development. The original requirement of equal area was replaced with equal population. Thus the following criteria were established for selecting a comparison area which would:

1) be located outside the Capitol Beltway, I-495,
2) not be centered by a pre-existent commercial or industrial nucleus,
3) have sanitary sewer availability and had undergone development during the 1960s as did Reston, and
4) include a 1970 residential population approximately equal to Reston's population.

The area chosen is composed of two sub-census tracts located in central Fairfax County. Referred to in this report as West Springfield, it is part of, but smaller than, the urbanized portion of the County so designated by local useage and the U.S. Bureau of the Census.[1]

Analysis of Fairfax County's receipts and disbursements involves two phases. The first deals with education and is based on FY71 data presented in the School Board's "Advertised School Budget for the School and Fiscal Year Ending June 30, 1973", hereinafter referred to as School Budget, FY73, and "Instructional and Support Program Budget

---

[1] U.S. Bureau of the Census, 1970 Census of Population and Housing Report PHC(1)-226, Census Tracts, Washington, D.C.-Md.-Va. SMSA, May, 1972.

Detail for the School and Fiscal Year Ending June 30, 1973", hereinafter named School Budget Detail, FY73. The latter source is of particular value inasmuch as it presents payout data for each school as well as for administrative purposes by program.

School lunch and adult education programs, both essentially self-supporting, were deleted from analysis of school expenditures and related revenues. Expenditures accounted to schools attended by pupils from Reston and West Springfield were pro-rated to residents attending those schools. Payouts for other school purposes were allocated to Reston and West Springfield students according to the appropriate pupil base.

The second phase of the study concerns all other services. Utilizing revenue and expenditure data presented in Peat, Marwick, Mitchell and Company, "Accountants' Report, Financial Statements and Supplementary Data - June 30, 1971, County of Fairfax, Virginia", to be referred to as Accountants' Report, FY71, as well as "Approved Fiscal Plan, Fiscal 1973, Fairfax County, Virginia", the budget adopted by the Board of Supervisors, which is cited as County Budget, FY73, data are developed for the following functions: general government (and the subcategory, county development), health, judicial, library, parks, public safety (civil defense, fire and police), recreation, social services and transportation. By various methodologies, as reported in Chapter III, these payouts were pro-rated to Reston and West Springfield.

Revenues associated with those services included in the analysis were pro-rated according to methodologies reported in Chapter IV. Neither transfer payments between accounting funds nor balances at the beginning of the fiscal year were included.

Deleted from analysis were expenditures and related revenues for services provided in special tax districts, for trash and leaf removal and for most of the public works programs including sewerage service. Special tax districts, where additional real estate tax is levied for services requested by citizens, are the exception rather than the rule in the County. Trash and leaf removal are essentially special district services. Reasons for excluding public works programs are detailed in Chapter III. Payments made from monies received from the sale of bonds are also deleted. To have included them would have been erroneous duplication of payouts. In addition, large capital expenditures made from borrowed funds in a single year distort the spending side of the fiscal picture. Rather, principal and interest payments made during the fiscal year more accurately portray a single year's capital facilities expenditure. Revenues and expenditures included in this analysis are summarized in Appendix Tables A-1 and A-2.

The author's population estimates (Appendix Table A-3) are developed from those provided by the Fairfax County Department of Planning. In most cases the mid-fiscal year date, January 1, 1971, is used for apportioning revenues and expenditures. When this was not the case the alternate population will be identified. During the fiscal year Reston's population almost doubled while West Springfield added about 500 people.

Empirical research constrained by time and money is not without limitations in its result. Given unlimited resources limitations might disappear. In real world research, however, one is forced to deal with the facts as they exist, which in this effort means that available data are sometimes not in the form useable to the researcher or that data are not available at all. Because of this it is necessary in several instances to make revenue and expenditure allocations to Reston and West Springfield on a per capita basis. This circumstance, while not optimal, is not viewed to be detrimental to the research. On the other hand, it is hoped that the research process and results may produce change such that a full range of data will be available for reiterative study for a future fiscal year.

Because of the length of this report, a few words about its organization are in order. The next chapter will provide a brief description of the setting: Fairfax County, the two study areas, Reston and West Springfield, their demographic characteristics as reported in the census, political issues and the economy. In Chapter III, nine services provided by Fairfax County will be described along with County-wide expenditures for and revenues generated by these services, and an estimate of outlay on behalf of Reston and West Springfield. The following chapter includes a discussion of sources of Fairfax County revenues, with emphasis on the major source for local government, the real estate tax, as well as estimates of other revenues generated in Reston and West Springfield. Revenues and expenditures for Reston and West Springfield are summarized in the final chapter which also presents conclusions and recommendations flowing from this research.

CHAPTER II

THE SETTING: RESTON, WEST SPRINGFIELD AND FAIRFAX COUNTY, VIRGINIA

FAIRFAX COUNTY

Four hundred square miles of primarily piedmont land in the northeastern section of the state, Fairfax County is bounded by Alexandria, Arlington County and the Potomac River on the east. The land rises from tidewater here to almost 500 feet on the county's western boundaries with Loudoun and Prince William counties. Near the center of the county, two interstate highways, I-66 and I-95 intersect the third, I-495, the Capitol Beltway, which rings Washington, D.C. (see Figure 1).

The rolling countryside is divided into three major watersheds, one of which empties into the Potomac River north of Washington, the others flow south into the tide-water portion of the same river. The county's history reaches back to the early colonial period, includes several chapters of this country's most devastating domestic struggle and recently has set major population growth records.

Proximity to the Nation's Capitol was the impetus

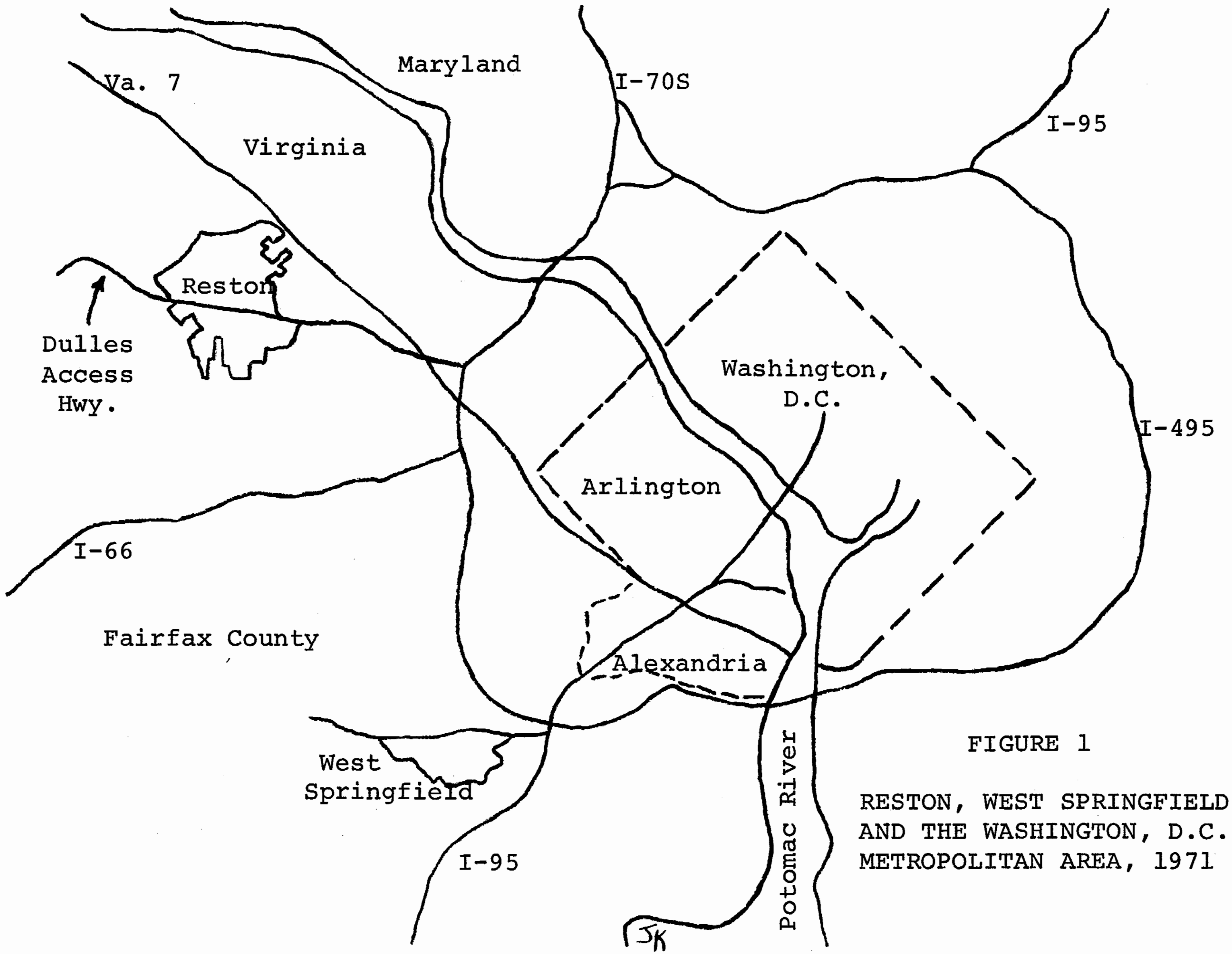

FIGURE 1

RESTON, WEST SPRINGFIELD
AND THE WASHINGTON, D.C.
METROPOLITAN AREA, 1971

for the county's rapid growth during the 1950's and 1960's when the population increased more than 350%, from 98,557 in 1950 to 455,021 in 1970.[1] In 1970 its people, with a median age of 25.2, were younger than the nation as a whole. A third of the residents were school children ages 5 through 18. It was a mobile population - over 60% of the people had lived in another house in 1965. The non-white population doubled between 1950 and 1970 but this share of the total population dropped from ten to four percent in those twenty years.

Financially, county residents were doing well. With a 1969 median family income of $15,707, Fairfax ranked as the second wealthiest county in the nation. In spite of this ranking, 4.5% of the families had incomes below the poverty level. The mean family income of these 4,000 families -- $1,608 -- indicates the dire situation for this affluent county's poor.

---

[1] Data presented here, except as noted below, were taken from the following reports of the 1970 Census of Population and Housing:
PHC(1)-226 Census Tracts Final Report, Washington, D.C. -Md.-Va. SMSA
PC(1)-A48Va. Number of Inhabitants
PC(1)-B48Va. General Population Characteristics
PC(1)-C48Va. General Social and Economic Characteristics

As might be expected from their proximity to the Capitol, almost 40 percent of employed Fairfax County residents were government workers. Professional, clerical and managerial occupation groups accounted for 2 out of 3 employed. One quarter of all workers living in Fairfax County travel to the Washington, D.C., central business district or elsewhere in the city to their jobs. The federal government also employs thousands at locations within the County, particularly at the Central Intelligence Agency and at Fort Belvoir, headquarters of the U.S. Army Corps of Engineers. Among employed Fairfax Countians, one in three works in his home county. According to the census, industries employing the largest number of residents were public administration, retail trade and educational services.

"Land development" is a major industry in Fairfax County, according to one source, and in FY71 represented a $285 million volume of business.[1] Agriculture was carried

---

[1] Fairfax County, Virginia, Division of Public Affairs, 1971 Annual Report for year ended June 30, 1971, (Fairfax: The Division, 1971), p. 35.

out on 430 farms covering 38,900 acres with approximately 8,000 head of cattle.[1] More numerous than farms were five-acre "estates" on which riding horses were kept.

The rapid population growth and urbanization of the Fifties and Sixties created increasing demands upon the County government for extension of services to newcomers and for higher quality services. The school system probably provides the most vivid example of service expansion in this rapidly growing area. In 1950, 16,163 pupils were educated in 41 public schools which were administered as two separate school systems. By September, 1970, 133,341 children were enrolled in 119 elementary, 18 intermediate and 20 high schools.[2] During these two decades the student body increased 725 percent.

In spite of the expansion or service delivery systems that did take place, County officials and citizen leaders felt that a new form of government was needed. In order to aid the County in its attempt to better fill the needs created by urbanization, the General Assembly in 1966

---

[1]Fairfax County, Virginia, Board of Supervisors, _Weekly Agenda_, October 13, 1970, p. 1.

[2]Data provided by the Fairfax County School Administration staff.

amended the code of Virginia to provide optional Urban County forms of government.[1]

Before discussing the form of Fairfax County's government which was designed to better meet the problems of a growing urban area, it is important to understand the County's political relationships with the Commonwealth.

Virginia is unique among the States in that cities exist independently of counties. Voters of a city elect only city officials and not those of the county, and vice versa. The single level of government below the state which serves all Virginians will be either city or county. (A town, on the other hand, is not independent but is part of a county.)

The Virginia county derives authority from the Commonwealth, acting in three capacities: as agent of the Commonwealth in judicial and tax matters, as local legislative body, and as the administrator of local services.[2] Since all power resides in the Commonwealth, those exercised by the county are specifically delegated to it.

---

[1] Code of Virginia, Chapter 15.

[2] Virginia State Chamber of Commerce, Virginia's Government, (Richmond: The Chamber, 1971), p. 115.

Although Virginia counties may be organized under one of five forms: traditional, county board, county manager, county executive or urban county, in each case the Board of Supervisors is the governing body. The urban county option was provided by the General Assembly in 1960 and was later adopted by Fairfax County. With this option, as with the other forms, the Commonwealth retains an overseer role in that some officials -- the school superintendent, the chief assessing officer, welfare department head, and health department head -- must be approved by or chosen from a list of eligibles furnished by state officials.[1]

By law, the County Board of Supervisors is required to adopt a budget and set the tax rate, after holding public hearings. Power to enact ordinances which do not conflict with state law is granted to the Board.[2] The Board is also empowered to establish "...departments as it deems necessary to the proper conduct of the business of the County".[3]

As a urban county, Fairfax was required to establish departments of finance, public works, public welfare, law

---

[1]Code of Virginia, Chapter 15.

[2]Virginia's Government, p. 117.

[3]Code of Virginia, Chapter 15.1-765.

enforcement, education, records, health and farm/home demonstration. The County also provides library, park, recreation, fire prevention, solid waste disposal, sewerage and street lighting as well as general governmental services. Water is provided by an independent agency, the Water Authority. Services provided by Fairfax County will be fully discussed in Chapter III.

Construction and maintenance of primary highways and secondary roads are the responsibility of the Commonwealth. The Board of Supervisors and State Highway Department are required to meet annually concerning the secondary road system within the county. The Board makes written recommendations as to the Department's future expenditures and must approve all additions to or abandonments of the secondary system.

Two other public bodies may provide services. The first, the authority, is exemplified in Fairfax County by the Water Authority which provides water service. The second, the sanitary district, is a special taxing district, created through a petition and hearing process, in which a special service is supplied. An additional tax is levied by the County to pay for the service provided in the district.

Adoption of the urban county form of government did not entail adoption of an urban form of development. As a result, sprawl continued to be the predominant form of growth.

As mentioned above, voters of Fairfax County adopted the Urban County-Executive option. Three elements of this form of government should be noted:

1) The Board of Supervisors is elected from single-member districts of approximately equal population.
2) The Chairman of the Board, elected at-large, has the power to vote only in case of a tie.
3) Incorporation of a town or city within the County is prohibited.

The significance of the first point lies in the fact that the election districts, which may also be service districts, are of equal population rather than equal area. It then became possible to district the County in such a way that the densely populated parts of the County could be provided with urban-scale services while the more sparsely settled rural areas could be provided, and taxed for, only the basic services. To date this has not been done, except through the small taxing district device which was available under the previous form of county government. Under the Urban County government the policy goal of Fairfax County continues to be to provide all services equally to all districts of the county.

Perhaps the most significant effect of Fairfax County's change to the Urban County form of government resulted from the third point mentioned above. Balkanization of the county by income level into taxhaven enclaves had been feared. This was precluded by the urban county form and governmental integrity of the County was maintained. The prohibition of incorporation not only may have encouraged sprawl but recently has become an issue with respect to Reston and the special governance needs of the new town.

The office of the Chairman of the Board of Supervisors, cast by this legislation into a weak, ceremonial post, proved to be a frustration to its first two occupants. Both resigned before completing a full term. In the fall of 1970 the Board Chairman, an interim appointee, became a candidate in the special election called to elect a Chairman for the remainder of the unexpired term.

This single contest for county office in the fall of 1970 illustrates the significant political issues facing the County at the time of this study. The incumbent defined the basic issue to be management of growth while preserving the environment, meeting citizen needs, maintaining fiscal responsibility and providing the tax base necessary to support facilities and services. His opponent campaigned for "full-time leadership" which would provide for sound management and thereby orderly growth and effective service delivery.[1] Management, services and growth were on the minds of the candidates. The form that growth should take was not mentioned.

A broader range of issues was indicated by the citizens through the Fairfax County Federation of Citizens Associations. These were law enforcement and increasing crime, priorities in public education, county growth over the next decade, the County's financial position, adequate housing for families with limited income and, again, effective management of County government.[2] This election presaged the principal issue in the election of the full Board of Supervisors the following year, that of controlling county growth.

---

[1]Fairfax County Federation of Citizens Association, Bulletin, 18, (October, 1970), pp. 2-7.

[2]Ibid.

RESTON

Reston's history begins in March, 1961 when Robert E. Simon, Jr., whose initials designate the new town, purchased the Sunset Hills tract of more than 7,000 acres. Earlier, in 1897, the town of Whiele was planned for the northwest section of Fairfax County where Reston now stands.[1] Several structures built at Whiele may be seen today in Reston, but the town did not materialize as planned. That the vicinity east of Dulles Airport was suitable for a satellite city was recognized in 1961 in the regional development plan, "The Nation's Capital: A Policies Plan for the Year 2000", which indicated there a new town center on both the peripheral communities plan and the radial corridor plan.[2] This policies plan, usually referred to as the "Year 2000 Plan", recommended a planning concept for the entire Washington, D.C. metropolitan area of corridors of urban development separated by wedges of open

---

[1]For an interesting account of the early history of Reston see: Gulf-Reston, Incorporated, A Brief History of Reston, Virginia, (Reston: The Corporation, 1971).

[2]U.S. National Capital Planning Commission, The Nation's Capital: A Policies Plan for the Year 2000, (Washington, D.C.: The Commission, 1961), pp. 44-48.

space. The concept was adopted by Montgomery County, Maryland and is today effective there as a guideline for growth. Although a public hearing on the plan was held by the Fairfax County Board of Supervisors, it did not take action on the proposal.

In the late 1950s the A. Smith Bowman family, then owners of Sunset Hills and operators of the distillery there, offered to sell the tract of land, excepting the distillery. After purchasing the land, Simon decided that his development would not be yet another sprawling look-alike community. He returned from a trip to England, where he had visited some British new towns, with a clearer definition of what Reston would be.[1] Some structures designed for Reston - buildings in which residential and commercial uses coexisted, and townhouses - were clearly incompatible with the County's building and zoning codes. Although common-wall residential buildings had existed in Alexandria, twenty miles away, since the 18th century, these structures were not permissible in Fairfax County in 1960. Simon's "revolutionary" land use plan required that a new

---

[1]The author is indebted to Kathryn Stone for her unpublished account of Reston's development.

zone, the Residential Planned Community (RPC) be adopted by the Board of Supervisors before approval for the new town would be granted. Delay caused by this controversy and administrative problems involving implementation of the new ordinance and amendments to building codes ultimately contributed to Simon's financial difficulties which resulted in his replacement, as developer, by Gulf-Reston, Incorporated.

It was more than two years after the July, 1962 approval of the Reston concept by the Board of Supervisors that the first residents moved into Reston in December, 1964. Simon later reflected that no one in the U.S. (presumably in the private sector) knew how to build a new town.[1] The first stage of the town's development included two residential areas and the industrial park. Lake Anne Village, with its architecturally renowned plaza, was designed as a series of townhouse clusters, a lakefront high-rise apartment, and a plaza with shops, offices, church, bank and apartments and single family homes built nearby. The industrial park was located in a strip along

---

[1] Comment of Robert E. Simon, Jr., at a seminar sponsored by the New Communities Study Center, Virginia Polytechnic Institute and State University, Reston, Virginia, October 19, 1971.

the north side of Dulles Airport Freeway. Hunters Woods, lying south of the Dulles Freeway, took on the appearance at that time of a conventional suburb since, initially, only lots for single family homes were platted. By 1972, apartments, townhouses, patio homes and a second village center were completed or under construction at Hunters Woods.

In 1970, Reston was a small new town with the promise of reaching its planned ultimate size of 75,000 population. More than half the population were school children of ages 5 through 18. Four people in ten were employed. One-third of these worked in Washington, but more, (forty percent), worked in Fairfax County. The 1969 median family income was $17,120. Two census statistics reflect Reston's different development pattern. In the first place, 42%, compared with the county's 62%, of the housing units were owner occupied. Second, less than 60% of the homes were single family type dwellings. The median value of owner-occupied homes was $44,500, while the median rent of renter-occupied units was $169.

As a new town, Reston has been planned for a mix of population, land uses and housing facilities. Census data indicate that in 1970 the population was 5.7% blacks in the census tract including Reston, compared with 3.5% in the entire county. In spite of this higher than average proportion, Reston blacks more nearly resemble other Restonians than blacks residing in the other locations in the county. This can be seen in the following table (Table 1) in which the eight census tracts in which 400 or more blacks resided are compared for education, profession, income and rent measures.

WEST SPRINGFIELD

In 1947 when the outer edges of Washington, D.C.'s suburbs were reaching into eastern Fairfax County, Edward R. Carr, Sr., traded his equity in some apartments in Alexandria for 300 acres of land in Springfield, a settlement of 150 people around the Southern Railroad Station.[1] He later purchased 2,100 more. Before he began development, Carr waited for Shirley Highway, (now I-95), the principal commuter road to Washington, to move closer to his land. After water and sewer services were assured, development of his dream community began. Ten years later unincorporated

---

[1]The history of West Springfield is told in news articles appearing in Alexandria Gazette, July 21 and 22, 1958; Fairfax County Sun Echo, February 8, 1962; and Washington Post, April 19, 1958.

TABLE 1

POPULATION CHARACTERISTICS IN EIGHT CENSUS TRACTS, FAIRFAX COUNTY, VIRGINIA, 1970

Characteristic	CT 4092 (Reston)	Blacks in CT 4092 (Reston)	Blacks in 7 other tracts (range)	Fairfax County
High School Graduates	92%	84%	18 - 86%	79%
Median School Years Completed	16.1	15.4	9.2 - 12.5	12.9
Percent Professional Clerical, Managerial among all workers	81%	68%	23 - 41%	67%
1969 Median Family Income	$17,120	$17,540	$5,155 - 8,313	$15,707
Median Contract Rent	$189	$183	$110 - $137	$172

Source: U.S. Bureau of Census, Census of Population and Housing: 1970, _Census Tracts Final Report, PHC(1)-226, Washington, D.C.-Md.-Va. SMSA_.

Springfield included a sizeable shopping complex and was about to produce its own "suburb". In April 1958, Carr announced plans to build three to four thousand homes around a country club in West Springfield. During the 1960s other builders developed the land to the west and south of the country club and by 1970 almost 8,000 people lived in the area bounded by Old Keene Mill Road, Sydenstricker Road, Hooes Road and the Accotink Creek, the second area to be studied in this fiscal impact research. Except for 100 townhouses, all residences are single family homes, most of which are built on quarter-acre lots in subdivisions. The more recently completed subdivisions were platted in accordance with the alternate density ordinance which allows smaller, sometimes pipe-stem shaped lots and common open space instead of lots averaging 12,500 square feet in area as required under conventional zoning.

West Springfield, as the portion included in this analysis is designated, is bisected by Rolling Road, an historic, ridge-top highway down which colonial planters rolled hogsheads of tobacco to Potomac River wharves. Rolling Road divides the two watersheds of West Springfield, the Accotink and the Pohick. Land in the latter valley was dedicated by builders to the County for stream valley parks. Other County facilities within the area include three elementary schools and one neighborhood park. Privately owned recreational facilities are the golf club and a share-holder owned swim club. A few commercial establishments are located on the peripheral highways which bound the study area.

Although the land areas of Reston and West Springfield differ in size, the similarity of their population is seen in census data. Since census and fiscal impact study boundaries do not coincide, it is not possible to compare population characteristics of Reston and West Springfield directly. Instead comparison must utilize the census tracts which include the two places. In each case the census tract includes a larger geographic area than the fiscal impact study area. Most of the people in CT 4042 live in West Springfield. The parts of Reston which were developed in 1970 are within CT 4092, except for one small section. It is assumed that Restonians in this section balance the non-Reston neighborhood which is included within the tract. With these factors in mind, data included in the following table (Table 2) may be taken as indicative of Reston and West Springfield populations.

TABLE 2

SELECTED POPULATION CHARACTERISTICS, CENSUS TRACTS 4042 AND 4092, AND FAIRFAX COUNTY, VIRGINIA, 1970

Characteristic	CT 4092 (Reston)	CT 4042 (W. Springfield)	Fairfax County
Population			
Total Count	8,315	9,755	455,021
Black	5.7%	0.2%	3.5%
School age (5-18 Yrs.)	30%	41%	32%
Single adults (14 and older)	18%	23%	24%
Aged 14 and older	65%	62%	70%
Families			
Number of families	2,171	2,348	114,172
With own children under 18 years old	71%	83%	68%
Persons per household	3.39	4.11	3.51
Education			
Enrolled in school (Age 3-34)	34%	43%	34%
High school graduates	92%	88%	79%
Median school years completed	16.1	14.7	12.9
Housing			
Year round housing units	3,059	2,460	130,793
Median number of rooms	6.4	7.8	6.3
Owner occupied	42%	85%	62%
Median value, owner occupied	$44,500	$41,800	$35,400
Median value, renter	$188	$248	$164
Single family homes	59%	96%	75%

TABLE 2 Continued

Characteristic	CT 4092 (Reston)	CT 4042 (W. Springfield)	Fairfax County
Housing continued			
Built 1965 or later	93%	73%	31%
No car available for use	2.6%	0.4%	3.8%
Employment			
All Workers	3,274	3,444	184,769
% of total population	39%	35%	41%
Private auto	85%	93%	86%
Ride bus to work	9%	3%	6%
Work in Wash., D.C.	29%	30%	25%
Work in Fairfax County	41%	27%	34%
Males in civilian labor force	96%	76%	82%
% Professional Clerical, Managerial among all Workers	81%	75%	67%
Government Workers	36%	48%	39%
Income			
1969 Median family income	$17,120	$17,646	$15,707
1969 Mean family income	17,540	19,331	16,807

Note: While the census tracts and study areas are not coincident, most of the census tract residents live in the study areas.

Source: U.S. Bureau of Census, Census of Population and Housing: 1970, Census Tracts Final Report PHC(1)-226, Washington, D.C.-Md.-Va. SMSA.

CHAPTER III

SERVICES PROVIDED BY FAIRFAX COUNTY: THREE Rs AND OTHER THINGS[1]

In the previous chapter Fairfax County's governmental structure and functions were described. It is through the budget process that County priorities are established and policy is inexplicably stated. This chapter, a discussion of payouts for service delivery, begins with the most significant service provided by the County.

EDUCATION

A review of recent County budgets indicated that public education is the prime service provided by Fairfax County. Half the dollars spent by Fairfax County in FY71 were for school operations. With construction and/or debt service added to operations, the proportion rises to 63% of all County expenditures. All other services accounted for one-third of the County's spending (see Chart 1).

---

[1]Many Fairfax County Staff members provided substantive and numerical data which are incorporated in Chapters II, III and IV. The author has drawn heavily on the following sources (short titles): Accountants' Report, FY71; Citizen's Handbook; County Budget, FY73; Weekly Agenda; 1971 Annual Report; School Budget, FY73; and School Budget Detail, FY73.

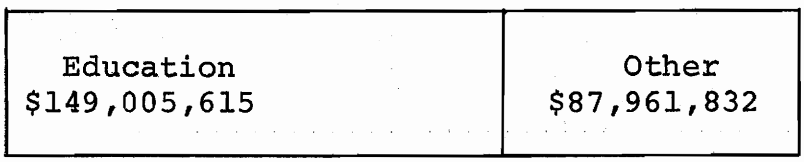

CHART 1

EXPENDITURES FOR SERVICES,
FAIRFAX COUNTY, VIRGINIA, FY71

Source: Appendix Table A-2.

When the 1970-71 school year opened 133,341 pupils were enrolled at 157 elementary, intermediate and high schools. This section deals with the Reston and West Springfield pupils enrolled in some of these schools. School lunch and adult education, essentially self-supporting programs, are not included in this analysis.[1]

The Reston student body, estimated from school census and membership data at 2,694 children in grades K through 12, includes public school pupils who live in Reston and attend public elementary school there or at the County's intermediate and high schools in Herndon. The West

---

[1]This portion of the study was previously reported by the author in: "Education Expenditures and Real Estate Revenues in New Town and Suburb", published by the New Communities Study Center, Virginia Polytechnic Institute and State University, Reston, Virginia, 1973.

Springfield group, totalling 3,668, attends four elementary schools and nearby Irving Intermediate and West Springfield high schools.

The Reston student body, with a median age of 9.3 years, is a full year younger than the West Springfield pupils. Because of the age distribution, a larger share of Reston's pupils is enrolled in elementary school than is the case in West Springfield (Table 3).

TABLE 3

EDUCATIONAL LEVELS OF RESTON, WEST SPRINGFIELD AND FAIRFAX COUNTY PUPILS, BY PERCENT, SCHOOL YEAR 1970-71[a]

Educational Level	Reston	West Springfield	Fairfax County
Elementary	64%	52%	53%
Intermediate	15	18	17
Secondary	21	30	30
Total	100%	100%	100%
Number	2,694	3,668	132,938

Note: Pupils in special education classes are not included.

[a]Calculated from school census and school membership data.

The fiscal significance of this fact is that per-pupil education expenditure increases with education level so that, just as in the family, the high school student is more costly to support than the elementary school child. Because of this one would expect expenditures for education services provided in the classroom (direct education expenditure) to be lower for the Reston group than for the West Springfield pupils. This indeed is the case, at $476 per Reston pupil and $538 for each West Springfield student. Per-pupil expenditures, based on average school membership, for services provided at these schools, (including teacher salaries, supplies, maintenance, utilities but excluding overhead costs) are shown in the following table (Table 4).

The lower per-pupil expenditure at Hunters Woods School, which appears to be a prime example of economy of scale, likely results from overcrowding. (Compare the design capacity of the school with the average school membership.) The per-pupil expenditure at each school, when extended for the study area pupil population, produces an estimate of direct education outlay for study area pupils. In Reston this is $1,282,709, while $1,971,907 are spent in West Springfield.

TABLE 4

PER-PUPIL EXPENDITURE FOR SCHOOL OPERATIONS, AVERAGE PUPIL MEMBERSHIP AND PLANNED CAPACITY FOR SCHOOLS SERVING PUPILS, FY71[a]

School	Per-Pupil Direct Education Expenditure: Total	Per-Pupil Direct Education Expenditure: Teacher Salaries	Average School Membership	Planned School Capacity
Elementary Schools:				
Burke	$875	$385	106	330
West Springfield	458	314	557	600
Rolling Valley	432	295	602	660
*Lake Anne	418	287	648	600
Hunt Valley	416	275	1,015	990
*Hunters Woods	374	259	1,239	990
Intermediate Schools:				
*Herndon	$678	$376	1,530	1,300
Irving	647	424	1,277	1,400
Secondary Schools:				
*Herndon	$678	$441	2,218	2,000
West Springfield	651	434	3,199	2,000

*Indicates schools attended by Reston residents.

[a]Derived from School Budget Detail, FY73 and school membership data.

Providing education service at the school absorbs the major portion of all operation funds paid out for public schools in Fairfax County. However, overhead accounted for one-third of total operations expenditures in FY71. Included in "overhead" are pupil transportation, materials, supervision supporting the instructional program, system-wide and area supervision and administrative support. These pro-rated expenditures, extended to the study area pupil populations, result in an estimate of overhead expenditures.

Transportation expenditures are allocated from the county-wide per-pupil expenditure of $39.23. Although some West Springfield students walk to Irving Intermediate School, most of the intermediate and high school students from both areas ride the school bus. While many children in West Springfield walk to elementary school, those who live farther than one mile from school ride the bus. Children in the northern section of Reston who had expected to walk to elementary school instead rode to the southern part of the town because their neighborhood school was not completed.

The third type of expenditure for education is the payout for debt service -- principal and interest payments on the bonded indebtedness for capital construction. For each school serving Reston and West Springfield pupils, the capital expenditure for ten fiscal years ending June 30, 1971, is related to total bonded indebtedness created during this period. This proportion is used to allocate to study area schools a share of FY71 debt service payout. That sum is further apportioned to Reston and West Springfield pupils. Payouts for direct education, overhead and debt service for Reston and West Springfield pupils are summarized in the following table (Table 5).

A total of $2,301,587 is spent to educate Reston children, while $3,253,464 is paid out for West Springfield pupils. Thus, $854 is spent for each Reston pupil and $887 for each West Springfield student attending public school.

Revenues for the Fairfax County school system are derived from federal, state and local sources. State and federal funds, but predominately local monies, are used for education operations expenditures (including direct education service and overhead) while only local funds are expended for debt service.[1]

---

[1]Real estate tax estimates for Reston and West Springfield are discussed in Chapter IV.

TABLE 5

EDUCATION EXPENDITURES FOR RESTON AND WEST SPRINGFIELD PUPILS, FY71[a]

Expenditure	Reston	W. Springfield
Direct education service	$1,282,709	$1,971,907
Overhead:		
Transportation	73,046	92,975
Instructional support	376,294	536,375
Administrative overhead	296,018	407,992
Debt service	273,520	244,215
Total	$2,301,587	$3,253,464
Per-pupil expenditure		
Direct education service	$476	$538
Overhead	277	283
Debt service	102	67
Total	$854*	$887*

*Discrepancy in total due to rounding.

[a]Calculated from School Budget Detail, FY73 and school membership data.

The local contribution to education operations is in the form of a transfer from the County's General Fund. This $69 million General Fund transfer amounted to 60% of all education operations revenues for Fairfax County. It can be said, then, that 60% of education operations expenditures in the two study areas are made from local funds. All monies for Fairfax County's debt service are described as a transfer from the General Fund, and thus are said to be from local funds. The General Fund transfer necessary to cover education expenditure in the two study areas, 60% of operations expenditures and 100% of debt service payout, amounts to $1,490,360 for Reston and $2,049,764 in West Springfield.

The real estate tax contributed 64% of all General Fund revenue. Thus it can be assumed that 64% of the General Fund transfer to education operations and school debt service funds is real estate tax monies. It follows, then, that $953,830 in real estate tax yield is required for education in Reston and $1,311,849 in West Springfield.

Real estate, including public service properties, yielded an estimated $2,076,957 in Reston and $1,363,452 in West Springfield. When the amount required for education expenditures, as detailed above, is deducted, a residual of over one million dollars remains in Reston, while only $51,603 is left in West Springfield (see Table 6). Stated another way, less than half, 46%, of the real estate tax yielded in Reston is spent for education, the service requiring local government's largest expenditure. A total of $1,123,127 in real estate tax yield remains available for other services in Reston and elsewhere in Fairfax County. In contrast, almost all, (96%) of real estate taxes yielded in West Springfield is absorbed in providing education services.

OTHER SERVICES

Although education is the major service, other services provided by the County cost tax payers about $88 million. These expenditures are described, and to the extent that it is possible, a share for Reston and West Springfield is estimated. Excluded from analysis are those services provided in special taxing districts where an additional tax is imposed. These services -- leaf removal, solid waste collection and silt removal -- were requested by residents. In the western part of the county, sewerage service is provided on a service-district basis. Also excluded are $35 million of non-revenue spent for construction. Payouts for

TABLE 6

REAL ESTATE TAX AND EDUCATION EXPENDITURES

RESTON AND WEST SPRINGFIELD, FY71

Real Estate Tax and/or Education Expenditures	Reston	West Springfield
Operations expenditure	$2,028,067	$3,009,249
Debt service expenditure	273,520	244,215
Total expenditure for education	$2,301,587	$3,253,464
General Fund Transfer for education expenditure:		
60% of operations expenditure	$1,216,840	$1,805,549
100% of debt service expenditure	273,520	244,215
Total General Fund Transfer	$1,490,360	$2,049,764
Real estate tax revenue required (64% of General Fund Transfer)	$ 953,830	$1,311,849
Real estate tax yield in study area	$2,076,957	$1,363,452
Less amount required for education	953,830	1,311,849
Real estate tax available for other purposes	$1,123,127	$ 51,603

services other than education are listed in the next table (Table 7).

GENERAL GOVERNMENT

General government, defined as those services required to sustain government, includes both legislative and executive arms. The Fairfax County legislature is the elected Board of Supervisors which sets policy, legislates through ordinances and resolutions and exercises appointive and budgetory power. The executive arm is headed by the appointed County Executive who as chief administrator supervises department heads, prepares executing orders and resolutions, and presents the annual budget to the Board.

Among the departments reporting to the County Executive are Assessments, Finance, Management and Budget, Community Affairs Coordinator, and Public Affairs, as well as such intra-governmental units as communications, personnel, purchasing and supplies management, central stores, data systems and equipment management. Department titles reflect the nature of the function performed by these agencies.

Among the general governmental departments three agencies deserve special mention since their activities

TABLE 7

EXPENDITURES FOR SERVICES OTHER THAN EDUCATION PROVIDED BY FAIRFAX COUNTY, FY71

Service	Expenditure	Percent
General Government	$17,417,115	19.8%
Health	3,886,088	4.4
Judicial	2,118,220	2.4
Library	3,967,134	4.5
Parks	6,911,854	7.9
Public Safety	10,758,255	12.2
Public Works*	20,390,494	23.2
Recreation	1,332,348	1.5
Social Services	5,016,307	5.7
Transportation	16,164,017	18.4
TOTAL	$87,961,832	100.0%

*Includes sewerage service and those services provided to special tax districts.

Source: Appendix Table A-2.

concern changing land use and therefore have particular relevance to this study: the Department of County Development, the Planning Department and the Planning Commission. The five units of the Department of County Development fulfill the following functions:

1) land use administration: implements approved plans and policies
2) design review division: reviews plats and plans to insure conformity with ordinances
3) inspection services: inspects construction of buildings and public facilities to ensure compliance with ordinances and codes
4) mapping division: produces all mapping and graphic work for County agencies
5) administrative services division: provides administration for the departments.

The other two bodies involved with land use are concerned with planning for development. The Division of Planning, as a staff agency, is responsible for preparing comprehensive plans and providing research support for overall development guidance in the County. The nine-member Planning Commission, an appointed commission with limited autonomy, does have power to decide location of public facilities, but otherwise functions to serve in an advisory capacity to the Board of Supervisors on master plans, special studies and rezoning applications.

Considerable activity was generated for these agencies in FY71 by Reston's developer, Gulf-Reston, Incorporated, and its proposal for the third Reston Master Plan which was heard before the Board of Supervisors on February 17, 1971. Other hearings dealt with the Reston Fire Station and turnkey public housing in the new town. Although rezoning applications involving the Pohick watershed were being processed, few cases concerned acreage within West Springfield.

In providing services related to the county's growth and development $3.6 million is spent, yet fees charged for the many services produce just over one-third that amount, $1.3 million. While these revenues are produced primarily by the Department of County Development, this Department spent twice the amount it took in. Over $15 million paid out for operations of these agencies and the others in the General Government category enable the government to function. Capital outlay and debt service on past construction add another $2.3 million. This is more than offset by the $112 million collected in taxes and other revenues most of which is spent for services provided by other Departments.

Disbursements for general governmental operations presumably are made for the benefit of all residents, although some activities, such as those of the County Development Department and planning agencies, result from ideas expressed by groups of citizens or non-resident business organizations. Construction outlays are for planning and renovating office facilities and improvements at the County Garage. Principal and interest payments repay monies borrowed to construct the central office facility. When apportioned for the mid-fiscal year population, general government outlay amounts to $37.23 per capita, or $410,723 for Reston and $360,178 for West Springfield.

HEALTH

Protection of the health of its residents is the responsibility of two agencies of the County, the Health Department and the Health and Hospital Commission.

The Health Department provides personal and inspection/enforcement services relating to the physical and mental well-being of county residents. Personal services are provided in homes and schools by nurses at clinics and through education programs. Other services of the Department include monitoring environmental quality, enforcing housing codes, testing and inspecting food and water sources and providing laboratory services. The Department also administers the medicaid program and is the registrar of vital statistics. Health needs addressed in the Department's clinics include maternal, pediatric, handicapped and retarded children, physical therapy, immunization, tuberculosis, x-ray, speech and hearing.

Health services were provided in FY71 at the Department's main facility in Fairfax and at two branches, as well as through mobile units. The Northwest branch would have been most convenient to Reston residents while the main facility was the one closest to West Springfield. A resident, however, is welcome at any clinic.

The Fairfax County Health Department is legally a branch of the state health department. Operating under a cooperative plan, the Commonwealth has contracted to pay 55% of the cost of basic programs at basic salary rates. The County pays the salary supplement, fringe benefits and any enrichments to the services such as programs for the physically or mentally handicapped. The contract between the Commonwealth and the County stipulates the right of the locality to assign new programs to the Health Department.

Private or non-county public agencies which receive financial support from the county include a camp for retarded children, a children's home, schools for handicapped children, mental health centers. Support is in the form of contributions that totalled more than $600,000 and are included in the $2.4 million for health operations.

Completely independent of the Health Department is the five-member Hospital and Health Center Commission. Under the aegis of this body Fairfax Hospital, which opened in 1960, was constructed under the federal Hill-Burton medical facilities program. In FY71 the Commission accepted site and master plans for a second county-funded hospital facility in the southern part of the County and awarded contracts for the design of mental health centers coordinated with these two hospitals. Hospital operations are guided by the hospital's Board of Trustees and are not funded by the County. Debt service payments for Fairfax Hospital and the Health Department's offices and clinics amount to $1.3 million.

In addition to State support, the Department received federal grants for air pollution and drug abuse programs.

Inspection activities and health programs produced about $60,000 revenue for the county.

Protection of the public's health is often unrecognized by the citizens who think of public health only in terms of clinics and school nurses. Since these services are provided to benefit all residents the expenditure is apportioned to the total population. This results in $7.92 payout for each resident, $87,397 in Reston and $76,642 in West Springfield.

JUDICIAL

For the purposes of this report the County's Judicial system is defined to include the Courts, the Commonwealth's Attorney, the County Clerk, the Sheriff's Office and the Record Agency.

Virginia law provides for a Circuit Court in each city and county. In the case of Fairfax County, the Circuit also includes Prince William, Fairfax City and Falls Church. Fairfax County's judiciary also includes the Juvenile and Domestic Relations Court.

The chief law enforcement officer in the county is the Commonwealth's Attorney, who might be known as the district attorney in another state. The sheriff is responsible for serving court processes, providing court bailiffs, jail operation and, if necessary, assisting police. The County Clerk is responsible for maintaining court and property records. Under Virginia law, Judges are appointed while the Commonwealth's Attorney, Sheriff and County Clerk are elected officials.

Several of these agencies are joint responsibilities with the state of Virginia which shares expenses for these offices, and in FY71 contributed $528,435 toward the operating of this system. Federal grants added almost $75,000. Both state and local taxes are collected by the County Clerk as he carries out his responsibilities. Of the $2.2 million collected for the County the most significant sources were county clerk fees and recordation taxes.

Operating expenditures for the judicial system total just over $2 million. In addition $30,000 is spent for a judicial center and jail improvements. Considering the state contribution and federal grants, as well as the locally generated revenues, the judicial system more than pays its way.

On a per capita basis, judicial system payouts amount to $4.53 or $49,986 for Reston and $43,837 for West Springfield.

LIBRARY

The Fairfax County Library system, first in Virginia by all measurable standards and third in the South, consists of a headquarters library, 11 branches and 3 bookmobiles. Patrons of the Library are free to borrow books and return them to any branch. County policy for establishing branches in the 1960s had been identified by the referenda in 1959 and 1966, which together specified funds for 12 branches, 2 expansions, a headquarters library and three sites. In several cases motivation for location of branches in specific communities was provided by the "Friends of the Library" organization in that community.

What appears to be a difference of major proportion in County services provided to Reston and West Springfield residents may be present in the case of library services, yet may be more apparent than real. One of Reston's earliest tenants was the Carter Glass branch of the Fairfax County Public Library which opened in April, 1966, at Lake Anne Village Center. A library is an essential element in Robert Simon's view of a new town. To assure that this service would be available to residents, Simon agreed to lease commercial space in Lake Anne Village Center to the

Fairfax County Library Board for the token rent of $1 per year. This arrangement has been perpetuated. In comparison, West Springfield receives bookmobile service two days a month from 10 A.M. to 5 P.M. The nearest library facility is Richard Byrd branch in Springfield, a distance of at least 3 miles for a West Springfield resident. One library official observed that in spite of this, West Springfield patrons may in fact receive a higher quality of service due to their proximity to the larger Richard Byrd branch and the personalized services which are provided to bookmobile patrons.

During FY71 Reston "Friends" sought a commitment from the Library Board that a second, larger facility would be provided at the soon-to-be constructed Hunters Woods Village Center in the southern part of the new town.

Patronage at Carter Glass increased along with Reston's growth. In FY71 Carter Glass branch accounted for 3.3 percent of the library system's volumes, circulation and registration, compared with Reston's 2.4 percent of the County's population. Although county residents do utilize services of all branches, it may be assumed that the 6,499 registrants at Reston were primarily Reston residents. Given this, 59% of Reston's population were borrowers.

In 1972 sixty percent of the population in the Richard Byrd service area were registered patrons. Assuming this experience also held for the previous fiscal year and was consistent throughout the service area, then 5,806 West Springfield residents were library patrons. Both areas had higher patronage rates than the estimated 43% for the County as a whole.

Over $3 million is spent for library services, by the County, almost all of which is for operations. Unfortunately neither program nor location data, with which expenditures could be pinpointed, are available. Operations produce $141,698 mostly from overdue penalties and $147,929 reimbursement from Fairfax City for services to its citizens. State and federal aid provide $102,866 additional support for libraries.

Payments for principal and interest on facilities constructed from borrowed funds amount to $260,575. Debt service for two units, Richard Byrd and Headquarters, is of interest here. Both were built with 1959 library bond monies. Debt service for this bond is apportioned to these two units and is further pro-rated to the partons of each unit. Since Headquarters houses the principal collection, its patronage is defined to be that of the total system plus the patrons of that unit. Debt service for Richard Byrd patrons, applicable to the estimated 5,806 West Springfield patrons is 74 cents. An additional eighteen cents per patron applies to patrons in both Reston and West Springfield for Headquarters debt service. Expenditures for operations of the entire system amount to $14.28 per patron. In sum, Reston's share of the library expenditure is $93,976 and West Springfield's is $88,251.

PARKS

Public parklands in Fairfax County are owned by federal, sub-state regional and local governments. Proximity to the nation's capital and historic sites accounts for most of the federal parkland. The Northern Virginia Regional Park Authority, funded by Arlington and Fairfax Counties and the cities of Alexandria, Fairfax and Falls Church, also owns parkland in Fairfax County. The Fairfax County Park Authority, established in 1950 under the State of Virginia Park Authorities Act, held title at the end of the fiscal year to 143 locally owned public parks of which 50 are developed. The 6,921 acres of parkland, including raw land and areas developed for recreational uses, are classified as follows:

1) Neighborhood, averaging 5 acres, walk-to parks;
2) Community, averaging 20 acres, has automobile access;
3) District, averaging 100-200 acres;
4) Historic, size determined by buildings and sites;
5) Stream Valley, encompassing floodplain; and
6) Large County and Regional, 200 acres minimum.

Although the Authority is chartered by the state as an independent agency, it is dependent upon the Board of Supervisors for operation funds, capital funds from bond referenda to acquire and develop parkland and for appointment of the Authority Board members. Revenue bonds sold to provide park facilities are obligations of the Authority.

Parklands abound in West Springfield. In comparison with the rest of the County, this neighborhood appears to be far richer than most. Bisecting West Springfield is a ridge which forms a boundary for the area's two watersheds, the Accotink and the Pohick. Here, as elsewhere in the County, developers have dedicated to the County what is often referred to as "100-year floodplain", land below the elevation to which floodwater will rise during a six-hour rainstorm expected to occur once in a hundred years.

These dedicated lands in West Springfield were augmented by the purchase of 25 adjacent acres of non-floodplain for park purposes. More than 200 acres of stream valley land dedicated to the County may utimately be developed for recreational uses since plans call for future construction of additional flood control dams in the Pohick watershed. One such impoundment would cover much of the West Springfield 100-year floodplain, inundating the present stream valley park, creating a lake. The 25 acres of higher ground that were purchased for a community park would remain above water. One neighborhood park located beside an elementary school in the area has two tennis courts which are heavily used.

Fairfax County does not provide neighborhood swim facilities in its park system. It was customary in Fairfax County during the 1960s, when development occurred in Reston and West Springfield, that in a new neighborhood a private non-profit corporation would be established to build a swimming facility to serve its several hundred families. This custom was followed in West Springfield, where two swim clubs operate in addition to one at the golf club. The West Springfield family is required to purchase a share in the swim pool corporation as well as to pay annual dues for the privilege of swimming. In Reston families swim at RHOA pools upon payment of an annual fee.

Fairfax County's only publicly owned swimming facility is located at the Park Authority's Lake Fairfax, a man-made lake adjacent to Reston's northeast boundary, purchased from its former owner who ran it as a commercial venture until its sale to the Authority. Lake Fairfax attracts visitors from many states to its camping facilities. Both swimmers and campers pay fees. It is not possible to determine if Reston residents intensively use these swim facilities, but informed opinion doubts this is the case. Most of Reston, and all of the new town's development through June 30, 1971, lies within the Difficult Run watershed. The Sunset Hills tract is enhanced by many tributaries of the Run, adding to the amenity of the new town. One proposal for Reston pictured a dam across one valley to form a focal point for the village center, a visual open space and recreational area. Lake Anne was later created in this manner. Another impoundment, Lake Elsa, had been constructed by the Bowman family. Part of the open space and pathway systems, features initiated for this County by this new town, are based on floodplain land.

Reston residents enjoy the use of tot lots, paths for walking or biking, boating and fishing. Although initially provided by the developer capital costs for these recreational facilities are passed to the resident owner or renter. All facilities are maintained through special assessment or service fees charged to Reston users. Tennis and horseback riding facilities are available for use upon payment of additional fees. In addition to these facilities is a private membership club, the Reston Golf and Country Club. It should be noted that the two recreational environments described for Reston and West Springfield are not typical of Fairfax County as a whole.

A significant difference between the open space and parkland of Reston and the stream valley parkland of West Springfield should be noted. Although much of the parkland in West Springfield was acquired by the Park Authority at no cost, expenditure is required for development and maintenance by the Authority. Reston "parkland", on the other hand, was conveyed by covenant attached to the deed of new town real estate, to the Reston Homeowners Association or one of the several cluster associations and thus, indirectly, the homeowner. These associations control and maintain the open spaces. As private property they are not a demand on the County's fiscal resources, but instead form part of its real estate tax base and create revenue.

Although much of West Springfield parkland was donated, development and maintenance costs are borne by the public. Reston's 200 acres of privately held parklands, valued in 1970 at $270,131, produced $11,616 in County taxes while requiring no expenditure of County funds for development and maintenance.

Developed parks are another of the County's revenue generators, producing almost $170,000. State grants for construction brought in an equal amount, while federal grants were in the neighborhood of a half million dollars. Gifts of over $300,000 in addition to the above brought the total for Park Authority revenues to $1.2 million.

Expenditures, on the other hand, amount to nearly five million dollars, about two-thirds for operation and outlay and one-third for debt service.

Allocation of park expenditures are predicated on the following:

1) operations payout is apportioned to population, inasmuch as parks are a service available to the total population.

2) capital outlay for neighborhood parks is assigned to each neighborhood, for other parks outlay is pro-rated to population.

3) debt service is shared on a per capita basis since it is not possible to relate debt service to each park purchase.

A single neighborhood park applicable to this study, Orange Hunt, appears in the list of capital expenditures. Its $98 outlay is charged to West Springfield. All expenditures except neighborhood parks amount to $10.51 per capita. Payouts charged to Reston, then, total $115,978 and $101,803 for West Springfield.

PUBLIC SAFETY

Civil Defense. Preserving the safety of the public includes the Fairfax County governmental functions of civil defense, fire, police and rescue services. Civil defense, with the program objective to support emergency operations in disaster, is of minor fiscal importance with payouts totalling $13,643.

Police. Protective service in a given geographic area in the county is based on that area's recent case load. Scattered subdivisions receive the degree of service reflected by requests for service. Data reviewed monthly may indicate a necessity to change the service level which is a function of population density, on-going activity, traffic congestion and highway conditions. An area (such as Seven Corners) with several shopping centers, multi-lane highways and high rise apartments would require more intensive police service and more police visibility than a residential subdivision, which at the minimum requires patrol and investigatory police work.

West Springfield is served by at least one officer for a 24-hour day with a floater patrol unit responding to incidents. Personnel operate from the Annandale substation, about 5 miles to the north. Reston also receives routine patrol and investigation services but is provided with additional manpower. At this community's request and the Department's realization of increased activity, a patrolman is assigned to Lake Anne Village Center on a regular basis. At the Center he has access to a small office which is provided by the new town's developer. Footpatrol, unique in the County when introduced in 1971, is particularly appropriate for this relatively dense residential/commercial Center at the convergence of the walkway system. The second reason for supplemental police service is on-going construction activity which triggers increased vandalism.

Reston's attractiveness to youth, its population density and intense construction activity may partly explain reported incidence of criminal activity reflected in the following Police Department statistics (see Table 8).

During the fiscal year planning was underway for a Springfield district office which would serve West Springfield. At the same time the possibility of a Reston-area district station was explored.

Fire. For many years the County has been served by volunteer fire companies which have provided stations, equipment and firefighters. During this time the County has paid increasing percentages of the operation expenses of this system. The majority of fire stations and motorized equipment are volunteer-owned, either built or acquired before the County instituted a policy of funding new buildings and equipment from taxes. In FY71 neither Reston nor West Springfield housed fire companies.

Fire protection and rescue service response to calls is provided by the nearest available unit. West Springfield, located midway between Burke and Springfield fire stations, is served by both of these volunteer companies but is situated more than five minutes response time from

TABLE 8

REPORTED CRIMES, SELECTED SUB-CENSUS TRACTS, FAIRFAX COUNTY, VIRGINIA, FY71

Crime	CT 4092.030 .040 .070 .090 (Reston)	CT 4042.020 .030 (West Springfield)	Fairfax County Total
Burglary	92	36	4,313
Grand Larceny	96	10	3,093
Petit Larceny	288	89	9,388
Auto Theft	51	32	2,470
TOTAL	527	167	19,264
Percent of Total	2.74%	0.87%	100.0%

Note: The reader will exercise caution in interpreting crime statistics comparing two areas, since many factors influence the commission and reporting of crimes.

Source: Fairfax County Police Department.

these two stations. The majority of houses have fire hydrants located nearby.

The situation at Reston is similar. Lake Anne Village is beyond the five minute response zone of the Herndon fire company, as is Hunters Woods Village from the station at Navy. Both villages are hydrant-equipped. Improved service for Reston is forthcoming, however, as plans for a station, to be built by Gulf-Reston, Incorporated, under a lease-purchase agreement with the County, moved forward during the fiscal year.

Of the $10.8 million spent by the County for public safety only two outlays can be specifically associated with either area, since neither program nor location budget data are available for public safety operations. These two items are the previously described foot patrolman at Lake Anne Village Center and $12,842 for planning Company #25 fire station in Reston. Both expenditures are assigned to Reston.

Public safety service is provided in response to need. Although service areas have been designed their boundaries are not sacrosanct. Because response to need in the short run may be provided on a "station-available" basis and because data are not available for service units, county-wide estimates are used for allocating operations expenditures. Capital expenditures for central office communications equipment and a computerized records system which would improve services for the entire county, as would the $6,115 spent for the fire department's training facility, are allocated to the entire county. Fire station construction payouts, other than for Company #25 which will be assigned to Reston, are not allotted. Debt service payments for the fire training center and police headquarters are also allocated to the entire county.

Public safety services are provided to protect both people and property. Expenditures for which county-wide allocations are made will be divided equally, one part to be apportioned on a per capita basis, the other by total assessed valuation. Estimated public safety payouts are summarized in the following table (Table 9).

With the exception of a small federal grant to the Police Department, these services are supported by local revenues. It should be noted that volunteer fire companies sponsor fund raising activities and contribution drives. Monies raised are retained by the volunteer organizations for purchase of equipment.

TABLE 9

PUBLIC SAFETY EXPENDITURES, RESTON AND WEST SPRINGFIELD, FY71[a]

Public Safety Expenditure	Reston	West Springfield
Outlay for one patrolman	$ 11,500*	$ 0
Company #25 Station	12,842	0
Pro-rated by population	122,378	107,318
Pro-rated by valuation	152,631	100,197
Total estimated expenditure	$299,351	$207,515

*Estimated by Police Department.

[a]Computed from data presented in Accountants' Report, FY71 and County Budget, FY73.

PUBLIC WORKS

The department of Public Works is Fairfax County's second most important in terms of dollars spent for providing services. Its activities are directed toward the undeveloped areas of the urbanizing county in the case of sewerage and storm water disposal system construction, and to the urbanized portion in matters of waste disposal and county facilities construction. Public Works also constructs utility lines and streets in areas by-passed by builders. In Fairfax County the residential subdivision builder or commercial facilities developer installs water and sewer lines, streets, sidewalks, curbs and gutters while the Department of Public Works contracts for the construction of sewer trunk lines, interceptor sewers and treatment facilities.

The Department is unusually complex, administratively, as reported in the County's management study of the Department.[1] Neither program nor budget funds coincide with administrative divisions, nor with each other, as is seen in the following table (Table 10).

---

[1]Fairfax County, Virginia, Office of Management and Budget, Management Study: Department of Public Works; Volume A (Fairfax: The County, March, 1971), p. A-2.

TABLE 10

ORGANIZATIONAL STRUCTURES OF THE DEPARTMENT OF PUBLIC WORKS, FARIFAX COUNTY, FY71[a]

Divisions	Budget Funds	Programs
Engineering	County Construction	Land Purchase
Land Acquisition	Public Works	Leaf Collection
Maintenance & Construction	Refuse Collection	Sewer Extension
Operations	Sewers - 9 Funds	Solid Waste
Program Administration	Sidewalk Construction	Storm Drainage
Solid Waste		Street Lighting
		Street Signs

[a]Derived from Management Study: Department of Public Works.

The Board of Supervisors appropriates money to a fund for which there is no corresponding division. Money is then transferred back and forth between funds, especially among the nine sewer funds. The absence of a single structure in which divisions, programs and funding are integrated, has created management problems and limits the scope of this analysis. In this report public works activities concerned with the sewer system are separated from other activities to the extent that this is possible.

Sewer System

From the early 1950s, residential builders set the pattern of Fairfax County's land development by installing collector and lateral sewer lines which were then linked to existing trunk sewers. Residential subdivisions built after WW II, located just inside the eastern boundaries of Fairfax County, often received sewer service from neighboring jurisdictions under agreements written between Fairfax County and Alexandria or Arlington County. Those subdivisions built further west were served by developer-constructed private system. As the County grew and problems occured, it became apparent that a single system composed of these small treatment plants and County units should be formed. Between 1948 and 1953 developers constructed 153 miles of sewers and related facilities which were later donated to or purchased by the County and integrated into a single system.[1] Because of legal technicalities, one special district remains outside the integrated system. The practice that the builder installs lateral and collector lines continues. Maintenance of all lines and operation of the treatment plants are Public Works' responsibilities.

The sewerage disposal system was a significant political issue in the County during FY71. In June, 1970, the County was placed under moratorium by the State Water Control Board because treatment plant effluent did not meet its standards. The effect of this action was that new connections to sewer lines were restricted until treatment could be upgraded.

Several events which occured during that fiscal year should be noted.

1) A large treatment plant on the Potomac River at the southern end of the county was completed and went into service. As a result the disposal route for West Springfield was changed from one trunk system to another.

---

[1]Fairfax County, Virginia, Planning Division, <u>Plan of Public Sewerage</u>, (Fairfax: The County, 1958), p. 1.

2) A $39 million sewer bond referendum was defeated at the polls in September. Controversy surrounded $9 million which would be spent for new sewers in the western part of the county. It was later reported that the voters had been dissatisfied with the vague, less than specific, plans.[6]

3) A $30 million bond referendum to provide for expansion of capacity, the addition of a new treatment stage to the newly opened plant on the Potomac, and to pay for the County's share of expansion and improvement at two plants owned by other jurisdictions was placed on the ballot at the regular November election. The $9 million for new sewers in the undeveloped western part of the county was deleted. The referendum carried overwhelmingly.

4) The flat rate annual sewer charge of $39.00 per year per single family residence was replaced by charges based on water consumption, effective January 1, 1971.

---

[1] Fairfax County Federation of Citizens Associations, Federation Bulletin, 18 (March, 1971), p. 4.

5) The Board of Supervisors voted to join several other jurisdictions in the creation of the Upper Occoquan Sewer Authority in order to protect their control over expected growth in the western section of the county. The Board also approved a plan for interim service for the area.

In 1971 the Board of Supervisors spent much time in consideration of the dual problems of upgrading the treatment level in the extant system and enlarging the system to allow for future development in the County.

This brief historical account is given to provide a context within which fiscal data may be understood. By the end of the fiscal year, 107,568 residential customers and 2,993 other users, which include industrial, commercial, apartment, recreational and other establishments, were connected to the County's system.

From these customers the Department collects almost $5 million in service charges, as well as almost $3.5 million in availability charges and $362,000 in connection charges, paid by the user prior to connection to the system. These three sources produce 90% of all sewer revenues. Other receipts come from interest on investments and miscellaneous sources. Shortly after the successful referendum, $30 million in bonds were sold to finance sewer construction.

Expenditures of sewer revenue is by law reserved (in order of priority) for debt service and reserve, interjurisdictional contractual agreements, other contractual agreements, operation/maintenance of sewer lines and plants, and construction.[1]

Construction claims the largest share, (45%) of the $11.8 million expenditure. None of the dollars made available by the sale of bonds are included in the $5.4 million spent for construction. Debt service accounts for 21% of outlays.

An attempt to assign portions of these expenditures and revenues to Reston and West Springfield is not made. Several factors preclude this.

1) A sewer construction project is designed to serve present and unknown numbers of future customers over a large land area. It is not possible to accurately estimate the potential

---

[1] Fairfax County, Virginia, Board of Supervisors, "General Bond Resolution Providing for Issuance of Sewer Bonds in Fairfax County, Virginia", adopted July 21, 1954.

or current customer base on which construction expenditures would be apportioned.

2) Personnel costs are a large part of operation cost at any plant. Large plants are more economical to operate than small ones because personnel cost per million gallons processed is lower at a large plant. The two areas being compared in this analysis are served by plants in two separate jurisdictions: The Blue Plains Plant serving Reston is part of the District of Columbia system, while West Springfield is now served by the new Potomac river plant in Fairfax County. Personnel and other variables which would enter into costs for plants serving these two areas would produce meaningless comparisons.

3) During FY71 service charges changed from flat rate to water consumption base for non-metered users. During the changeover little revenue was received during the fourth quarter for non-metered accounts. Comparison of revenues would be biased by the large proportion of metered accounts in Reston.

4) Because not all residents receive sewer service while 3,000 sewage service customers are non-residential users, per capita computation is inappropriate.

Given these problems of allocation and the dynamics of the system, it is not possible to estimate with any degree of confidence the revenues and expenditures for Reston and West Springfield sewerage service in FY71.

Public Works Construction

Other responsibilities of this Department, in addition to sewage removal and disposal, involve construction and waste collection. Leaf and solid waste collection services are provided mainly to special tax districts created for these purposes. Because they are essentially self-supporting programs, paid for with a few additional pennies of tax levied against real estate within the tax district, they are deleted from further analysis. Neither Reston nor West Springfield are within special tax districts. Instead, solid waste is collected by private companies and disposed at county landfills.

Other Public Works construction projects account for $1.8 million expenditures, compared with $5.4 million for sewer programs. These include sidewalk, storm water drainage and miscellaneous construction.

Sidewalks are usually constructed in Fairfax County by land developers in accordance with subdivision ordinances. A school built within a subdivision is therefore likely to be surrounded by walkways safe for the children. In some situations, however, walking school children must cross land which has been neither subdivided nor sidewalked. Here walkways are constructed by the Public Works Department. For this project $168,200 was spent for land, fees associated with gaining easements and the construction itself. Neither sidewalks nor street improvements were constructed in either Reston or West Springfield under this program. Therefore no allocation of these expenditures is made.

Storm water drainage, road improvement and water service to by-passed areas are also provided through Public Works. More than three-fourths of this $1.6 million outlay was spent for structures, the remainder for architecture fees, land, supervision and planning.

Expenditures for many of these activities, such as floodplain studies, engineering studies or developers defaults, could not be pinpointed as to location or beneficiary area. It is therefore, not possible to allocate a portion of these payouts to a particular geographic area or population groups.

The County Construction fund of the Public Works Department paid out almost $5.8 million for a variety of projects ranging from fire stations to government centers. In this study expenditures for these projects were assigned to service functions such as library, general government or parks.

RECREATION

Leisure time activities for citizens of all ages in all areas of the County are sponsored by the Recreation Department. Its programs include teen centers, children's playgrounds, senior citizen and young adult activity groups, sport leagues, performing and fine arts activities, and classes for serious and avocational students of art, crafts, music, games and sports. Since the Department owns no facilities, programs are conducted at convenient publicly and privately owned places: schools, libraries, county buildings, parks, churches. A new program is initiated upon the request of interested residents if it may be provided within budgetary constraints. Programs are open to all county residents who may participate at any location.

Among the most successful programs are the year-round playgrounds and youth centers operated in the public schools. Participation in these programs are detailed in the following table (Table 11).

These statistics are offered as an example of participation but this small segment of the total recreation program should not be taken as indication of total participation in Recreation Department programs in Reston and West Springfield.

Local revenue is the major financial support for programs of this Department. Fees are charged to participants of hobby classes, making them essentially self-supporting. One-third of the Department's expenditures is covered by the $445,312 fees collected. Capital outlay provides electric power and lights for the summer baseball program. The $1.3 million expenditure, $2.85 on a per capita basis, when extended, amounts to $31,450 for Reston and $27,579 for West Springfield.

SOCIAL SERVICES

This Department provides to eligible Fairfax County residents, on an emergency or continuing basis, protective services to children and financial assistance to people

TABLE 11

ATTENDANCE AT SELECTED RECREATION PROGRAMS, FY71

Programs	Attendance Levels Reston	 West Springfield	 Fairfax County
Playgrounds	4,369	21,098	412,092
Summer	3,166	5,434	167,020
Fall After-School	1,203	5,620	87,595
Winter After-School	-	3,628	69,851
Spring After-School	-	6,416	87,626
Youth Centers	2,545	2,186	184,097
Sundays	458	395	N/A
Summer	1,140	-	N/A
Sunday*	463	633	N/A
Saturday*	256	595	N/A
Summer*	228	563	N/A

N/A - Indicates Not Applicable

*Attendance at these programs conducted at intermediate and high schools serving the study areas was pro-rated as was school attendance.

Source: Fairfax County Department of Recreation.

in need. No group in the county is immune to the problems which this Department seeks to address. Demand for child welfare services of the Department, including child adoption, foster care and child protective services, is thus assumed to be constant across the county's population, while the need for financial assistance by dependent children, disabled adults, the elderly and general public is a function of income level. The Department also coordinates the operation of day care centers and certifies federal social security, food stamp and medicaid eligibility.

The Department's program is determined by the Commonwealth, which provides about two-thirds of the funds for financial assistance. Although there is no formal program designed to mitigate housing problems, this is a large part of the Department's concern, since it is recognized that those in need of financial assistance can make little progress toward independence when housing costs absorb a large portion of their income. Increased availability of housing for families with low income may utimately reduce the number of families requiring financial assistance from this Department.

In addition to state assistance, county revenue supports activities of this Department. Those parents availing themselves of the Department's adoptive and foster care services who are able to pay are asked to do so. Falls Church and Fairfax City reimbursed the County $162,632 for services rendered their citizens by the Department.

Given the assumption stated earlier that need for the Department's services is constant across the County, two types of errors are likely. First, financial assistance expenditures for West Springfield will be over-estimated, since that community was reported in the 1970 Census to have had in 1969 a higher per-family income than the County as a whole and thus would likely have a lower than average need for financial support services. The 1969 income experience very likely was true for FY71 as well.

Conversely, the second type error, under-estimation, is likely in the case of Reston. Although per-family income is higher than the county average, equal that of West Springfield, the new town does provide a number of dwelling units, constructed under federal programs, for low and moderate income families. To the extent that more residents here are among those who require financial support services than in the County as a whole, the estimate for Reston is low. It should be noted that one of the objectives of the HUD New Communities program is provision of housing for low and moderate income families. Although Reston is not one of the HUD supported new communities, it has made an effort to provide some low-cost housing.

Inasmuch as expenditure data for each program are not available, nor are data for assistance provided in Reston and West Springfield, per capita expenditure for social service, computed on a county-wide basis, is extended to each community's population in order to estimate social service expenditures in Reston and West Springfield. This results in $118,295 estimated expenditure in Reston and $103,737 in West Springfield.

TRANSPORTATION

There is no department in Fairfax County's governmental structure which has as its purpose the facilitation of movement of people and goods. However, the more than $16 million spent for transportation-related purposes establishes this as a major function of the county government, although the FY71 expenditures are in anticipation of future services.

Transportation is present in the consciousness of the county administrative staff through the Planning Office and in the legislative branch through the participation of elected officials on the boards of regional transportation bodies, such as the Metropolitan Washington Transit Authority (WMATA), the planning and implementation body which is responsible for the rapid rail transit system (METRO) in the Washington, D.C., area, and the Northern Virginia Transportation Commission (NVTC), the sub-state regional advisory transportation body.

The $15.6 million construction outlay from borrowed monies was the County's first installment paid to WMATA as its share of construction costs of METRO. The adopted plans shows two rail lines connecting Fairfax County with the city. All local governments in the metropolitan area will share capital costs.

Expenditures for transportation include a $81,332 contribution to NVTC, which is composed of ten elected officials of local governing bodies in Northern Virginia and a representative of the State Highway Commission. NVTC acts as liaison between the local governments and WMATA and reviews WMATA plans.

Neither Reston or West Springfield will be initially served by METRO, although West Springfield is in the path of a proposed extension of the Franconia-Springfield route while the proposed Dulles Airport extension will have a station at Reston. During FY71 both areas were served by regularly scheduled express and commuter busses, which at that time were not part of the METRO system but are at this writing.

Since public transportation benefits both riders and non-riders, transportation-related expenditures are apportioned on a county-wide per capita basis. Payouts from borrowed monies are not included here, but principal and interest payments are pro-rated. Transportation expenditures totalling $538,207 are allocated: $12,690 to Reston and $11,129 for West Springfield.

WATER

The largest of the several governmental agencies providing water service to Fairfax County residents is the Fairfax County Water Authority, which was chartered in 1957 to construct and operate an integrated water system for the County. The Authority serves both Reston and West Springfield. As an independent authority it sets its rates and may issue revenue bonds. There is no funding interchange between the Authority and the County.[1] In FY71

---

[1]Fairfax County Water Authority, 1971 Annual Report, (Fairfax: The Authority, 1971), p. 1.

the County government made no financial contribution to the Authority other than as a water customer. Because of this independent nature, the Authority is not included in this fiscal analysis.

SUMMARY OF EXPENDITURES

The data for payouts of each service, as detailed in the preceding pages, are summarized below (see Table 12). As mentioned earlier, expenditures for services provided in special taxing districts and public works department are excluded. Because Reston's population at mid-fiscal year 1971 was greater than West Springfield's, estimated expenditures for non-education services are greater for Reston. On the other hand, payouts for education are higher in West Springfield because of that community's larger and older school-age population.

TABLE 12

EXPENDITURES ALLOCATED TO RESTON AND WEST SPRINGFIELD, FY71[a]

Service	Reston	West Springfield
General Government	$ 410,723	$ 360,178
Health	87,397	76,642
Judicial	49,986	43,837
Library	93,976	88,251
Parks	115,978	101,803
Public Safety	299,351	207,515
Recreation	31,450	27,579
Social Services	118,295	103,737
Transportation	12,690	11,129
Total for Nine Services	$1,219,846	$1,020,671
Education	2,301,587	3,253,464
TOTAL	$3,521,433	$4,274,135

[a]Estimates derived according to methodology detailed in Chapter III.

CHAPTER IV

REVENUES: RENDER UNTO FAIRFAX THOSE MONIES...

Fiscal impact analysis is incomplete if only expenditures are analyzed. It is equally important to identify the sources of revenue which support governmental outlays.

Almost $200 million in revenues were received in FY71 by Fairfax County for operational and capital expenses. This does not include $84 million non-revenue, proceeds from the sale of bonds for parks, schools, transit and other construction. That Fairfax County depended on its own resources for the major share of its FY71 income is seen in the following table (Table 13). Intergovernmental transfers totalled $58 million, with the Commonwealth supplying the bulk, $41 million, while federal grants amounted to $17 million.

REVENUES FROM LOCAL SOURCES

Some of the $141 million in revenues generated locally result from governmental activity but most is produced by taxation. Local revenue sources can be grouped into three categories: (1) property taxes, (2) other taxes, permits, fees, licenses, and (3) non-tax revenues. Much of the

TABLE 13

RECEIPTS OF FAIRFAX COUNTY GOVERNMENT, FY71

Source of Receipts	Amount	Percent
Local Sources	$140,926,307	70.6%
The Commonwealth	41,302,242	20.7
The Federal Government	17,391,005	8.7
Total Revenue	$199,619,554	100.0%
Proceeds from sale of bonds	84,100,590	
Total Receipts	$283,720,143*	

*Discrepancy due to rounding.

Source: Accountants' Report, FY71, Comments, p. 1.

latter group results from service charges and is earmarked for expenditure. Dollar amounts and the relative importance of these three groups are shown in the following table (Table 14).

Taxes, including licenses, fees, permits - the principal local source of Fairfax County's funds in FY71 - brought in $109 million, or 77% of all local revenues. Property taxes, including the personalty tax, account for almost 80% of all local tax revenues. The real estate tax alone accounts for two-thirds of all local tax receipts. Two other taxes, both levied on retail sales, in combination yield an amount equal to the personalty tax. These are the 1% piggyback retail sales tax and the 10% tax on utilities consumption. These four, accounting for 92% of Fairfax County taxes, lead the list of local tax revenues (see Table 15). Tax receipts from these sources support general governmental activity as well as specific services and payment of principal and interest for County debt.

The third group of revenues is composed of local non-tax receipts which in FY71 totalled $32 million. Collected from a variety of sources, these receipts are derived mainly from governmental activities. Some are earmarked for expenditure and are not available for general distribution

TABLE 14

LOCALLY PRODUCED REVENUES, FAIRFAX COUNTY, FY71

Local Revenue Source	Amount	Percent
Property Taxes	$ 86,219,688	61.2%
Other Taxes, Fees, Permits and Licenses	22,426,150	15.9
Non-tax Revenue	32,280,469	22.9
TOTAL	$140,926,307	100.0%

Source: Accountants' Report, FY71, Exhibits B and C.

TABLE 15

LOCAL TAX REVENUES FOR FAIRFAX COUNTY, FY71

Tax	Amount
Real Estate Tax	$ 73,010,015
Personal Property Tax	13,209,672
Local Sales Tax	7,256,503
Utility Consumption Tax	6,615,362
Motor Vehicle Licenses	1,964,434
Cigarette Tax	1,718,852
Business, Professional and Occupational Licenses	1,714,912
Miscellaneous Licenses and Fees, and Other Taxes	3,156,086
Total Local Tax Revenues	$108,645,836*

*Discrepancy between Tables 14 and 15 due to rounding.

Sources: Accountants' Report, FY71, Exhibit C and County Budget, FY73, p. 17.

among the County's departments. Included here are such minor revenues as library fines, gifts, rental of facilities, as well as the larger amounts in broad categories as detailed in the following table (Table 16).

To summarize, taxes are the principal local source of revenue and produce twice the amount received from state and federal sources. Local non-tax revenues are of comparatively minor consequence (16% of all received) and many of these receipts are earmarked for expenditure. In this chapter revenues arising from Reston and West Springfield for seven taxes are estimated, and allocations of receipts from miscellaneous taxes, non-tax revenue and intergovernmental transfers are made to Reston and West Springfield.

LOCAL PROPERTY TAXES

Real Estate Tax.[1] The real estate tax is traditionally the most important source of revenue for local

---

[1]This section of the chapter is a revision of a preliminary report on real estate tax generated in Reston and West Springfield reported in the New Communities Research Bulletin, 1972, by the New Communities Study Center, Virginia Polytechnic Institute and State University, Reston, Virginia. The writer is indebted to Royce Hanson for his assistance in its preparation.

TABLE 16

OTHER LOCALLY COLLECTED REVENUES, FAIRFAX COUNTY, FY71

Non-Tax Revenue Source	Amount
Fines and Forfeitures	$ 657,119
Revenues from use of money or property	4,276,389
Charges for current services	17,331,866
Sales of service, property	6,497,407
Retirement contributions from employees	2,212,876
Miscellaneous revenue	1,304,812
Total Local Non-Tax Revenue	$32,280,469

Source: Accountants' Report, FY71, Exhibits B and C.

governments. Its universality should not be construed as an indication that it lacks disadvantages. One fiscal problem concerns the length of time between the effective date of assessment of the tax base and the conclusion of the fiscal year. This is illustrated in Fairfax County by the fact that during the period of this study, assessment was based on appraisal values as of January 1, 1970 for the expenditure year that closed June 30, 1971. Thus the most important tax base remained constant during the 18 months that new residents and businesses, both of which require services from the County, were moving into the jurisdiction.

A constant real estate tax base, obviously disadvantageous for a rapidly expanding community, should be turned into one which more closely follows the dynamics of growth. This occurred in Fairfax County in FY72 when new assessment policy was instituted: reassessment immediately follows reappraisal, which occurs upon completion of construction. This replaced the practice of reappraisal after construction followed by reassessment as of the first day of the next calendar year. This change partially fills the gap between real estate tax revenues and funds needed to serve newly arrived citizens, since the expanding real estate tax base more nearly coincides with the growing population.

The FY71 real estate tax rate of $4.30 per $100 assessed valuation applies to both land and improvements in all areas of the County. An additional tax of from two to seventy cents is levied in special districts to pay for requested services such as trash and leaf removal, dredging silt, construction and operation of community centers. Neither Reston nor West Springfield are included in a special district.

Utilizing Assessment Department data, Reston and West Springfield real estate tax bases were estimated. From these data, as of January 1, 1970, it was determined that 2,331 recorded parcels of taxable land in Reston had an assessed value of $19,408,809, with improvements valued at $28,892,511.[1] Applying the $4.30 tax rate for FY71, this Reston property should have yielded $2,076,957 in real property taxes for the County.

Compared with this is West Springfield's 2,406 parcels, assessed at $31,708,189, which should have produced taxes of $1,363,452. This yield was based on assessments of $9,140,609 for land and $22,567,580 for improvements.

---

[1] See Appendix Table A-4.

The problem created by the 18 month interval between effective date of real estate assessment and the end of the fiscal year is most clearly illustrated by the per capita tax. Reston's $2 million yield amounts to $231 per person for its estimated population at the beginning of the fiscal year. Population growth whittled this yield to $146 per capita by the end of the fiscal year. This problem is less severe with West Springfield's more gradually increasing population, as its per capita tax fell only six dollars to $139 during the fiscal year.

While both areas have about the same number of taxable parcels, Reston covers four times as much land: 7,098 vs. 1,642 acres for West Springfield. Just over 55% of Reston's acreage is not developed as of January 1, 1970, but this land yielded about a fifth of its real estate tax. A parcel is defined as "developed" if the valuation of its improvements amounts to $1,000 or more. This reflects improvements appraised at $2,500. About 73% of West Springfield acreage is thereby "developed". Most of the real estate tax in both areas is derived from developed land -- 83% in Reston and 95% in West Springfield. Assessed valuation data for both areas are presented in the following table (Table 17).

TABLE 17

ASSESSED VALUATION, RESTON AND WEST SPRINGFIELD, JANUARY 1, 1970

Real Property	Reston	West Springfield
Undeveloped Land	$ 8,117,438	$ 1,472,350
Developed Land	11,291,371	7,668,259
Improvements	28,892,511	22,567,580
TOTAL	$48,301,320	$31,708,189

Source: Appendix Tables A-4 and A-5.

It is important to look at assessed valuation on a per acre basis, since the total area of Reston is about four times larger than West Springfield. When normalized in this manner the effect of Reston's larger size is removed. On a per acre basis, assessed valuation (including improvements) differs greatly: $6,805 per taxable acre in Reston and $19,311 in West Springfield. The difference appears to be explained by the appraised value of the land, although some of the difference may be an effect of the definition, since a few of Reston's large parcels have minimal improvements. Per acre assessed valuation for undeveloped land in Reston is $2,025 while it is $3,309 in West Springfield. These figures would reflect appraisals of $5,063 and $8,273 per acre respectively. For developed land excluding improvements, the Reston $3,654 valuation indicates an appraisal of $9,135 per acre while the West Springfield valuation of $6,406 for developed land indicates $16,015 appraisal per acre.

Differences in appraised value of land (excluding improvements) for Reston and West Springfield may be ascribed to appraisal methods or to market value of the real estate. (Fairfax County land appraisals reflect fair market value.) It is the policy of the County to standardize real estate appraisals across the County. It thus appears that different market values prevail in West Springfield and Reston. This difference may be due to West Springfield's proximity to two interstate highways, I-95 and I-495.

What is not revealed in these data is the contribution of industrial and commercial development to the real estate tax bases in the two areas. As is typical of dormitory suburbs, one industrial and a few commercial facilities are found in West Springfield. Homeowners produce almost all the real estate tax here. The largest non-residential parcel, occupied by the West Springfield Golf and Country Club, covers almost 160 acres and is valued for tax purposes at just under $225,000. Slightly more valuable is the single industrial facility, a four-acre substation owned by the Virginia Electric and Power Company. Small businesses such as gasoline stations, mini-supermarkets and a private school are located on five other parcels. The estimated tax yield from these properties in $31,000, less than three percent of the total yield.

On the other hand in Reston, which is designed for balance among business, industrial, residential and open space uses, one fifth of the real estate tax is provided by non-residential land and improvements. This category includes an industrial park which has both tenant and owner-occupied facilities, as well as commercial and office facilities at Lake Anne Village Center. Reston's private golf club is valued a little higher than, but covers the same area as, West Springfield's.

One industry located here, a whiskey distillery which predates the new town, contributes 13% of the commercial/industrial real estate taxes in Reston. This corporation's properties include four parcels improved with the distillery, warehouses, a large residence and two cottages. All four properties, located within Reston's industrial area, yielded $53,206 in real estate tax in FY71.

It is by happenstance that the distillery is located within the new town and therefore might justifiably be deleted from analysis. Since this empirical research concerns Reston as it exists, the distillery will be retained. (The distillery's tax yield has no significant effect on the final outcome of the fiscal impact analysis.)

Half the industrial/commercial acreages is at least partially developed, but undeveloped commercial or industrial land in Reston is valued at over $2.6 million and produced over $100,000 in real estate tax revenue. This contrasts with West Springfield where <u>no undeveloped</u>

commercial-industrial land exists. This reflects the usual practice of the developer to request and the Board of Supervisors to grant rezoning for commercial or industrial use just prior to development. As a result, no inventory of undeveloped industrial-commercial land, with high assessed valuation and consequently high tax bills, accumulates.

The other category of non-residential land is open space, land use for leisure purposes. Such land in West Springfield is owned by the Park Authority and is tax exempt. Open space in Reston, owned by RHOA and cluster association, produced over $11,500 tax and requires no expenditure by the County for maintenance or debt service. Assessed valuation for land and improvements, by land use, is summarized in the following table (Table 18).

TABLE 18

ASSESSED VALUATION BY LAND USE, RESTON AND WEST SPRINGFIELD, JANUARY 1, 1970

Land Use	Reston	West Springfield
Commercial-Industrial	$ 9,321,551	$ 717,179
Open Space	270,131	N/A
Residential and Other	38,709,638	30,991,010
Total Assessed Valuation	$48,301,320	$31,708,189
Percent Commercial-Industrial	19%	2%

Source: Appendix Tables A-4 and A-5.

To summarize the effect of a diversified real property tax base, note that developed residential land provides the largest share of real estate taxes in both areas, 69% in Reston compared with 93% in West Springfield. The Reston per capita tax burden of developed residential land $130, was almost identical with $131 per capita for West Springfield. However, the tax generated by Reston's commercial-industrial tax base, $36 per capita, was $33 more per person than in West Springfield.

This situation suggests that either residential real estate tax in Reston could be reduced or, since more revenue is generated here, a higher expenditure level could be justified. However, these actions are precluded by the County policy of equal taxation and equal provision of services across the County.

Personal Property Tax. The tax, due in December, is based on assessment as of the previous January 1. The dilemma of constant tax base and increasing population occurs with this tax as with real estate taxation.

Five classes of personal property are taxed in Fairfax County:

1) Motor vehicles (household goods are excluded),
2) Public Service personal property,
3) Machinery and tools,
4) Machinery and tools used in research and development, and
5) Farm machinery, farm tools and farm livestock.

Assessed valuations and collections from these categories show that regular and public service property account for 98% of this revenue (see Appendix Table A-6).

Regular property, including motor vehicles owned by individuals and business firms, as well as the latter's fixtures and unlicensed equipment, is assessed at a declining percentage of cost over time.[1] Appraisals of public service property made by the State Corporation Commission are accepted by the County's Assessments Office. Commission data show that one property in Reston, the Reston Air Conditioning Corporation, falls into this category.[2]

Data which distinguish between individual and corporate regular property or between the various types of motor vehicles are not available. Utilizing available census data for autos owned by householders, an estimate of personalty tax on autos for Reston and West Springfield was made. To this was added the public service personalty tax for Reston. The results were $258,709 allocated to Reston and $201,306 to West Springfield.

OTHER LOCAL TAXES

Business, Professional and Occupational License Tax (BPOL). This license is required annually of individuals or firms engaged in occupations and businesses

---

[1] Fairfax County Industrial Authority, Incorporation and Tax Information, Fairfax County, Virginia, (Fairfax: The Authority, 1971).

[2] Correspondence from Lee B. Younger, State Corporation Commission, Richmond, Virginia, December 12, 1972.

operating in the County. The tax is based on gross receipts of the previous year with rates varying among the several business categories.

A function of commercial and industrial activity, the BPOL tax would be more productive in a new town with its development balanced between residential and commercial-industrial land uses than in a conventional dormitory suburb. BPOL produced $1.7 million for Fairfax County in FY71. Tax collected from Reston business amount to $17,487 compared with $1,767 collected in West Springfield.[1]

Cigarette Tax. Cigarettes sold in Fairfax County, taxed at the rate of five cents per package, raised $1.7 million in FY71. Revenues generated within the two study areas could differ considerably, since the new town with a number of commercial and industrial establishments could be expected to capture a larger share of the market than would the dormitory suburb with only a few convenience stores and cigarette vending machines. On the other hand, revenues from purchases made by residents at stores in Fairfax County is unknowable in the absence of data on smoking and purchasing habits.

---

[1] Data provided by Department of Assessments, Fairfax County, Virginia.

To estimate cigarette tax revenues the assumption may be made that smoking habits of the residents of Reston and West Springfield are the same as those of all other Fairfax Countians. Cigarette tax revenue is pro-rated according to the Reston and West Springfield share of the 14-and-older age group of the County's mid-fiscal year population, as estimated from census tract and total county population data. Thus it is estimated that cigarette tax generated $37,815 from Reston and $30,939 in West Springfield.

Local Sales Tax. Virginia counties may levy a 1% piggyback tax on the state-imposed 3% sales tax. Fairfax County has adopted this option. Tax collections are forwarded through the local tax office to the state treasurer who then returns the 1% tax, ($7.3 million in the case of Fairfax County in FY71), as well as a portion of the State's 3% tax.

Estimating the sales tax revenues attributable to Reston and West Springfield is problematical. Regardless of which approach is taken, collections within the geographic area or collections from residents of the area, estimation of sales tax revenue for small areas is difficult because of incomplete data. If the former approach is taken, taxes collected would depend on the total sales volume of retail establishments in the area. With the second, sales tax revenue would be a function of propensity to spend and disposable income after housing payments.

The absence of necessary data requires that a third method be used. This is to pro-rate the County's collection on the basis of population. This assumes disposable income and propensity to spend to be constant across the County. Thus Reston's share of sales tax is $171,153 and West Springfield, $150,090, based on a County per capita sales tax collection of $15.51. Such an estimate would be low in the case of Reston which has a higher median family income than the county. This would likewise be true of West Springfield, where a second factor will also influence sales tax paid. Many West Springfield families are headed by active duty or retired military personnel who enjoy commissary privileges. It appears that these military families shop extensively at the nearby commissaries where sales tax is not charged.[1]

---

[1] This observation was made by both a county official and a knowledgeable resident of the area.

<u>Motor Vehicle Licenses</u>. All motorized vehicles, with the exception of farm tractors, were taxed during FY71 at the rate of $10.00 per automobile or truck and $3.00 per motorcycle. County licensing parallels state law so annual licensing was accomplished between March 15 and April 15, 1971. This fee produced almost $2 million for Fairfax County.

Estimate of this tax collected for Reston and West Springfield vehicles is based on 1970 census data of auto ownership. The assumption is made that ownership patterns did not change in the year following the census. To estimate the number of vehicle licenses sold, the ratio of autos to households, as reported in the census, is applied to the estimated households in the study area in January, 1971 (see Appendix Tables A-7 and A-8). The resultant number of autos is the tax base to which license fees are applied.

Interesting contrasts in ownership are seen in the census data. Forty percent of Reston households, compared with 28% in West Springfield, own either one car or none at all. Put another way, almost three-quarters of West Springfield households have two or more cars, compared with 60% of Reston households. (Recall that the median family income of both communities is approximately equal.) This difference may be due to (1) the express commuter bus service operating between the new town and Washington, D.C. employment centers and (2) the physical form of Lake Anne Village which encourages walking and bicycle riding. Although express busses also served West Springfield, census data show that 8.6% of Reston employees rode the bus to work compared with 2.6% in West Springfield.

Auto ownership patterns affect auto license revenues in the two areas, as does military status of the auto owner. In FY71 active duty military personnel paid $1 license fee for one car which was registered to the service person. Auto license revenue for West Springfield was reduced for the 581 military residents who, it is assumed, each paid $1 for one car. The same assumption is made for the 132 Reston service people. The total auto tag revenue for Reston is estimated to be $51,892 and for West Springfield, $36,791. No estimate was made for vehicles other than autos because data from which ownership of other vehicles could be estimated are not available.

<u>Utility Consumption Tax</u>. In 1966 the Board of Supervisors adopted an ordinance which imposed a 10% tax, referred to here as the utility tax, on electricity and natural gas

consumed, and on local telephone service. An amendment in 1968 raised the maximum monthly tax for each service to five dollars for residential customers and to $60 for commercial and industrial service.[1] The tax is billed and collected by the utility companies, which forward lump-sum payments to the County. This tax proved to be a lucrative revenue source, producing $6.6 million in FY71.

As with the sales tax, estimation of the utility tax generated in a geographical area is problematical. Lump-sum receipts require that an indirect estimate for Reston and West Springfield be made. It is assumed that consumption of gas, electric and telephone service, and therefore the utility taxes paid, varies directly with the valuation of improvements to real estate (public service properties excluded). This assumption associates improvements to the land, such as commercial and industrial structures and larger houses, with higher levels of

---

[1] Fairfax County Board of Supervisors, Notice of Adoption of an Ordinance Imposing a Tax on Persons Purchasing Utility Services, Fixing the Amount of Tax, Providing for its Collection and Prescribing Penalties for the Violation of This Ordinance, June 29, 1966, and Adoption of Amendments to an Ordinance Imposing a Tax on Persons Purchasing Utility Services, Fixing the Amount of Tax, Providing for its Collection and Prescribing Penalties for the Violation of Said Ordinance, June 26, 1968.

utilities consumption than moderately or lower valued residences. This is apparent when comparing the utilities consumed at a moderately priced home with those consumed at a luxury home, which is air conditioned and equipped with a number of electrical appliances and extension telephones, or a commercial or industrial facility. It would appear to be valid to apportion to a geographic area a part of the total utilities tax collected which is the same proportion that assessed valuation of real estate improvements for that area are to the County's total improvements assessed valuation.

Utilizing this methodology, Reston's share of improvements to real estate is 2.8%, while for West Springfield it is 2.2%. Utilizing these same percentages, estimated utilities tax receipts for Reston are $185,230, and $145,538 for West Springfield.

OTHER LOCAL REVENUE

In addition to the ones mentioned above, Fairfax County in FY71 levied a number of taxes, licenses and fees which produced $3.2 million. Those associated with industrial and commercial activity would be expected to produce a higher yield in a new town than in a conventional suburb because a new town includes commercial and industrial components which are absent from the conventional suburb. Fees related to land development may be a significant revenue source, depending on the fee structure, during a period of rapid expansion. However, costs associated with the permit and inspection processes may surpass the revenue. On a per capita basis revenue from these miscellaneous taxes amounts to $74,376 for Reston and $65,223 for West Springfield.

Among the local non-tax revenues, totalling $32.3 million, is interest earned on invested funds, which contributes $3.5 million to the County's coffers. Since bonds are repaid primarily from real estate tax revenue, the interest earned is apportioned according to the real estate tax base, the assessed valuation. When pro-rated to the two areas, revenues are estimated to be $102,659 for Reston and $67,259 for West Springfield.

Revenues accruing to the County from some sources are non-discretionary in that they are earmarked for expenditure by the nature of the source. These $17.7 million include, for example, revenues from sewerage service, which must be spent for this service; receipts from sales of school lunches, which with federal subsidy is a self-supporting activity of the school system; and revenues for special districts.

These are deleted from analysis and are not apportioned to either Reston or West Springfield.

The remaining $12.3 million locally generated revenue is apportioned on a per capita basis, resulting in an estimated $290,331 for Reston and $254,602 for West Springfield.

REVENUE FROM STATE AND FEDERAL SOURCES

Federal and state transfers earmarked for education, $41 million, accounted for 70% of intergovernmental revenues.

The Commonwealth also contributed $13.7 million to the County for non-educational purposes. Half this amount was the County share of the state three percent sales tax. Other monies included $4.7 million reimbursements for shared responsibilities in finance, assessment and record agencies and for public assistance purposes. One million dollars in grants from the federal government were for health, judicial, library and county construction programs. Non-education intergovernmental transfers, apportioned on a per capita basis, amount to $344,181 for Reston and $301,826 for West Springfield. Revenues for school lunches are excluded, but other education-related grants, when allocated on a per pupil basis, amounted to $836,163 for Reston and $1,138,474 for West Springfield.

SUMMARY OF REVENUES

Estimates of revenues for Reston and West Springfield, as detailed in this chapter, are summarized in the following table (Table 19). Excluded are those sources previously mentioned as deleted from analysis. Two items should be noted. First, locally raised revenues were greater in Reston due to the higher real estate tax yield and to per capita allocations based on a larger population. Second, intergovernmental transfers were larger for West Springfield because education grants, which account for the bulk of such transfers, were made on a per pupil basis. Overall, Reston accounted for almost $700,000 more revenue than West Springfield, and for more than its share, on a per capita basis, of total county revenue.

TABLE 19

REVENUES GENERATED BY RESTON AND WEST SPRINGFIELD, FY71[h]

Revenue Source	Reston	West Springfield
Local		
Real Estate Tax	$2,076,957	$1,363,452
Personal Property Tax	258,709	201,306
Business, Professional, Occupational License	17,487	1,767
Cigarette Tax	37,815	30,939
Local Sales Tax (1%)	171,153	150,090
Motor Vehicle License	51,892	36,791
Utilities Consumption	185,230	145,538
Interest from Investment	102,659	67,259
Miscellaneous Taxes	74,376	65,223
Other Local Revenues*	290,331	254,602
Total Local Revenues	$3,266,609	$2,316,967
State and Federal		
Education Grants	$ 836,163	$1,138,474
Other Grants	344,181	301,826
Total Intergovernmental	$1,180,344	$1,440,300
Total Revenue	$4,446,953	$3,757,267

*Does not include revenues previously mentioned as deleted from analysis.

[h]Methodology for estimates are described in Chapter IV.

CHAPTER V

THE MEANING OF FISCAL IMPACT

In this final chapter are the summary of fiscal estimates for the two areas, conclusions drawn from the research, and implications for governments at all levels, for the local citizenry and for developers of new towns. It closes with recommendations for further research. At this point the getting and spending for Reston and West Springfield are reconciled.

RECONCILIATION OF REVENUES AND EXPENDITURES

More than $3.5 million was spent by Fairfax County in Reston in FY71 compared with almost $4.3 million in West Springfield. On a per capita basis this amounted to $319 and $442 respectively. In contrast, over $4.4 million was generated in Reston from various revenue sources, compared with almost $3.8 million in West Springfield. Again, respective per capita figures are $403 and $388.

Fiscal impact is defined as the effect of a community on a local government's revenues and expenditures. In this study fiscal impact is represented by the Reston and West Springfield share of Fairfax County's FY71 outlays for education and nine other services, and revenues derived locally and from intergovernmental transfer.

In a word, Reston's fiscal impact is positive, producing $925,520 or 26% more revenue than needed. This compares with West Springfield's negative impact, wherein revenues are 12% less than total outlay there. Reston's ratio of revenue to expenditure, 1.3, is more favorable than West Springfield's 0.9. The hypothesis is therefore confirmed.

It must be remembered that this analysis is based on $179 million revenue and $173 million expenditure, or three percent excess revenue. Reston exceeded this percentage by a considerable amount, while West Springfield did not meet the required amount. Summary data are presented in the following table (Table 20).

In comparing the two communities recall that the difference in real estate tax revenue results from Reston's larger geographic area and its more numerous commercial and industrial properties. The variety of land uses found in a new town produce a fiscal advantage over the conventional suburb's virtually single land use. West Springfield produced a larger total amount of all other revenues than Reston.

TABLE 20

FISCAL IMPACT, RESTON AND WEST SPRINGFIELD, FY71

Revenue/Expenditure and Ratio	Reston	West Springfield
Real Estate Tax	$2,076,957	$1,363,452
Other Revenue	2,369,996	2,393,815
Total Revenue	$4,446,953	$3,757,267
Education Expenditure	$2,301,587	$3,253,464
Nine Other Services	1,219,846	1,020,671
Total Expenditure	$3,521,433	$4,274,135
Revenue Surplus (Deficit)	$ 925,520	($ 516,868)
Fiscal Impact Ratio	1.26	0.88

Source: Tables 12 and 19.

This is accounted for by the larger allocation, based on school membership, of federal and state education grants.

The fiscal effect of Reston's growing population during FY71, when it nearly doubled in size, is particularly evident in revenues generated from that portion of the tax base which reflects the population dynamic -- cigarette, local sales and utility consumption taxes.

Because of its larger school membership, education expenditures are greater in West Springfield than in Reston. Payouts for nine other services are estimated to be greater in Reston since these allocations are based on various statistics which reflect Reston's larger population at the middle of the fiscal year. Real estate tax base differences were discussed earlier and data related to this, appearing in Appendix Tables A-4 and A-5, may be examined in detail.

Differences in population should be fully explained. At the time of the decennial census Reston included just under 8,000 people, while West Springfield was 16% larger. By the beginning of the fiscal year Reston grew by 1,000 people, while West Springfield had 150 more residents. At mid-fiscal year Reston had surpassed West Springfield in population by about 1,500 and at the end of the fiscal year Reston was 45% larger than West Springfield.

This study shows that real estate tax revenue generated from non-residential properties, i.e., commercial and industrial properties, accounts in part for Reston's positive fiscal impact. At the same time five commercial and one industrial properties are present in West Springfield. Yet in each place the developed commercial real estate (excluding the private golf clubs) is not a significant revenue source, since it accounts for less than two percent of the real estate tax generated in either place. For non-residential real estate tax revenue generated in the two places, most of the difference is accounted for by industrial properties. It is Reston's developed industrial, rather than commercial, properties that provide the bulk of the non-residential real estate tax revenue there. As is typical of conventionally planned residential suburbs, industry is not present in West Springfield to a noticeable extent.

One may assume that the presence of 9,000 people, as in West Springfield, will precipitate commercial, and perhaps some industrial, development nearby, thus generating real estate tax revenue to support expenditures for this population. If this is true for West Springfield, it would also hold for other nearby residential developments. The extent of this resultant commercial and industrial growth and its fiscal effect on either West Springfield or another residential development is not measurable. In any case it is assumed that such revenue would not have a significant effect on the outcome of this study. As a related matter, the fiscal analysis does not take into account the convenience afforded the residents of the fully planned new town by their proximity to its commercial and industrial facilities - a convenience not available to the residents of the conventional suburb.

At this point some words of caution are appropriate. Generalization of the statistical results of this study should be made only within narrow bounds for the following reasons[1]:

1) local-state-federal fiscal relationships vary from year to year for a locality, as well as from state to state;
2) expenditures are dependent upon social characteristics of the population being served, the tax base, the local political environment

---

[1]The author is indebted to L. Laszlo Ecker-Racz for his comments, at the New Towns Seminar, sponsored by the New Communities Study Center, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, November 13-15, 1972, which serve to expand the author's original list.

and intergovernmental fiscal relations, all of which differ from time to time and from place to place;

3) the economic and political milieu at the time of fiscal impact evaluation is not constant across the country;

4) fiscal feasibility and capability varies among governments and with time;

5) stage of economic development and ultimate potential of the area governed change over time; and

6) prices cannot be assumed to be constant over time.

CONCLUSIONS

For the reasons just stated, the conclusions drawn from this research are necessarily limited in number and scope. This circumstance does not, however, diminish their importance.

1) In FY71 the new town, Reston, represents a fiscal asset for Fairfax County by providing a surplus of almost $1 million revenues over expenditures.

This is a welcome circumstance, for Reston not only achieved fiscal balance but it also provided excess revenue which supported residents elsewhere in the County.

2) The community of West Springfield, as defined in this study, did not produce revenues sufficient to cover expenditures made for it by Fairfax County in FY71.

The deficiency amounted to over one half million dollars.

3) Reston generated more real estate tax than did West Springfield, but the latter accounted for more federal and state aid for education.

In spite of the fact that West Springfield's per acre assessed valuation is higher than Reston's, Reston generated a larger total real estate tax because of its greater acreage and its commercial-industrial facilities. Real estate tax receipts accounted for about a half of Reston's total revenue and about a third of West Springfield's total revenue.

4) Education expenditures are higher in West Springfield than in Reston because the former community has a larger and older public school membership. Expenditures for nine other services are greater in Reston because its population at mid-fiscal year is larger.

In Reston, payouts for education are double those for nine other services taken together. For West Springfield the education outlays were more than triple those made for the nine other services. This indicates the paramount importance of education outlays in Fairfax County.

5) Because real estate tax revenues account for a large portion of total County revenue, and education expenditures similarly account for a large percentage of County payouts, FY71 fiscal impact in Fairfax County is in large part determined by the age characteristics of the population and the real estate tax base.

It follows that within Fairfax County the fiscal impact of any of its communities would be largely due to its school age population and its real estate tax base.

6) The local real estate tax generated from commercial and industrial properties and from undeveloped land in Reston contributed to the new town's positive fiscal impact.

These tax sources are generally absent from the conventional residential suburb, and thus would not generate revenue to support it. As Reston's population grows its undeveloped land will decrease in acreage, in effect be replaced by land which houses people and businesses and requires governmental services. Effort should be made to maintain fiscal balance as the new town grows.

7) In order for West Springfield to have generated revenues sufficient to cover expenditures for local services, the real estate tax rate would have been increased by $1.62 or 38 percent.

This assumes that the entire increase is borne by the real estate tax. If other revenue sources share this deficit, then the real estate tax increase would have been proportionately smaller. In any case the tax paying unit, the household, will be taxed the equivalent of this real estate tax increase.

8) This report demonstrates the practicality of empirical fiscal impact analysis.

It is possible to determine fiscal impact from available governmental data. As government utilizes its administrative records for research purposes and extracts data from these records, the precision of the fiscal impact measurement will improve.

9) The variety which a new town offers to the individual in choice of living and working environments also offers to local government the possibility of positive fiscal impact for the community.

The new town which attracts residents of all ages and a variety of businesses produces the need for a range of governmental services but also produces a broad tax base.

IMPLICATIONS

Implications suggested by this research should be noted. Some pertain specifically to Fairfax County government and citizenry, while others -- using Fairfax County as a case in point -- have relevance for other local governments. Finally, some implications for the U.S. Department of Housing and Urban Development and for national land use policy are presented.

This research has importance as the first empirical analysis of local governmental revenues and expenditures related to a new town and conventional suburban development. Its value as a comparative study is enhanced by the fact that both areas receive services from the same governmental entity. Of itself, this research adds to the body of new town information. For the people of Fairfax County this study may increase their understanding of the new town and the necessity to view the new town not simply as a new subdivision down the highway but as an alternative to conventional development, and in this case, an alternative with the potentiality of fiscal benefit for the County.

If Reston continues to grow as it has in the past, with concurrent residential, commercial and industrial development, and its demographic characteristics remain constant, it is likely that its fiscal impact will remain positive. If so, it may be in Fairfax County's best interest to not impede Reston's growth but to encourage its development, even if this requires that development elsewhere in the County be delayed. While Fairfax County does not exist to make a profit, the County should preserve a fiscal asset, which Reston appeared to be in FY71.

This research shows that real estate tax revenue per capita from developed residential property was virtually identical in Reston and West Springfield. The County benefitted from the additional real estate tax from Reston's commercial and industrial facilities which were not matched by West Springfield's. This implies that either residential real estate tax could be reduced in Reston or that expenditures there could be increased. Although present County policy precludes either action, the Reston citizenry may press this issue in the future.

The results of this research suggest increased pressure on Fairfax County Supervisors on this very point. The pocketbook perception held by the Reston citizenry that Reston supports itself and is not a burden on the County's resources is borne out for FY71 by this research. Given the new town's positive fiscal impact that year, Restonians may even more intensively hold the opinion that services delivered to them by the County should be comparable in quantity and kind with those delivered elsewhere in the County. This especially pertains to education. Reston residents may expect to be provided with neighborhood elementary school facilities sufficient to avoid overcrowding and long school bus trips and other school facilities to meet the needs of Reston's population.

Knowledge that Reston paid its own way in FY71 may strongly encourage not only the citizenry but also the developer to demand equal service delivery from the County. The developer may feel justified in requesting priority treatment over other developers when limited County resources must be allocated.

Some citizens elsewhere in the County have the notion that Reston gets special treatment -- more than a fair share of services. To the extent that the content of this report is accepted, this notion is challenged.

Fiscal impact study results for West Springfield will not be welcomed by land developers in Fairfax County who presently feel constrained by the County's moratorium on sewer connections and the slow-growth posture taken by the present Board of Supervisors. Hitherto developers have contended that residential development pays its own way. Thus, Fairfax County Supervisors will find themselves under increasing pressure from Reston citizens, who will demand services, and the developer, who may feel that since this community is fiscally self-sufficient what development will occur in the County should take place in Reston. At the same time other developers holding land elsewhere in the County will point to their right to develop land. The Supervisors will be at the vortex of a developer-new town developer-new town citizenry conflict.

Since the new town with mixed residential, commercial and industrial land uses provides a positive fiscal impact, Fairfax County officials may find it useful to view a proposed residential development in a new town context. That is, view it as if it were part of a new town and pair residential development with incipient commercial and industrial growth. This would provide a tax base mixture similar to that of a new town, creating the likelihood of positive fiscal impact for the residential increment. In this situation, the County government itself could act as if it were a new town entrepreneur to plan this pairing, or it could require the residential and commercial developers to jointly bear the responsibility for pairing.

That West Springfield did not generate revenues equal to expenditures made for it in FY71 does not mean that in the future West Springfield will not produce a positive fiscal impact. As this community's school-age population group grows older, education expenditures will change. The possibility of a positive fiscal impact exists.

The methodology utilized in this study may be adapted by Fairfax County so that study of Reston's fiscal impact may continue. Over time, the study of new town and suburban dynamics, as well as their fiscal effects, may provide input for policy-makers concerned with efficient land use. Such research may probe the relationships between population characteristics and service delivery, possibly revealing problem areas and unknown efficiencies.

This study demonstrates that at the outset one cannot assume positive fiscal impact from family income and property value. One might expect that the suburban community of families with above average income living in houses valued above average in one of the country's wealthiest counties would generate revenues in excess of expenditures. This expectation was not upheld in the case of West Springfield in FY71. Demographic characteristics are a necessary factor in the fiscal impact equation.

Implications suggested by the analytical process are appropriate to other governments in addition to Fairfax County and should be noted. The process of fiscal impact analysis for both new town and dormitory suburb suggests policy issues which should be addressed at several levels of government as well as by the citizenry and developer of both new towns and conventional suburbs.

For the Department of Housing and Urban Development this research suggests the importance of maintaining balance among the residential, commercial and industrial uses during the development period of a new town. If the non-residential parts of the town do not keep pace, the new town degenerates into a typical suburban development. It is not sufficient that a new town be planned to include a variety of activities based on a mix of land uses. The town's implementation must be planned with a reasonable expectation of achievement. Without this expectation, the planned new town should not be implemented.

Soundly based fiscal analysis should deter HUD from supporting a new town which would work a long-term burden on a locality and its citizenry. It is incumbent upon HUD not to undermine the fiscal viability of a local government by approving within its boundaries a new town which promises negative fiscal impact throughout most of its development period.

A local government should be sensitive to the possibility that through federal assistance a proposed new town which could be an excessive burden could be vitiated, while the absence of federal assistance would preclude its development. A citizenry is entitled to mistakenly burden itself but it should not be subject to a burden imposed by a higher government which, while recognizing the long-range effect of the burden, offers no compensatory aid. This circumstance is a possibility. If federal or state land use policy incorporating the new town strategy is adopted it should also incorporate state and federal aid to the service-providing local governmental unit to ensure positive or neutral fiscal impact.

Another area of concern is the criteria for evaluation of fiscal impact studies. Presently fiscal impact studies are submitted to HUD in new communities assistance applications and to the correspondent local government for comment. Both agencies must evaluate the accuracy, reasonableness and completeness of the study. A local government may be especially hard-pressed to evaluate the future financial effect, from the standpoint of both operational and capital investment expenditures, of large-scale development because of lack of expertise. It may be necessary for state or federal government to financially assist a local effort to evaluate the consequences of large-scale development within its boundary. For the local government responsible for a new town development without HUD guarantee assistance, that agency should provide technical assistance to the local government for evaluating the proposed new town.

This research has an important bearing on the development of national land use policy. That new towns should be a prime strategy in future land use must be justified by political, economic, social and ecological as well as fiscal considerations. This research supports the contention that the new town alternative to current sprawl development is fiscally sound. This is not to say that all new towns will produce a positive fiscal impact and therefore justify their existence. What this does point out is that given the choice between a new town incorporating a variety of land uses and sprawl residential development the former has the likelihood of producing a favorable fiscal impact for local government.

As an example, given the choice of locating a huge auto assembly plant in a pasture 30 miles from the nearest large city or in the industrial sector of a new town, from the fiscal standpoint the new town location would be superior. Assume that if the plant were located in the new town its employees would live there. Then the revenue from the industrial tax base and the employee-generated expenditures would be coincident in the same local governmental jurisdiction. Under the present circumstance, the private sector's decision to locate a plant in a rural area may benefit one local government while burdening another with demands for services generated by the plant's employee.

Relationships between growth, tax base and expenditures should be noted and taken into consideration when development policy is formulated at the local, state or federal level. Then fiscal maladjustment accompanying development, which burdens either the new resident or the established citizenry or both, may be minimized.

Another consideration for a developing new town which is implicit from this research is the time lag between date of appraisal and assessment for real estate tax purposes, the real estate tax collection, and the end of the fiscal year. If the interval between date of appraisal and/or assessment of real estate and due date for tax payments is more than one year, this may create a severe problem in the local government's financial position, since the population is increasing while the tax base remains constant. This may be especially severe for the locality which is small relative to the new development. A local government should consider revision of its policies and procedures to minimize this problem.

To prevent serious fiscal maladjustment another measure which may be instituted by local government is to organize the tax structure so that receipts are staged throughout the year. This provides not only a continuous cash flow but also utilizes the enlarging tax base.

Yet another concern arising from this research involves local policies regarding land conversion and service delivery and their inter-relationships. Local government may view these two matters separately and distinctly. A state mandates to the locality delivery of at least minimal levels of some services while at the same time it adopts a laissez faire attitude toward land conversion policy. Mutual consideration of the effects of large-scale development on both state and local governments is indicated by the rapid growth of Reston and demographic differences as revealed in this study. Neither fiscal nor natural resources are limitless; effective husbandry is required. Fiscal impact research may aid in optomizing public and private resources.

Thus, issues suggested by this research which face governments at the national, state and local levels include the relationship between fiscal and development policies, the staging of revenues, a technique for achieving balance among land uses, the need for sound fiscal information on which to base land use decisions and the relationship between the land conversion process and service delivery policies.

RECOMMENDATIONS

Several recommendations result from this research effort. Three relate to empirical fiscal impact studies, a like number are directed toward HUD, while the final three pertain to Fairfax County.

Empirical fiscal impact research of Reston in Fairfax County, which had its beginning with this study, should be repeated biennially. A single fiscal impact study does not a theory make. Nor does it provide a confident prediction for the future. Through reiteration of this study the dynamics of the new town's growth, its population, service delivery, tax base,urban form, as well as the relationships among these elements, may be studied. At the same time techniques of measurements should evolve from the present elementary stage to a more precise level. From a longitudinal study trends could be established for such measures as education expenditures/real estate tax, total expenditures per capita and real estate tax per developed acre.

Not only should fiscal impact analysis be conducted for one new town over time, but the study field should be broadened to contrast new communities of various types. It is recommended that empirical fiscal study be made for various types of new communities as the leisure-recreational community, the retirement community, or a new town-in-town to contrast the effects of various types of new towns. Such studies may reveal information useful to federal, state and local policy-makers.

One such study could incorporate the third recommendation: that empirical fiscal analysis begin with the initial year of a new town's construction. Outlay and income resulting from the development process occurring prior to occupancy by residents and businesses should be examined. This study would be especially appropriate for a new town guaranteed by HUD. It may be desirable to initiate analysis at the earliest possible date such as when negotations between developer and government begins, in order to learn the total expenditure made by local government on behalf of the new town.

Three suggestions are directed toward the U.S. Department of Housing and Urban Development. The first is that HUD develop criteria for evaluating the reasonableness, completeness and accuracy of fiscal impact studies submitted to them by applicants for HUD guarantee. For example, expenditure estimates for public safety by the local government should be based on current urban rather than that government's previous experience. These criteria should be shared with state and local governments in which the proposed new community would be built.

Furthermore, HUD should grant to the governmental jurisdiction of the proposed new community sufficient funds to enable it to conduct thorough analytical evaluation of the fiscal impact statement submitted by the developer. This evaluation would point up for the local government the fiscal issues to be faced with the arrival of a new town.

In addition to the fiscal impact analysis of revenue and expenditure for a new community over its development period it is important for the local government to have a cash flow statement covering the new town's development period which identifies the lean and fat years during the development period when local government may be required to adjust its fiscal plan. Outlay for capital facilities may then be coordinated with expected revenues as well as with population increase.

The last three recommendations ensuing from this research apply to Fairfax County. The residential and commercial-industrial components of Fairfax County's tax base should be the subject of a study directed toward identifying the tax burden borne by the residential and business sectors of the County. This should include not only real estate taxes, but the entire revenue structure. From this the optimal mix of business and residential taxes for both Reston and the County may be suggested.

Another study which would be appropriate for Fairfax County to conduct is that of outlays and income for various public works activities. It would be especially appropriate to contrast the urban and non-urban areas of the County where the character of activities in these two environments may differ. As policy making input, information may be developed which reveal the expenditure required for opening a new area for growth, in contrast with expenditure needed to maintain the more mature area of the County.

A single recommendation for action is that Fairfax County institute program budgeting for non-school services in order to identify expenditures and revenues relative to particular groups or locations. The School Administration's program accounting systems provides a wealth of information for analysis. In contrast, it is not possible to identify expenditures of a single library branch. Data capability for non-education programs, similar to that of the School Administration, could become a management asset.

A FINAL COMMENT

This study is an inquiry into the fiscal effect on a local government of an extant new town and suburb. From the study problems were identified and recommendations for action are suggested. In the final analysis the real meaning of fiscal impact is not in the positive or negative ratios that are calculated. The real meaning is found if the process enables a community to be created which allows through interaction and communication, and as fully as is possible, for the achievement of each resident's potential.

SOURCES CONSULTED

FISCAL AND ECONOMIC

American City Corporation. The Greater Hartford Process. Columbia, Maryland: The Corporation, 1972.

American Society of Planning Officials. Planning Advisory Service. Impact of Large Industries on Small Communities. Information Report #31. Chicago: The Society, October, 1951.

Boston, Massachusetts. City Planning Board. Report on the Income and Cost of Six Districts in the City of Boston. Boston: The Board, 1934.

Clapp, James A. New Towns and Urban Policy: Planned Metropolitan Growth. New York: Dunellen, 1971.

Davis, Otto A. and Haines, George H., Jr. "A Political Approach to a Theory of Public Expenditure: The Case of Municipalities," Readings in State and Local Finance. Edited by William E. Mitchell and Ingo Walter. New York: Ronald Press, 1970.

Del Guidice, Dominic. "Cost-Revenue Implications of High Rise Apartments." Urban Land, 22 (February, 1963), 1, 3-5.

Einsweiler, Robert C. and Smith, Julius C. "New Town Locates in a Municipality: Jonathan Saves Money and Chaska Increases Tax Base," Planners Notebook, 1 (June-July, 1971), 3-4.

Ecker-Racz, L. Laszlo. The Politics and Economics of State-Local Finance. Englewood Cliffs, N.J.: Prentice-Hall, 1970.

Esser, George H. Are New Residential Areas a Tax Liability? A Report to the Greensboro City Council Concerning the Financial Impact of Annexing Subdivisions. Institute of Government, University of North Carolina, Chapel Hill: The Institute, 1956.

Esser, George H. "Urban Growth and Municipal Services. I: Municipal Service Patterns. II: Cost and Revenues." Popular Government, 23 (October, 1956), 3-8, 16, 23 (November, 1956), 5-12.

Graves, Frank M. "Fiscal Disparities between the Atlanta and Non-Atlanta Areas of Fulton County, Georgia," National Tax Journal, 23 (December, 1970), 449-455.

Great Britain. Central Office of Information. Reference Division. The New Towns of Britain. Pamphlet 44 London: H.M.S.O., 1969.

Groves, Harold M. and Riew, John. "The Impact of Industry on Local Taxes - A Simple Model," National Tax Journal, 16 (June, 1963), 137-146.

Hanson, Royce. New Towns: Laboratories for Democracy, Report of the Twentieth Century Fund Task Force on Governance of New Towns. Background paper by Royce Hanson. New York: The Fund, 1971.

Hirsch, Werner Zvi. The Economics of State and Local Government. New York: McGraw-Hill, 1970.

Hirsch, Werner Zvi. "Fiscal Impact of Industrialization on Schools," Review of Economics and Statistics, 46 (May, 1964), 191-199.

Hoch, Irving. Progress in Urban Economics: The Work of the Committee on Urban Economics, 1959-1968, and the Development of the Field. Washington, D.C.: Resources for the Future, 1969.

Isard, Walter and Coughlin, Robert. Municipal Costs and Revenues Resulting from Community Growth. Wellesley, Massachusetts: Chandler-Davis, 1957.

Kee, Woo Sik. "Industrial Development and Its Impact on Local Finance," Quarterly Review of Economics and Business, 8 (Summer, 1968), 19-24.

Knox, Vera H. Public Finance: Information Sources. Detroit: Gale Research Company, 1964.

Leuthold, Jane H. "The Impact of Industrial Development on Local Finance: A Comment," Quarterly Review of Economics and Business, 8 (Autumn, 1968), 76-80.

Loewenstein, Louis K. "The Impact of New Industry on the Fiscal Revenues and Expenditures of Suburban Communities," National Tax Journal, 16 (June, 1963), 113-37.

Mace, Ruth Lowens. "Cost-Revenue Research and the Finance Officer," Municipal Finance, 36 (May, 1964), 122-29.

Mace, Ruth Lowens. Costing Urban Development and Redevelopment. Selected readings on costs, revenues, cost-revenue analysis, in relation to land use. University of North Carolina, Institute of Government. Chapel Hill: The Institute, 1964.

Mace, Ruth Lowens. Municipal Cost-Revenue Research in the United States. A critical survey of research to measure municipal costs and revenues in relation to land uses and areas: 1933-1960. Chapel Hill: Institute of Government, University of North Carolina, 1961.

Mace, Ruth L. and Wicker, Warren J. "Do Single-Family Homes Pay Their Way?" A Comparative Analysis of Costs and Revenues for Public Services. Research Monograph 15. Washington, D.C.: Urban Land Institute, 1968.

McKean, Eugene C. and Taylor, Harold C. Paying for Public Facilities in Kalamazoo County. Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research, 1968.

Masten, John T., Jr., and Quindry, Kenneth E. "A Note on City Expenditure Determinants," Land Economics, 46 (February, 1970), 79-81.

Mitchell, William E. and Walter, Ingo, eds. Readings in State and Local Finance. New York: Ronald Press, 1970.

Oregon, University of. Bureau of Governmental Research and Service. "Analysis of Factors Affecting Expenditures of State and Local Governments in Oregon." Local Government Finance. (January, 1971), Mimeographed.

Osborn, Federic James. "New Town Financial Results," Town and Country Planning (UK), (February, 1965), 134-5.

Osborn, Sir Frederic James and Wittick, Arnold. The New Towns: The Answer to Megalopolis, with introduction by Lewis Mumford. Revised edition. Cambridge, Massachusetts: M.I.T. Press, 1969.

Patterson, George M. "Allocating Expenditures to Land Use Categories," Municipal Finance, 36 (May, 1964), 136-9.

Perloff, Harvey S. and Wingo, Lowdon, eds. Issues in Urban Economics; based on papers presented at a conference. Published for Resources for the Future by the Johns Hopkins Press. Baltimore: The Press, 1968.

Peters, Richard M. "Techniques for Fiscal Analysis, including Analyses of Revenues and Expenditures," Unpublished research paper for Virginia Polytechnic Institute and State University, 1973.

The Rouse Company. South Richmond: A Report to the City of New York: An Analysis of Development Trends and Recommendations for a New City in South Richmond. Columbia, Maryland: The Company, 1970.

Sachs, Seymour and Campbell, Alan K. "The Fiscal Zoning Game," Municipal Finance, 36 (May, 1964), 140-9.

Sargent, Charles A. "Urbanization of a Rural County," Research Bulletin. Purdue University, Agricultural Experiment Station, bulletin no. 859. Lafayette: The University, September, 1970.

Schaeffer, Beldon H. Small Homes and Community Growth: A Study of the Small Low-Cost Home: Community Asset or Liability. Storrs: Institute of Public Service, University of Connecticut, 1954.

Wheaton, William L.C. and Schussheim, Morton J. The Cost of Municipal Services in Residential Areas; A study prepared for the Housing and Home Finance Agency. U.S. Department of Commerce, Office of Technical Service, Washington, D.C.: The Department, 1955.

U.S., Department of Agriculture, Economic Research Service. The Impact of New Industry on Local Government Finances in Five Small Towns in Kentucky, by Charles B. Garrison. Agricultural Economic Report No. 191. Washington, D.C.: Government Printing Office, September, 1970.

BY AND ABOUT FAIRFAX COUNTY, RESTON AND WEST SPRINGFIELD

Alexandria Gazette. July 21, 1958, p. 1. July 22, 1958, p. 1.

ARCATA Real Estate Data Incorporated. Real Estate Atlas of Fairfax County, Virginia, Area/Map Volume. 10th ed. Miami: The Corporation, 1970.

Arcata-Redi Services, Incorporated. Real Estate Atlas of Fairfax County, Virginia, County Ownership Volume, Geographical. 9th ed. Miami: The Corporation, 1970.

Fairfax County, Virginia. Five Year Countywide Development Program. Vol. 1: Presentation of Alternatives. Vol. 2: Financial Plan, FY73-77. Vol. 3: Evaluation of Standards and Criteria. Fairfax: The County, 1972.

Fairfax County, Virginia. Questions and Answers about the Business, Professional and Occupational Licensing Tax in Fairfax County, Virginia: including the text of the ordinance as amended. Revised. Fairfax: The County, January, 1973.

Fairfax County, Virginia. Board of Supervisors. *Advertised Capital Budget, Fairfax County, Fiscal 1971*. Fairfax: The County, 1970.

Fairfax County, Virginia. Board of Supervisors. *Advertised Capital Outlay Plan, Fairfax County, Fiscal 1972*. Fairfax: The County, 1971.

Fairfax County, Virginia. Board of Supervisors. *Advertised Fiscal Plan, Fairfax County, Fiscal 1971*. Fairfax: The County, 1970.

Fairfax County, Virginia. Board of Supervisors. *Approved Fiscal Plan, Fairfax County, Fiscal 1971*. Fairfax: The County, 1970.

Fairfax County, Virginia. Board of Supervisors. *Approved Fiscal Plan, Fairfax County, Fiscal 1972*. Fairfax: The County, 1971.

Fairfax County, Virginia. Board of Supervisors. *Weekly Agenda*. Various Issues, 1970 and 1971. Fairfax: The Board.

Fairfax County, Virginia. Industrial Authority. *Incorporation and Tax Information, Fairfax County, Virginia*. Fairfax: The Authority, 1971. (Mimeographed.)

Fairfax County, Virginia. Industrial Authority. *1971-1972 Directory of Business and Industry, Fairfax County, Virginia*. Fairfax: The Authority, n.d.

Fairfax County, Virginia. Office of Capital Facilities, Department of Public Works. *Statement of Policy Regarding Sewage Disposal*. Adopted by the Board of Supervisors, April 10, 1972. Fairfax: The County, 1972. (Mimeographed.)

Fairfax County, Virginia. Office of Management and Budget. *Approved Fiscal Plan, Fiscal 1974, Fairfax County, Virginia*. Fairfax: The County, June 30, 1973.

Fairfax County, Virginia. Office of Management and Budget. Management Study: Department of Public Works. Vol. A: Summary of Conclusions and Recommendations. Fairfax: The County, 1971.

Fairfax County, Virginia. Office of Public Affairs. The Citizen's Handbook. Fairfax: The Office, August, 1971.

Fairfax County, Virginia. Office of Public Affairs. 1971 Annual Report: Year ended June 30, 1971. Fairfax: The Office, n.d.

Fairfax County, Virginia. Office of Public Affairs. Tax Facts: A Guide to Tax Assessments in Fairfax County. Fairfax: The Office, 1973.

Fairfax County, Virginia. Planning Division. Plan of Public Sewage. Fairfax: The County, 1958.

Fairfax County. School Board. Advertised School Budget for the School and Fiscal Year ending June 30, 1973. Fairfax: The Board, 1972.

Fairfax County. School Board. Instructional and Support Programs Budget Detail for the School and Fiscal Year ending June 30, 1973. Fairfax: The Board, 1972.

Fairfax County. Federation of Citizen's Association. "Pollution Abatement." Federation Bulletin, 18 (September, 1970), 1.

Fairfax County Sun Echo. February 8, 1962, p. 1.

Fairfax County Water Authority. 1971 Annual Report. Fairfax: The Authority, n.d.

Gulf Reston, Incorporated. A Brief History of Reston, Virginia. Reston: The Corporation, 1970.

Gulf Reston, Incorporated. Inside Reston, Virginia. Reston: The Corporation, 1971.

Gulf Reston, Incorporated. Resident's Handbook, Reston, Virginia. Reston: The Corporation, 1970.

Hays, Janet and Lindberg, Carolyn. A Place called Reston -- 1971-72 Reston Directory. Reston, Virginia: New Town Publications, 1971.

League of Women Voters of the Fairfax Area. "Updated Lowdown on Sewer Status." Bulletin. (March, 1971), 14.

March, Jean Spottswood. "Service Delivery in the Privately Financed New Community in the U.S." Reston, Virginia, September, 1971. (Typewritten.)

Peat, Marwick, Mitchell and Company. County of Fairfax, Virginia, Accountants' Report: Financial Statements and Supplementary Data, June 30, 1971. Washington, D.C.: The Company, September 30, 1971.

Sheeler, Harve Lee. "An Index to Fairfax County Federation of Citizens Associations Bulletin, 1965-71 and Supplement for 1972." Unpublished MLS Research Paper, Catholic University, Washington, D.C., May, 1972.

Stenberg, Linda Crump. "Citizens, Services, and New Towns." Unpublished M.U.A. Thesis, V.P.I. and S.U., Blacksburg, Virginia, 1973.

U. S. Bureau of the Census. 1970 Census of Population and Housing, Census Tracts, Final Report PHC(1)-226, Washington, D.C.-Md.-Va. SMSA, May, 1972, Washington, D.C.: Government Printing Office, 1972.

U.S. Bureau of the Census. 1970 Census of Population and Housing, General Population Characteristics, Final Report PC(1)-B48Va. Washington, D.C.: Government Printing Office, 1971.

U.S. Bureau of the Census. 1970 Census of Population and Housing, General Social and Economic Characteristics, Final Report PC(1)-C48Va. Washington, D.C.: Government Printing Office, 1972.

U.S. Bureau of the Census. 1970 Census of Population and Housing, Number of Inhabitants, Final Report PC(1)-A48Va. Washington, D.C.: Government Printing Office, 1971.

Virginia. The Urban County Executive Form and Urban County Manager Form, Code of Virginia (as amended 1966). Title 15.1, Chapter 15. August, 1966.

Virginia. Commission on Constitutional Revision. The Constitution of Virginia: Report. Charlottesville, Virginia: The Michie Company, 1969.

Virginia. Department of Highways. Fairfax County General Highway Map, Supplements C, F and H. January, 1973. Richmond: The Department, 1973.

Virginia State Chamber of Commerce. Virginia's Government: A Description of the Structure and Functions of the State and Local Governments of the People of Virginia: State, Municipal, County. Richmond, The Chamber, 1971.

Washington Center for Metropolitan Studies. Reston, Virginia ...a study in beginnings. Washington, D.C.: The Center, 1966. (Mimeographed.)

Washington Post, April 19, 1958, p. Cl.

INTERVIEWS

Fairfax County, Virginia. Interview with Ray Ahner, Urban Development Information Service, January 18, 1972.

Fairfax County, Virginia. Interview with Julia C. Barton, Social Services, July 20, 1973.

Fairfax County, Virginia. Interview with Ray M. Birch, Finance, February 11, 1972.

Fairfax County, Virginia. Interview with Howard G. Borgstrom, Response Staff, December 15, 1971.

Fairfax County, Virginia. Interview with Lewis H. Bryant, Public Works, June 12, 1972.

Fairfax County, Virginia. Interview with Carrol D. Buracker, Police Department, July 17, 1973.

Fairfax County, Virginia. Interview with Myron E. Cale, School Administration, June 8, 1972.

Fairfax County, Virginia. Interview with M. Patricia Corey, Library, July 18, 1973.

Fairfax County, Virginia. Interview with Randall Y. Chun, Planning, February 25, 1972.

Fairfax County, Virginia. Interview with Camille H. Cleveland, Planning, July 19, 1973.

Fairfax County, Virginia. Interview with Henry F. Conner, Public Works, June 5, 1972.

Fairfax County, Virginia. Interview with Robert Cooper, School Administration, July 24, 1972.

Fairfax County, Virginia. Interview with Delma Culp, Finance, September 10, 1973.

Fairfax County, Virginia. Interview with Marion H. Earle, Assessments, March 16, 1972.

Fairfax County, Virginia. Interview with Thomas J. Feeney, Assessments, April 4, 1972.

Fairfax County, Virginia. Interview with Samuel Finz, Research and Statistics, July 3, 1973.

Fairfax County, Virginia. Interview with Charles A. Funkhouser, Health Department, July 19, 1973.

Fairfax County, Virginia. Interview with W. Franklin Gooding, County Clerk, March 14, 1972.

Fairfax County, Virginia. Interview with Richard J. Gozikowski, Public Works, August 22, 1973.

Fairfax County, Virginia. Interview with C. Douglas Harmon, Research and Statistics, February 28, 1973.

Fairfax County, Virginia. Interview with Edna Marie Hash, Assessments, March 16, 1972.

Fairfax County, Virginia. Interview with Joseph Higgins, School Administration, August 4, 1972.

Fairfax County, Virginia. Interview with Peggy Honeycutt, Health Department, July 19, 1973.

Fairfax County, Virginia. Interview with Frank S. Howser, Public Works, May 17, 1972.

Fairfax County, Virginia. Interview with William Hudgens, Office of Management and Budget, July 9, 1973.

Fairfax County, Virginia. Interview with John L. Hysom, Jr., Urban Development Information System, January 18, 1972.

Fairfax County, Virginia. Interview with Carolyn Jones, Response Staff, January 13, 1972.

Fairfax County, Virginia. Interview with Howard Jones, School Administration, July 18, 1973.

Fairfax County, Virginia. Interview with Timothy M. Jones, Office of Management and Budget, July 16, 1973.

Fairfax County, Virginia. Interview with Caroll Karr, Federal/State Aid Coordinator, August 29, 1973.

Fairfax County, Virginia. Interview with Lowell T. Keagy, Recreation, July 18, 1973.

Fairfax County, Virginia. Interview with George J. Kelley, Jr., County Executive, January 13, 1972.

Fairfax County, Virginia. Interview with Charles King, School Administration, June 13, 1972.

Fairfax County, Virginia. Interview with J. Hamilton Lambert, Public Works, May 12, 1972.

Fairfax County, Virginia. Interview with Robert J. Lawlor, Parks, July 16, 1973.

Fairfax County, Virginia. Interview with John Lay, County Development, February 7, 1972.

Fairfax County, Virginia. Interview with Jack H. Liedl, Public Works, February 17, 1972.

Fairfax County, Virginia. Interview with J. Jay Linard, Jr., Planning, February 15, 1972.

Fairfax County, Virginia. Interview with Carolyn Lindberg, Hospital and Health Commission, July 23, 1973.

Fairfax County, Virginia. Interview with Michael Long, Response Staff, October 11, 1972.

Fairfax County, Virginia. Interview with Mary P. Markham, County Executive Office, September 19, 1973.

Fairfax County, Virginia. Interview with Shelby Mason, Public Works, May 17, 1972.

Fairfax County, Virginia. Interview with Audrey Moore, Fairfax County Board of Supervisors, Annandale District, November 13, 1972.

Fairfax County, Virginia. Interview with Edward Moore, School Administration, August 8, 1972.

Fairfax County, Virginia. Interview with William Morton, School Administration, July 18, 1972.

Fairfax County, Virginia. Interview with Joseph C. Muzyka, Sr., Health Department, July 19, 1973.

Fairfax County, Virginia. Interview with Martha V. Pennino, Fairfax County Board of Supervisors, Centreville District, March 6, 1973.

Fairfax County, Virginia. Interview with Rufus Phillips, Fairfax County Board of Supervisors, Dranesville District, March 2, 1973.

Fairfax County, Virginia. Interview with York L. Phillips, Planning, December 6, 1971.

Fairfax County, Virginia. Interview with A. B. Ramey, Assessments, January 17, 1973.

Fairfax County, Virginia. Interview with Morris Sahr, former Commissioner, Fairfax County Planning Commission, February 15, 1972.

Fairfax County, Virginia. Interview with Hosea Spina, County Development, April 11, 1972.

Fairfax County, Virginia. Interview with Linda Sutton, Finance, June 12, 1972.

Fairfax County, Virginia. Interview with Charles R. Thacker, Fire Department, July 17, 1973.

Fairfax County, Virginia. Interview with William L. Whitesides, Library, July 18, 1973.

Fairfax County, Virginia. Interview with Thomas C. Whitworth, School Administration, April 11, 1972.

Fairfax County, Virginia. Interview with Robert W. Wilson, County Executive, February 28, 1973.

Fairfax County, Virginia. Interview with Frederick C. Wyse, Assessments, November 7, 1972.

Fairfax County, Virginia. Interview with Bohdan Zagurski, Finance, September 10, 1973.

Fairfax County, Virginia. Interview with William Dobrzykowski, C.P.A., September 20, 1973.

Fairfax County, Virginia. Interview with Professor Joseph I. Intermaggio, VPI and SU, October 3, 1971.

Fairfax County, Virginia. Interview with Professor David Meiselman, VPI and SU, November 15, 1972.

Reston, Virginia. Interview with Rita Berman, Secretary, Reston Council of Clusters, April 21, 1972.

Reston, Virginia. Interview with Jean S. March, Resident, September 4, 1973.

Reston, Virginia. Interview with Linda C. Stenberg, Resident, May 22, 1973.

Reston, Virginia. Interview with Margaret H. Cram, Resident, May 22, 1973.

Reston, Virginia. Interview with William Magness, President, Gulf Reston, Incorporated, January 5, 1972.

Reston, Virginia. Interview with Theodore Shetzer, Gulf Reston, Incorporated, January 5, 1972.

Reston, Virginia. Interview with Celaine Willman, Gulf Reston, Incorporated, January 5, 1972.

Reston, Virginia. Interview with John Guinee, Gulf Reston, Incorporated, January 5, 1972.

Reston, Virginia. Interview with Jimmie Kepner, Gulf Reston, Incorporated, March 6, 1972.

Reston, Virginia. Interview with Joseph Krohnak, Gulf Reston, Incorporated, February 17, 1972.

Reston, Virginia. Interview with Robert Wright, Gulf Reston, Incorporated, March 22, 1972.

U.S. Bureau of the Census. Interview with James Davis, January 20, 1972.

U.S. Department of Housing and Urban Development. Interview with William Clarke, Office of New Communities, April 27, 1973.

U.S. Department of Housing and Urban Development. Interview with Bong Lee, Office of New Communities, April 27, 1973.

U.S. Department of Housing and Urban Development. Interview with William Nicoson, formerly of Office of New Communities, September 25, 1972.

U.S. Department of Housing and Urban Development. Interview with Jack Underhill, Office of New Communities, July 24, 1973.

Virginia. Cigarette Tax Board. Interview with James Taylor, February 8, 1972.

West Springfield, Virginia. Interview with Donald Bowman, Director, Fairfax County Department of Environmental Affairs, former Supervisor, Springfield District, Fairfax County Board of Supervisors, July 19, 1973.

West Springfield, Virginia. Interview with Carol Hodges, Resident, March 15, 1973.

West Springfield, Virginia. Interview with Barbara West, Resident, July 15, 1973.

APPENDIX A

Table A-1 Scope of Research, Fiscal Impact Study of Fairfax County, FY71 169

Table A-2 Scope of Expenditure Analysis Fiscal Impact Study of Fairfax County, FY71 170

Table A-3 Population Estimates for Reston and West Springfield Study Areas, and Fairfax County, Virginia, 1970-1972 171

Table A-4 Acreage, Assessed Value and Estimated Real Estate Tax by Land Use, Reston, Virginia, FY71 172

Table A-5 Acreage, Assessed Value and Estimated Real Estate Tax by Land Use, West Springfield, Virginia, FY71 174

Table A-6 Personal Property Assess Valuation, Tax Rate and Levy, and Estimated Collection, Fairfax County, FY71 176

Table A-7 Households and Auto Ownership in Reston and West Springfield, 1970 177

Table A-8 Estimated Households and Auto Ownership in Reston and West Springfield, 1971 178

TABLE A-1

SCOPE OF RESEARCH, FISCAL IMPACT

STUDY OF FAIRFAX COUNTY, FY71[a]

	Expenditure	Revenue
Total	$236,967,447	$199,619,553
Subject to Analysis	173,931,991	179,063,326
Schools	124,979,435	47,992,249
Other Services	48,952,556	131,071,077
Deleted from Analysis	63,035,456	20,556,227
School Lunch	7,622,209	7,169,103
Sanitary Districts	5,414,494	3,682,690
Public Works	3,184,571	536,673
Sewer	11,791,429	9,167,761
Construction from Bond Monies	35,022,753	*

*$84,100,590 (non-revenue) was realized from sale of bonds and bond anticipation notes.

[a]Data derived from Accountants' Report, Exhibit B, and Fiscal Plan, FY73.

TABLE A-2

SCOPE OF EXPENDITURE ANALYSIS

FISCAL IMPACT STUDY OF FAIRFAX COUNTY, FY71[a]

Service	Subject to Analysis	Deleted from Analysis	Total Expenditure
Education	$124,979,435	$24,026,180	$149,005,615
Other Services:			
General Government	17,417,115	0	17,417,115
Health	3,706,920	179,168	3,886,088
Judicial	2,118,220	0	2,118,220
Library	3,103,330	863,804	3,967,134
Parks	4,961,854	1,950,000	6,911,854
Public Safety	10,758,255	0	10,758,255
Public Works	0	3,184,571	3,184,571
Recreation	1,332,348	0	1,332,348
Sewerage	0	11,791,429	11,791,429
Social Services	5,016,307	0	5,016,307
Special Districts	0	5,414,494	5,414,494
Transportation	538,207	15,625,810	16,164,017
Total	$173,931,991	$63,035,456	$236,967,447

[a]Derived from Accountants' Report, FY71 and FY73 Budget

TABLE A-3

POPULATION ESTIMATES FOR RESTON AND WEST SPRINGFIELD STUDY AREAS, AND FAIRFAX COUNTY, VIRGINIA, 1970-1972[a]

Date	Reston	West Springfield	Fairfax County
April 1, 1970	7,935	9,229	455,021[b]
July 1, 1970	8,974	9,378	459,338
January 1, 1971	11,035	9,677	467,971
July 1, 1971	14,274	9,817	485,413
January 1, 1972	17,495	9,958	502,856

[a]Unless noted otherwise, estimates are derived from data provided by Fairfax County Planning Department.

[b]U.S. Census

TABLE A-4

ACREAGE, ASSESSED VALUE AND ESTIMATED REAL ESTATE TAX BY LAND USE, RESTON, VIRGINIA FY71[a]

Land Use	Total	Developed	Undeveloped
ACREAGE			
Industrial-Commercial	1,091.0859A	551.4287A	539.6572A
Open Space	201.1005	69.0161	132.0844
Residential and Other	5,806.1089	2,469.4369	3,336.6720
Total	7,098.2953	3,089.8817	4,008.4136
NUMBER OF PARCELS			
Industrial-Commercial	64	32	32
Open Space	61	16	45
Residential and Other	2,206	1,606	600
Total	2,331	1,654	677
ASSESSED VALUE OF LAND			
Industrial-Commercial	$ 5,119,682	$ 2,502,932	$2,616,750
Open Space	77,541	33,540	44,001
Residential and Other	14,211,586	8,754,899	5,456,687
Total	19,408,809	11,291,371	8,117,438
ASSESSED VALUE OF LAND AND IMPROVEMENTS			
Industrial-Commercial	$ 9,321,551	$ 6,704,801	$2,616,750
Open Space	270,131	226,130	44,001
Residential and Other	38,709,638	33,252,951	5,456,687
Total	48,301,320	40,183,882	8,117,438

TABLE A-4 Continued

Land Use	Total	Developed	Undeveloped
ESTIMATED TAX YIELD*			
Industrial-Commercial	$ 400,826	$ 288,306	$112,520
Open Space	11,616	9,724	1,892
Residential and Other	1,664,515	1,429,877	234,638
Total	2,076,957	1,727,907	349,050
ESTIMATED TAX YIELD PER CAPITA			
Industrial-Commercial	$ 36.32**	$ 26.13	$10.20
Open Space	1.05	.88	.17
Residential and Other	150.84	129.58	21.26
Total	188.22**	156.58**	31.63
ESTIMATED TAX YIELD PER ACRE			
Industrial-Commercial	$367	$523	$208
Open Space	58	141	14
Residential and Other	287	579	70
All Land	293	559	87

*($4.30 per $100 A.V.)

**Discrepancy due to rounding.

[a]Calculated from Assessment Department records as of 1/1/70.

TABLE A-5

ACREAGE, ASSESSED VALUE AND ESTIMATED REAL ESTATE TAX BY LAND USE, WEST SPRINGFIELD, VIRGINIA FY71[a]

Land Use	Total	Developed	Undeveloped
ACREAGE			
Industrial-Commercial	180.7650A	180.7650A	0. A
Open Space	N.A.	N.A.	N.A.
Residential and Other	1,461.0500	1,016.4040	444.6460
Total	1,641.8150	1,197.1690	444.6460
NUMBER OF PARCELS			
Industrial-Commercial	7	7	0
Open Space	N.A.	N.A.	N.A.
Residential and Other	2,399	2,213	186
Total	2,406	2,220	186
ASSESSED VALUE OF LAND			
Industrial-Commercial	$ 296,859	$ 296,859	$ 0
Open Space	N.A.	N.A.	N.A.
Residential and Other	8,843,750	7,371,400	1,472,350
Total	9,140,609	7,668,259	1,472,350
ASSESSED VALUE OF LAND AND IMPROVEMENTS			
Industrial-Commercial	$ 717,179	$ 717,179	$ 0
Open Space	N.A.	N.A.	N.A.
Residential and Other	30,991,010	29,518,660	1,472,350
Total	31,708,189	30,235,839	1,472,350

TABLE A-5 Continued

Land Use	Total	Developed	Undeveloped
ESTIMATED TAX YIELD*			
Industrial-Commercial	$ 30,839	$ 30,839	$ 0
Open Space	N.A.	N.A.	N.A.
Residential and Other	1,332,613	1,269,302	63,311
Total	1,363,452	1,300,141	63,311
ESTIMATED TAX YIELD PER CAPITA			
Industrial-Commercial	$ 3.19	$ 3.19	$0.00
Open Space	N.A.	N.A.	N.A.
Residential and Other	137.71	131.17	6.54
Total	140.90**	134.35**	6.54
ESTIMATED TAX YIELD PER ACRE			
Industrial-Commercial	$170	$ 170	$ 0
Open Space	N.A.	N.A.	N.A.
Residential and Other	912	1,249	142
All Land	830	1,086	142

*($4.30 per $100 A.V.)

**Discrepancy due to rounding.

[a]Calculated from Assessment Department records as of 1/1/70.

TABLE A-6

PERSONAL PROPERTY ASSESSED VALUATION, TAX RATE AND LEVY, AND ESTIMATED COLLECTION, FAIRFAX COUNTY, FY71

Personal Property Classification	Assessed Value	Tax Rate Per $100	Tax Levy	Estimated Collection*	Percent of Total Tax
Regular	$229,588,473	$4.30	$ 9,872,304	$ 9,586,007	76.1%
Public Service	65,985,626	4.30	2,837,382	2,755,098	21.9
Machinery & Tools	6,134,325	3.25	199,366	193,584	1.5
Research & Development	1,888,167	3.25	61,365	59,585	0.5
Farm	39,285	.01	393	382	0.0
Total	$303,635,876	-	$12,970,810	$12,594,656	100.0%

*Collection rate is 97.1% of levy.

Source: Schedule 5, p 11, FY73 Budget.

TABLE A-7

HOUSEHOLDS AND AUTO OWNERSHIP IN

RESTON AND WEST SPRINGFIELD, 1971

Households and Auto Ownership	CT 4092 (Reston)		CT 4042 (West Springfield)	
	No.	%	No.	%
1970 Households With [1]				
No Cars	63	2.6%	9	0.4%
1 Car	913	37.3	668	27.6
2 Cars	1,334	54.5	1,576	65.1
3 or More Cars	137	5.6	167	6.9
Total Households	2,447	100.0%	2,420	100.0%
Total Cars	3,992		4,321	
Population[2]	8,315		9,860	
Persons per Household[2]	3.39		4.11	
Military Labor Force[2]	101		591	
% of Population	1.2%		6.0%	

Sources: [1]Table 17, 4th Count, Housing Census Tape

[2]Table P-1, Census Tracts, Final Report PHC(1) 226, 1970 Census of Population and Housing

TABLE A-8

ESTIMATED HOUSEHOLDS AND AUTO OWNERSHIP IN RESTON AND WEST SPRINGFIELD, 1971[a]

Estimated Households and Auto Ownership	Reston	West Springfield
1971 Population (Est)	11,035	9,677
1971 Households (Est)	3,255	2,355
1971 Households with (Est)		
No Cars	85	9
1 Car	1,214	650
2 Cars	1,774	1,533
3 or Nore Cars	182	162
Total Cars, 1971	5,308	4,202
1971 Military Labor Force (Est)	132	581

Note: Census tract percentages were applied to estimated populations of Reston and West Springfield to derive 1971 estimates of autos and military labor force.

[a]Derived from Table A-7.

VITA

Ida Mae Diener Cuthbertson   Ida D Cuthbertson

Born June 16, 1929, married, two children

Resides at 2528 Bull Run Court, Vienna, Virginia 22180

Education

Undergraduate: Ohio State University
Bachelor of Arts, March 1951,
Economics major

Graduate: Virginia Polytechnic Institute and
State University
Master of Urban Affairs, June 1974

Experience

Statistician, Ohio Department of Health
Columbus, Ohio
March 1951-August 1954

Statistical Assistant, Commission on Professional and
Hospital Activities
Ann Arbor, Michigan
September 1954-January 1956

Editorial Aide, Public Health Economics
Bureau of Public Health Economics, University of Michigan
Ann Arbor, Michigan
February 1956-June 1957

Research Assistant, Research Analysis Corporation
(now General Research Corporation)
McLean, Virginia
October 1968-October 1971

Graduate Research Assistant, Virginia Polytechnic Institute
and State University
Reston, Virginia
October 1971-September 1973

Community Activities

Citizens' Committee on the Vienna (Metro) Corridor
Appointment by the Fairfax County Board of Supervisors, 1973

Fairfax Area League of Women Voters, 1962-1972

Delegate to the General Assembly, Lutheran Planning Council
of the Washington, D.C. area, 1968-1970

THE FISCAL IMPACT OF NEW TOWN AND SUBURBAN DEVELOPMENT:
AN ASSESSMENT OF THE EFFECTS OF RESTON AND WEST
SPRINGFIELD ON FAIRFAX COUNTY, VIRGINIA

by

Ida D. Cuthbertson

(ABSTRACT)

This empirical study of governmental finances of Fairfax County, Virginia, for Fiscal Year 1971 compares revenues and expenditures for two types of communities within its boundaries -- Reston, a growing new town, and West Springfield, a conventional suburb. Among the ten services provided by the County to both communities, education accounted for the largest share of expenditures. On the revenue side the real estate tax was the principal source.

Reston's fiscal impact, the ratio of revenues to expenditures, is more favorable for the County than that of West Springfield because of the commercial-industrial tax base present in a new town which is absent from the conventional suburb and because Reston's school-age population differed from West Springfield's. For FY71 West Springfield did not produce revenues equal to expenditures made for it.

The reader is cautioned to not project from a single year's fiscal impact to other years or to other communities. Yet the results obtained from these contrasting types of communities within a single governmental jurisdiction cannot be ignored. Implications of this research and recommendations for Fairfax County, governmental decision-makers at local, state and federal levels, and for the Department of Housing and Urban Development are presented. Methodology for estimation of revenues and expenditures for Reston and West Springfield, criteria by which West Springfield was selected, and general descriptions of the two communities and services provided by the County are included.