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General Plan Refinement Goals & Objectives

THEN & NOW

SUPPLEMENTAL FACT SHEETS

MONTGOMERY COUNTY, MARYLAND

PLANNING BOARD (FINAL) DRAFT

Published by the

MONTGOMERY COUNTY PLANNING DEPARTMENT

ABSTRACT

TITLE:	The General Plan Refinement of the Goals and Objectives Montgomery County Then and Now: Supplemental Fact Sheets
AUTHOR:	The Maryland-National Capital Park and Planning Commission
SUBJECT:	Background information for the Amendment to *A General Plan for the Maryland-Washington Regional District in Montgomery and Prince George's Counties* (1964), as amended, and the 1969 *Updated General Plan for Montgomery County* (approved in 1970), as amended.
DATE:	January 1993
PLANNING AGENCY:	The Maryland-National Capital Park and Planning Commission 8787 Georgia Avenue Silver Spring, MD 20910-3760
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ABSTRACT:	This document supplements the General Plan Refinement of the Goals and Objectives. This document contains the eight fact sheets produced during the development of the General Plan Refinement. The first fact sheet describes the general changes that have occurred since 1969 and the process that led to the General Plan Refinement. The seven remaining fact sheets focus on the seven General Plan Goals. They describe changes, trends, and challenges of each topic over the past two decades.

NOTICE TO READERS

This supplement contains eight fact sheets that were prepared for use at public workshops and worksessions of the Planning Board to facilitate development of the General Plan Refinement. The introductory fact sheet describes the general changes that have occurred since the 1969 General Plan Update and the process that led to the General Plan Refinement. The remaining seven fact sheets focus on each of the seven goals.

Together these fact sheets provide a comprehensive look at the challenges that Montgomery County has faced since 1969. During the public workshops, each fact sheet served as an introduction to each of the seven General Plan Refinement goals; they also provided an important framework for subsequent discussions by the Planning Board.

Because the fact sheets were produced over an eight month period, some of the language used to describe geographic areas of the County has evolved over time. The development of General Plan Refinement concepts can be traced through these fact sheets. For example, the urban/suburban ring referenced in some fact sheets has emerged as two distinct geographic areas, the urban ring, and suburban communities. In addition, the satellite communities of Olney and Damascus are addressed under the more general concept of centers in the General Plan Refinement.

The General Plan Refinement of the Goals and Objectives serves as an amendment to the 1964 General Plan and the 1969 General Plan Update (approved in 1970).

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd.)

TABLE OF CONTENTS (Cont'd.)

TABLE OF CONTENTS (Cont'd.)

WHAT IS ... ON WEDGES AND CORRIDORS?

Both the 1964 General Plan and the 1969 Updated General Plan have guided the general land use pattern and the transportation network in Montgomery County for more than two decades. The Plan's name, "... On Wedges and Corridors," comes from the land use pattern it recommends. The General Plan has shaped Montgomery County by channeling growth into transportation corridors and an urban and suburban ring around Washington, D.C. At the same time, it preserves wedges of green open space, farmland, and lower density residential uses.

Conceived in 1961, wedges and corridors was the growth pattern first proposed for the entire national capital area by the "Policies Plan for the Year 2000," a plan prepared by the National Capital Planning Commission and the National Capital Regional Planning Council (a forerunner of the Council of Governments). Montgomery County is the only jurisdiction in the Washington region that officially adopted the wedges and corridors concept to guide its development. The concept was originally based on six corridors of urban development, one of which is in Montgomery County, the I-270 Corridor. Another, the I-95 Corridor, straddles the Montgomery County-Prince George's County line. The corridors radiate out from the District, the region's employment center, like the spokes of a wheel and were to be separated by the wedges, land reserved for rural open space.

The I-270 corridor consists of several cities, including Rockville, Gaithersburg, and Germantown, linked with one another and with Washington by Metrorail. For the 21st Century, the 1964 plan recommended another corridor city, Clarksburg, along the I-270 Corridor. The later plan downsized the scale of this community to a town. Proposed cities for the I-95 Corridor included a new city, east of Fairland, and Laurel.

Served by transit, the corridor cities were to be located about four miles apart so they could grow large enough to support a real mixed use downtown with high-rise buildings, housing, offices, and a host of shopping and cultural amenities. A ring of residential communities consisting of a variety of housing types with their own local shopping, recreational and educational facilities were to surround the core.

The General Plan envisioned the wedges as green open space with low density housing needed to help shape the corridor cities, to provide recreational opportunities and a rural environment for farming, and to conserve and protect natural resources, such as the public water supply. Generally, stream valley parks and lower density housing have separated the wedges from the corridors.

In 1969, the Montgomery County Council reaffirmed the wedges and corridors concept by approving the updated General Plan and revising the 1964 Plan's goals and objectives.

WHY IS MONTGOMERY COUNTY REFINING THE GOALS AND OBJECTIVES OF THE GENERAL PLAN?

Although the wedges and corridors concept is sound and has basically been followed, Montgomery County has changed in many ways during the past two decades as discussed earlier. Thus, it is an ideal time to look at the General Plan's goals and objectives as the County prepares for the 21st century. This Refinement is the culmination of 22 years of working with the General Plan, two recent Planning Department studies, a report from a government working group, and a series of citizens committees.

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anticipated problems affecting the County. The second is the "General Plan Assessment Study" which assesses how well the County would work if the County continued to develop according to the General Plan. The third report by the Working Group to Evaluate the Agricultural and Rural Open Space Preservaiton Programs reaffirmed the importance of the agricultural and open space lands.

The following year, 1989, saw the release of the four-volume Comprehensive Growth Policy Study (CGPS), also prepared by the Planning Department. A follow-up to the Assessment Study, the CGPS concluded that traffic congestion would be intolerable unless development patterns and people's driving habits change.

Two major findings of the above reports, that the General Plan's basic "wedges and corridors" concept is still valid and that it is time to refine the goals and objectives of the General Plan, were echoed in a 1991 report, "Action Agenda, Recommendations of the Growth Management Advisory Work Group to the Montgomery County Planning Board." The above five reports are summarized below.

Commission on the Future

In 1986 the Montgomery County Council created a 15-member citizens commission to make recommendations concerning the County's future trends and policies in the coming 30-year period. This group, the Commission on the Future, drafted a report, then met with more than 900 citizens at 17 forums to discuss and refine the draft. After 18 months, the Commission on the Future issued a final report, entitled "Envisioning Our Future," in June 1988.

The Commission's purview went well beyond land use issues to include such subjects as education, public services, and cultural activities. One of the Commission's primary concerns, however, was growth, and four of the trends it identified were directly related to the General Plan. These are:

- "The 1960s radial corridor concept as a pattern for development of the national capital region will all but disappear, since Montgomery County, alone among the metropolitan jurisdictions, has organized its development along these lines."

- "At-place employment increases will greatly exceed projections and the assumptions of the General Plan, although housing production has been pretty much as anticipated and population gains significantly below the Plan's assumptions."

- "...in the I-270 and Route 29 corridors the form of the 'corridor cities' and regional activity centers envisioned by the General Plan is being eroded increasingly by market pressures for spreading, low-density (housing and) highway-oriented workplaces."

- "Neither Route 29 nor Georgia Avenue was originally slated to become a development corridor, but both are emerging as such because of ... commercial zoning decisions, and the Wheaton-Glenmont alignment choice for Metro."

The Report also gave credit to the General Plan for "our excellent park system" and for the Agricultural Reserve. It called for slower job growth and increased housing production, particularly near selected Metrorail stations, indicating that this would be more consistent with the Plan. Finally, among its recommendations are that "the General Plan needs to be reassessed...What is still valid and good in the General Plan should be reaffirmed and what needs to be modified or changed should be changed."

General Plan Assessment Study

The Planning Department's 1988 "General Plan Assessment Study" was the first step in refining the 1969 Updated General Plan. It analyzed how well Montgomery County would function if the County continues to develop according to the General Plan, as amended by master plans and

functional plans. The Assessment reaffirmed the wedges and corridors concept "since it still appears to provide a better solution to increasingly critical transportation and environmental issues than a more sprawling development pattern...the County's development has been surprisingly faithful to the Plan's basic principles."

The Study's three main findings are:

- The total amount of development allowed by current zoning in Montgomery County will generate more traffic than the presently-planned transportation system can handle. If the amount of commercial development and jobs allowed by zoning is reduced and transit lines are added, less traffic will be created and congestion levels will be more tolerable.
- The total amount of development allowed by current zoning in Montgomery County will require substantial additional sewer capacity.
- A Comprehensive Growth Policy Study should be undertaken as a next step.

Working Group to Evaluate the Agricultural and Rural Open Space Preservation Programs

The Montgomery County Council appointed the Working Group to Evaluate the Agricultural and Rural Open Space Preservation Programs. The group's 1988 report reaffirmed the agricultural and rural open space programs in Montgomery County and in particular the 1980 Functional Master Plan for the Preservation of Agriculture and Rural Open Space (Agricultural Plan). The 90,000-acre Agricultural Reserve represents one of the most significant tools to implement the General Plan's Wedge concept.

The Report's main findings and recommendations are:

- The rate of farmland conversion to residential use decreased substantially in the Agricultural Reserve between the adoption of the Agricultural Plan in 1980 and 1988.
- The four preservation programs (private sale of TDR, Maryland Environmental Trust Easements, State Agricultural Easements, and Montgomery County Agricultural Easements) active in the County "contain important aspects that are essential to the preservation of prime farmland and each program area should be continued although some modifications are recommended." These programs have been maintained.
- The County should continue its commitment to the RDT, Rural and Rural Cluster zones. The densities, minimum lot sizes, development standards, and the area covered by the zones were endorsed. These standards have been maintained. Further examination of the zoning in transition areas may be appropriate at a later time, as well as a proposal to transfer development rights (TDR) to rural villages were suggested.
- The transfer development rights (TDR) program should be retained essentially unchanged with an increased emphasis on the public purchase of easements and the designation of additional receiving areas. This recommendation has been, and continues to be implemented.
- The County should develop a priority easement acquisition program to acquire strategically placed farmland and rural open space. This recommendation has been implemented.
- Agricultural preservation through the state tax laws should be continued, with transfer tax revenues being used to fund priority local easement programs. This recommendation has been maintained.

Comprehensive Growth Policy Study

The Planning Department's 1989 "Comprehensive Growth Policy Study" (CGPS), an analysis of future development scenarios, also confirmed

the General Plan's wedges and corridors concept, but found that traffic congestion would be excessive unless we each drive less than we do today. CGPS tested ten development scenarios, which varied by amount, location, and concentration matched with a transportation system emphasizing travel by single-occupant car, car-pool, bus, or transit.

The study recommended that Montgomery County set a goal of reducing the average auto driver share of work trips from 75 percent to somewhere near 50 percent. To accomplish this, the study suggested ways to reduce car use such as:

- clustering housing and jobs near transit;
- improving mass transportation, including trolley lines, expansion of bus routes, carpool and bus lanes; and
- taking actions to help people reduce the car habit, such as auto/transit pricing, pedestrian oriented design, and providing more bikeways and sidewalks.

CGPS found that "the pattern of urban growth...is much more important that either the pace of growth...or the jobs to housing proportion of growth..." The study recommended that "Without losing sight of Wedges and Corridors, we should consider shifting our policy focus towards a vision called "Centers and Trails."

Although the CGPS study focused primarily on transportation, it also looked at water and sewerage systems needs for the next several decades and concluded that a serious problem in locating and building a major new sewage treatment plant will need to be solved by about the year 2000.

The study also concluded that Montgomery County probably can afford the costs of growth but that "the County's fiscal fate will be hostage to...influential external factors..." such as real income and property appreciation and state and federal funding. As we all know, recent actions of the Governor and State Legislature reducing State aid to Montgomery County, have proven this true. The CGPS suggested that funding patterns need to shift from the private sector (i.e., reduce private expenditure on automobiles and increase public sector revenue for transportation) to the public sector and that some ways to achieve this are to:

- tax the use of the private automobile (gas tax, parking fees, etc.) and
- obtain more direct state and federal aid for road and rail construction.

Growth Management Advisory Work Group

In October 1990, the Planning Board began the third step of the Refinement, by appointing a 15-member citizens group to advise the Board regarding the process of managing growth in Montgomery County. The Work Group concluded that "the General Plan has served the County well" and that "its vision of development interspersed with green space remains sound." After 12 meetings the Group issued a report, "Action Agenda", in May 1991. This report presents over 30 recommendations to the Planning Board on managing growth in Montgomery County. Three of its major recommendations deal with the General Plan as follows:

- "Investigate the need to refine the General Plan or modify its goals and objectives."
- "Evaluate the degree to which the General Plan has successfully accommodated actual growth and how successfully it can be expected to accommodate future growth..."
- "Define necessary changes, if any; and assess their effects, accounting for current and future needs..."

Other major recommendations include:

- Determine the appropriate time frame and geographic area(s) over which jobs and housing should be balanced.
- Evaluate current growth management tools.

- Foster regional cooperation in planning.
- Investigate a wider range of housing choices and locations.
- Study changing travel patterns and creative ways to reduce traffic.
- Identify, reserve, and establish priorities for funding new rights-of-way for transportation.
- Determine the level and pattern of growth that is financially sustainable.

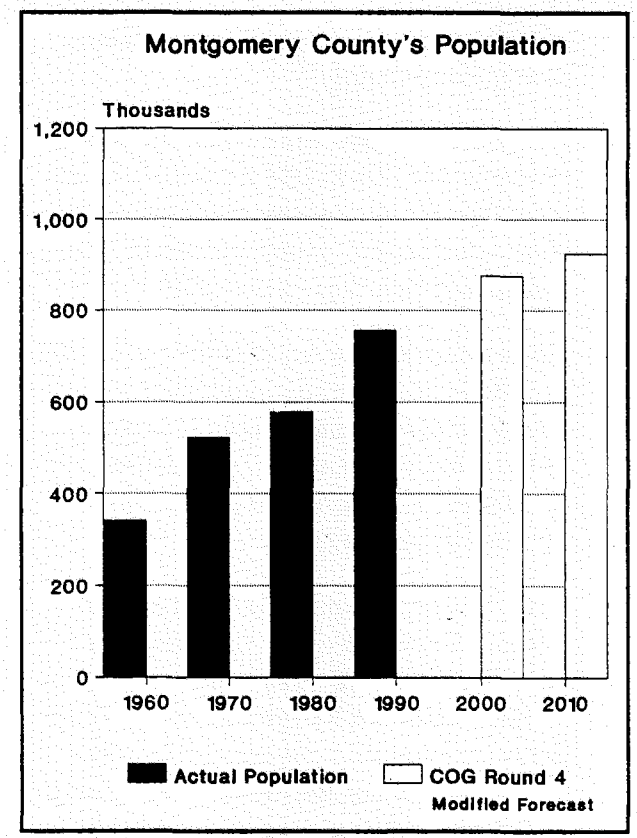
After receiving this advice, the Planning Board recommended that the Montgomery County Council amend the work program of the Planning Department. This General Plan Refinement is a result of the Work Group's advice and the specific recommendations of the Planning Board.

HOW HAVE WE CHANGED SINCE THE GENERAL PLAN WAS APPROVED?

Montgomery County has changed in many ways since the 1969 General Plan was approved. The following describes some of the major changes. At later workshops on particular goals such as housing, environment, economic activity, land use, and transportation, more detailed information will be presented.

Population

- *We are now the most populous jurisdiction in Maryland, with 757,000 people, about 235,000 more than in 1970.* In actual numbers of people, we grew almost as much in the 1980's as we did in the 1950's and in the 1960's, and less than expected in the forecast done for the 1969 General Plan. Population growth is expected to slow down during the next two decades. By 2010, Montgomery County is expected to be home to about 170,000 more people, bringing total population to about 925,000.



- *More than one-quarter of Maryland's population increase between 1970 and 1990 occurred here in Montgomery County.* The Maryland suburbs of the Washington, D.C., Metropolitan Statistical Area (MSA) accounted for 37 percent of the state's population in 1990, up from 34 percent in 1970. About one-fifth of the State's population growth between 1990 and 2010 is expected to occur in Montgomery County. We expect to grow faster than the state overall, but slower than the Washington, D.C. MSA.

- *Our regional population concentration has shifted from the city to the suburbs.* In 1970, Washington, D.C. accounted for about 25 percent of the MSA population and was the most populous jurisdiction in the MSA. By 1990, Washington, D.C. represented only 15.5 percent of the MSA's population and was surpassed by three suburban jurisdictions: Fairfax County, Montgomery County, and Prince George's County. Similarly, in 1970 Baltimore City was the most populous jurisdiction in Maryland.

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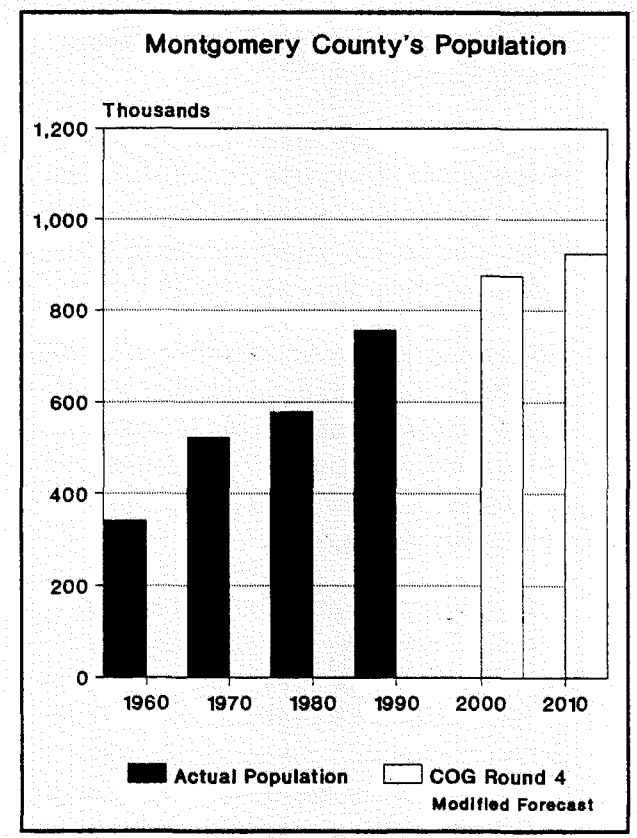

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In 1990 it is the second most populous after Montgomery County.

- *We are older.* In 1970, the median age of our residents was 27.9, in 1990 it was 33.9. Today more than 10 percent of us are 65 years or older, compared to about 6 percent in 1970 and an expected 12 percent in 2010.

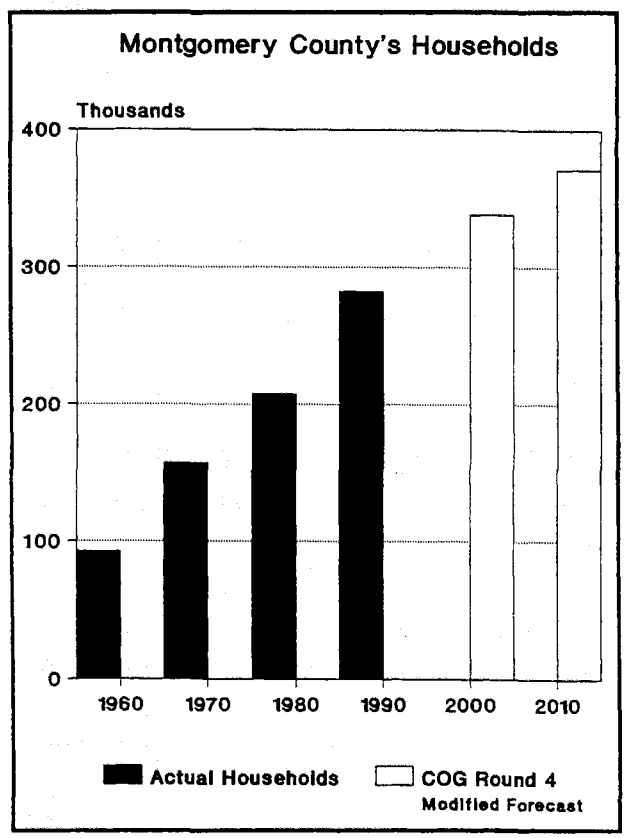
- *School-aged population began declining after 1972.* In 1970, 28 percent of our population was school aged, compared to only 16 percent in 1990. In fact, while our total population grew by 235,000, our school aged population declined by almost 25,000.

- *Births hit a record high at 12,604 in 1988 and are projected to remain high over the next several years.* This will have a major impact on future school enrollment. By 1996, about 131,000 students are expected to be enrolled in public schools, surpassing the previous record set in 1972. The number of children aged 0 to 17 is expected to increase from 178,000 in 1990 to 215,000 in 2010.

- *We are more racially diverse.* Our racial minorities make up almost one-quarter of the County's 1990 population, compared to only 5 percent in 1970. Blacks are our largest minority group at more than 12 percent of total population. Montgomery County's Asian population grew rapidly in the past twenty years, and at 62,000, is now 14 times as large as it was in 1970, accounting for over 8 percent of our total population. With almost 55,700 people of Hispanic origin, both white and non-white, we have the largest Hispanic population in the State of Maryland and in the Washington, D.C. MSA.

Households

- *The number of households grew almost twice as fast as population.* From 1970 to 1990, the number of households increased 80 percent while our population grew by only 45 percent. Some 282,000 households now reside here, more than in any other jurisdiction in Maryland. In 1970 Baltimore City, Baltimore County and Prince George's County outranked us. Household growth is expected to slow down and by 2010 Montgomery County should be home to about 90,000 more households, bringing the total household count to about 370,000.



- *Montgomery County is home to almost 20 percent of the Washington, D.C. MSA's households, second only to Fairfax County.* In 1970 both the District of Columbia and Prince George's County had more households than Montgomery County and Fairfax County. Over the next 20 years, we expect to grow at a slower rate than the Washington, D.C. MSA overall, and our share of total households will slip to about 18 percent of MSA households.

- *Our households are smaller now.* Average household size dropped from 3.30 to 2.65 as the proportion of the population under age 18 declined and the proportion of single-person

households increased. The number of persons living alone nearly tripled between 1970 and 1990. More than one-fifth of our households are now single-person households. We also have fewer family households. The share of non-family households jumped from 16 percent in 1970 to nearly 30 percent in 1990.

- *Median household income is about double the national median.* In 1970, the median income in Montgomery County was $16,710. In 1990, it had risen to $60,586. In contrast, the U.S. median was $8,734 in 1970 and $29,943 in 1990.

Housing

- *The majority of our housing stock is single-family.* About 70 percent of our housing stock is single-family, counting both single-family detached houses and townhouses, similar to the proportion in 1970. Although the production of multi-family housing declined in the 1980's, high production in the 1970's helped multi-family housing retain its 30 percent share of the total housing stock.

- *Our housing stock has changed significantly.* Between 1970 and 1990 the number of townhouses in Montgomery County increased from 2,420 units to 50,536 units. Today one quarter of single-family homes are townhouses and 17 percent of all homes are townhouses. The State of Maryland has a greater proportion of townhouses than Montgomery County with townhouses making up about 30 percent of its total housing stock.

- *Housing costs have escalated.* The Washington, D.C. area is among the country's top ten metropolitan areas in housing prices. At $217,290, the 1989 median price of a new home in Montgomery County was 19 percent higher than the Washington, D.C. area median and 81 percent higher than the national median. Montgomery County's median sales price increased by 429 percent between 1970 and 1989, almost twice the rate of inflation, faster than the 237 percent increase in median income, and essentially the same as the 413 percent increase in the U.S. median sales price.

- *Rents also are rising more rapidly than inflation.* The median rent in Montgomery County jumped 323 percent, from $165 in 1970 to $698 in 1990, while the Consumer Price Index rose only 240 percent. Our rent increase is similar to rent increases in Maryland as a whole.

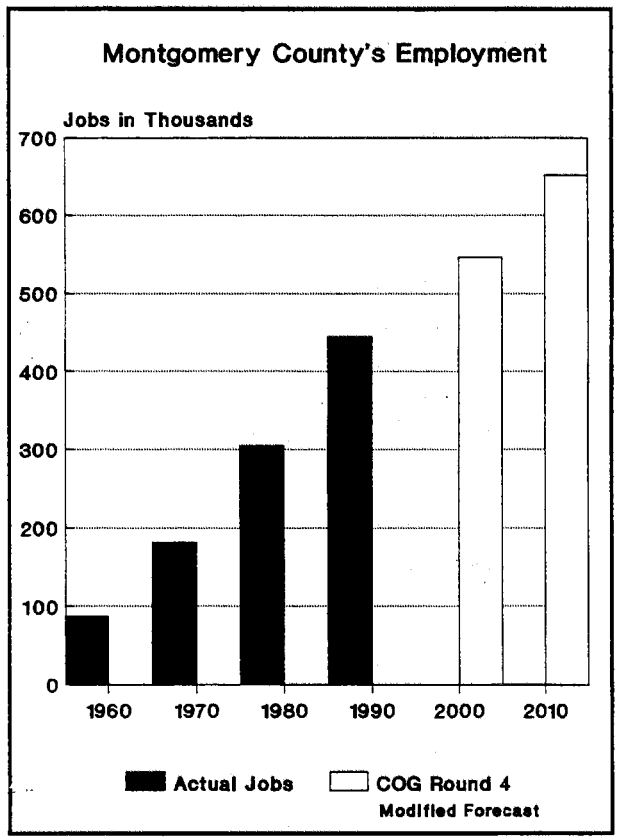
- *More of us own our homes.* The proportion of households owning their own homes increased from 61 percent in 1970 to 68 percent in 1990.

Employment

- *We are no longer a bedroom community to Washington, D.C.; we have become an employment center in our own right.* Between 1970 and 1990, the number of jobs in Montgomery County more than doubled to 445,000 jobs. We created jobs more quickly than the State and exceeded the forecast of the 1969 General Plan. One out of every 5.5 jobs in the State is now located in Montgomery County; in 1970 it was only one out of every 7.3. By 2010, Montgomery County is expected to add about 200,000 more jobs, boosting total employment to 650,000. Our forecasted growth rate for employment is almost double the rate for the State and similar to the rate forecasted for the Washington, D.C. MSA.

- *Montgomery County has the third largest number of jobs in the Washington, D.C. MSA.* Although we grew more rapidly than the MSA as a whole, record high employment growth pushed Fairfax County to second place after the District of Columbia. As Montgomery County's share of MSA employment rose from 15 to 18 percent, the District of Columbia's share fell from 43 to 28 percent.

- *More of us work in Montgomery County.* In 1987, nearly 60 percent of Montgomery County's employed residents worked in the County, compared to about 54 percent in 1970. During



this time, the proportion of residents who work in the District of Columbia declined, from one-third to one-quarter of all employed Montgomery County residents.

Workforce

- *Women have become a large component of our workforce growth.* Between 1970 and 1990 the female labor force participation rate jumped from 45 percent to 66 percent, well above the current U.S. participation rate of 54 percent.

Environment

- *The early 1970's were landmark years for federal environmental legislation.* The 1970 Clean Air Act and the 1972 Clean Water Act were signed into law. In 1970 we celebrated our first Earth Day and the Environmental Protection Agency was created.

- *Regional air quality is still below the national standard for ozone and we continue to be a non-attainment area.* While we have succeeded in reducing some air pollutants, the region failed to meet the ozone standard for 4 days in 1990 and 26 days in 1988.

- *Water quality of the Potomac River has improved dramatically.* Stringent controls on point source and non-point source pollution in tributary streams have helped to improve the Potomac River.

- *We recycle more.* In 1970 the County did not have a recycling program. In 1990 we recycled 17 percent of our solid wastes. Our goal is to recycle 35 percent of our solid wastes by 1995 and 40 percent by 2000.

Transportation

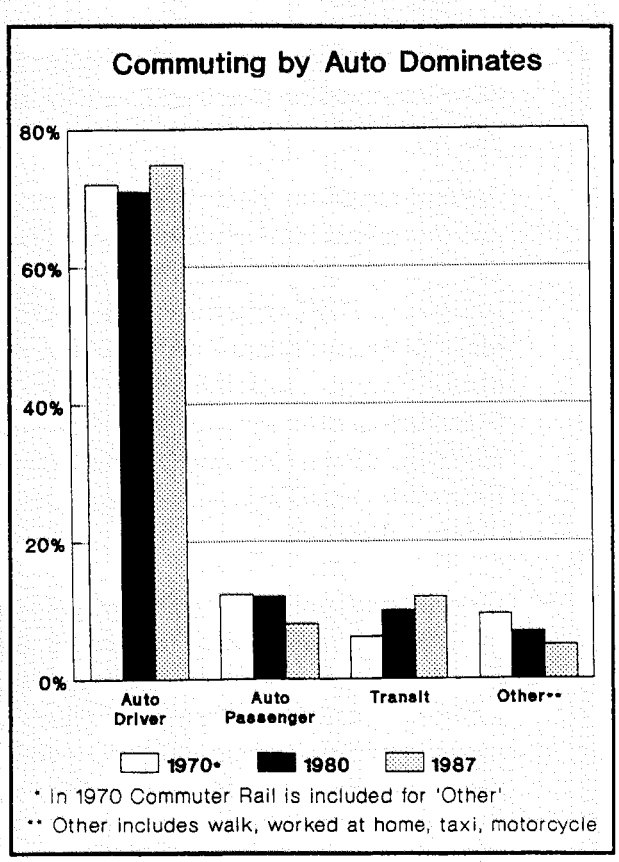
- *We make more trips, especially non-work trips.* On an average weekday, we made 1.5 million trips in 1988, about 50 percent more than in 1968. The most dramatic increase was in the number of non-work trips during the peak hours, such as trips to the store or day care center, which almost doubled during this time period.

- *Travel patterns have changed.* There are more suburb-to-suburb trips now than there were 20 years ago because more of us live and work in the suburbs and because we have become an employment center in our own right.

- *Time spent driving to work has decreased slightly.* The average Montgomery County resident spent slightly less time driving to work, 23 minutes in 1988, compared to 27 minutes in 1968, and only slightly more time making non-work trips. This may be due to shorter distances between home and work.

- *Commuting by auto continues to dominate.* About 83 percent of us travel to work in cars. During the 1980's, the percentage of commuters driving alone increased from 62 percent to 72 percent, while the percentage of carpoolers declined from 21 percent to 11 percent.

- *More of us use transit.* In 1970, before there was Metrorail and Ride-On, only 6.2 percent of us



commuted by transit. By 1987, this percentage had almost doubled.

- *We own more motor vehicles.* Between 1970 and 1990, the number of cars and motorcycles we own almost doubled to 489,000. Despite a 20 percent decrease in household size, the number of cars per household has increased from 1.66 in 1970 to 1.74 in 1990.

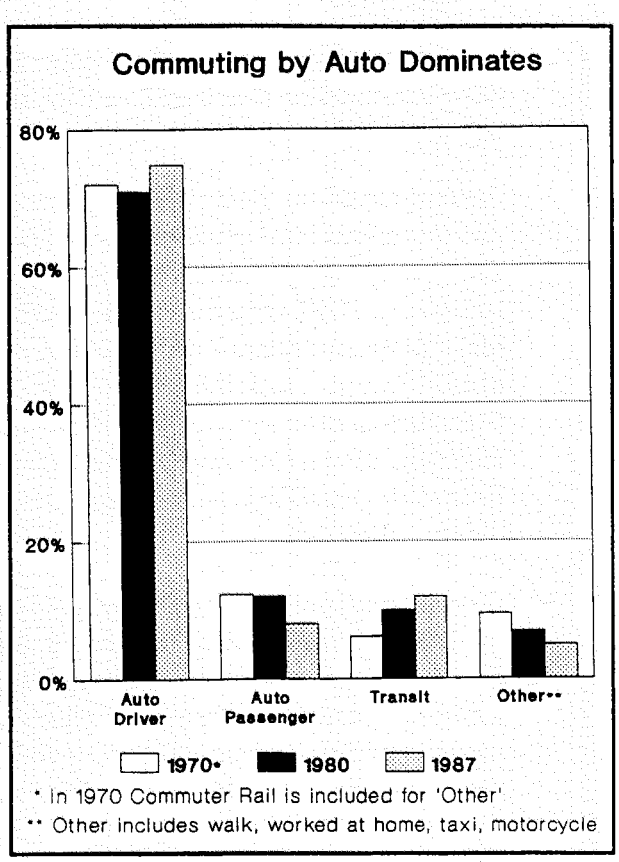
- *Our roads are traveled more.* Average daily vehicular travel on state maintained roads increased from a little over 4 million in 1967 to almost 11 million in 1989. While daily travel on state roads grew 175 percent, the number of lane miles of state roads increased only 20 percent.

- *Peak hour congestion has been growing.* In 1980, travel in the peak hour used about 50 percent of the County-wide roadway capacity. By 1989, this had increased to about 75 percent, resulting in more locations operating under congested conditions. Between the early 1970's and the late 1980's, the number of intersections in Montgomery County operating at congested conditions grew from about 80 to about 240.

A SUMMARY: HOW MONTGOMERY COUNTY HAS IMPLEMENTED THE GENERAL PLAN

During the past 22 years, Montgomery County has implemented the General Plan in many ways. Since the 1969 General Plan was approved, the Montgomery County Council has approved about 40 master plans and sector plans and six functional master plans, such as the "Park, Recreation, and Open Space Master Plan," the "Master Plan of Bikeways," and the "Functional Master Plan for the Preservation of Agriculture and Rural Open Space." Each of these plans is actually a formal amendment to the General Plan. While most of these plans are consistent with the General Plan, several plans have recommended major changes. One example of a major change is the 1981 "Eastern Montgomery County Master Plan," which eliminated the Fairland corridor city recommended in the General Plan. Another example was the 1971 "Gaithersburg Vicinity Master Plan," which acknowledged that Gaithersburg, a corridor city, did not have a single center of employment and shopping activities as envisioned in the General Plan, but instead had several employment centers located away from the core.

The General Plan also has been implemented through many governmental regulations, guidelines, and zoning text amendments. Montgomery County now has many development guidelines which help the County realize the type of development it desires. For example, the County now prohibits development in the 100-year floodplain and requires stormwater management controls. Another example is the "Local Area Transportation Review Guidelines," used at the time of subdivision, which helps the County better match the timing of development with future traffic improvements. During the 1970's and 1980's,



commuted by transit. By 1987, this percentage had almost doubled.

- *We own more motor vehicles.* Between 1970 and 1990, the number of cars and motorcycles we own almost doubled to 489,000. Despite a 20 percent decrease in household size, the number of cars per household has increased from 1.66 in 1970 to 1.74 in 1990.

- *Our roads are traveled more.* Average daily vehicular travel on state maintained roads increased from a little over 4 million in 1967 to almost 11 million in 1989. While daily travel on state roads grew 175 percent, the number of lane miles of state roads increased only 20 percent.

- *Peak hour congestion has been growing.* In 1980, travel in the peak hour used about 50 percent of the County-wide roadway capacity. By 1989, this had increased to about 75 percent, resulting in more locations operating under congested conditions. Between the early 1970's and the late 1980's, the number of intersections in Montgomery County operating at congested conditions grew from about 80 to about 240.

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many new zones were added to the Zoning Ordinance limiting development in rural areas, allowing mixed use high density development in transit station locations, and increasing the number of residential zones to expand housing choices.

On the other hand, the County has failed to implement the General Plan in several ways. For example, several major roadways, such as sections of the Outer Beltway have been removed from the Plan. Another example is that development is being restrained around many transit stations. In addition, affordable housing is greatly limited, despite the County's efforts to increase the amount of such housing.

This fact sheet provides just a short summary of some of Montgomery County's major successes and some of the County's shortcomings in implementing the General Plan. This summary is organized by General Plan goal topics.

Land Use

- *The concept of the wedge has become more clearly defined and implemented during the past two decades.* A series of master plans designated low density residential zoning in broad areas to maintain their wedge character. An 89,000-acre Agricultural Reserve was created in 1980 to further protect the wedge, specifically, farmland and rural open space. Montgomery County has protected this area using a preferential agricultural zone in conjunction with a Transfer of Development Rights (TDR) program and State and County easement purchase programs. As of 1991, more than one-third of this area has been protected through these easement programs.

- *The concept of the corridor has been implemented, but in a more scattered and less dense pattern than called for in the General Plan.* Between 1982 and 1989 about half of Montgomery County's new homes and half of its new commercial square footage was built in the corridor cities of Rockville, Gaithersburg, and Germantown. However, much of this development was scattered throughout the corridor rather than being concentrated near transit stations as recommended in the General Plan.

- *Parkland acquisitions generally have kept pace with the increase in the number of households.* The County owns about 27,300 acres of parkland today, 11,300 acres more than in 1970. Major park acquisitions during the past two decades include Black Hill Regional Park, Great Seneca Extension Stream Valley Park, Blockhouse Point Conservation Park, Little Bennett Regional Park, and Muddy Branch Stream Valley Park.

- *On-site recreational space is now required in many new developments.* In 1991, the Planning Board adopted "Guidelines for Recreational Amenities in Residential Developments," which are used to determine whether the recreational amenities in planned housing developments are adequate. These guidelines apply to all site plans of 25 or more homes, except where lot sizes are more than one acre.

- *Capital budgeting has been improved.* In the late 1960's, the Capital Improvements Program emerged as a separate budget document and in 1970 the Council approved it's first six-year CIP for all local government agencies. The current CIP, the FY 92-97 CIP budgeted more than $1.9 billion for capital improvements over the six-year period. Despite this great progress, the CIP continues to suffer from project deferrals and deletions. Some projects which were relied on for the Annual Growth Policy have been deferred.

- *Public facility provision has been tied to development.* The County's Adequate Public Facilities Ordinance (APFO) and the Annual Growth Policy (AGP) attempt to synchronize development with the availability of public facilities such as roads, transit, schools, sewer, and water service. The APFO, adopted in 1973, requires that public facilities adequate to serve a proposed subdivision be existing or pro-

grammed for construction in the capital budget before the Planning Board can approve that subdivision.

- *Some sites have been reserved for community facilities before private development occurs.* The Maryland National Capital Park and Planning Commission established an Advanced Land Acquisition Revolving Fund (ALARF) in 1971 to purchase sites needed for future public use such as parks, schools, and right-of-way for State highways and transit projects. The Commission has used this fund to purchase land in Paint Branch Stream Valley Park, Sligo Creek Park, Rock Creek Park, and Seneca Creek Park. It also has used this fund to purchase the right-of-way for the I-370 and I-270 Interchange, the Intercounty Connector, the Rockville Facility, Falls Road widening, and Capitol View Avenue. Today, the fund has real estate holdings which cost about $23 million and a remaining balance of about $1.5 million. Advance dedication of public school sites and road alignments also has been helpful.

- *Community participation has been encouraged.* Today there are more than half a dozen committees advising the Planning Board on individual master plans and sector plans. The Planning Board also is conducting a far reaching community participation and public education program during the General Plan Refinement effort.

Circulation

- *A coordinated rail-bus transit system has been provided.* Eleven of the twelve Metrorail stations planned for Montgomery County have been built and are in operation. MARC commuter rail now has 11 stations connecting Dickerson to Germantown to Silver Spring. The Metrorail system and the MARC commuter rail system are complemented and accessed by Metro buses, the County's Ride-On buses, more than 18,000 park-and-ride spaces, bicycle storage, bikeways, and sidewalks. Each of the bus systems logged over 7 million miles in 1990. Although this system does a good job serving north-south travel needs, improvements are needed to serve the demand for cross-county trips.

- *New roads have been built in Montgomery County, but not at the pace anticipated.* Since 1970, I-270 has been widened in some places to 12 lanes and the major highways of Great Seneca Highway, sections of Mid-County Highway, and Sam Eig Highway/I-370 have been constructed. Several new County and city arterials such as Tuckerman Lane, Democracy Boulevard Extended, Ritchie Parkway, and Perry Parkway have been built. Most of the other road improvements have been widenings to existing roadways and intersection improvements.

- *Several major roads have not been built as called for in the General Plan.* Several major roads have been removed from master plans, the General Plan and the Master Plan of Highways including the Northern Parkway and North Central Freeway, which together connected Washington, D.C. to Howard County; sections of the Outer Beltway; and the U.S. 29 Bypass.

- *One of the other Maryland corridors, the I-95 Corridor, does not have the amount of transportation infrastructure envisioned in the General Plan.* The rapid rail transit line recommended in the Plan for the I-95 Corridor was never built. Also the extension of I-95 from the Beltway into the District of Columbia has not been built.

- *The need for non-motorized transportation has been recognized.* About 165 miles of bike paths, lanes, and routes have been built in Montgomery County. In 1970 there were only about 10 miles of bikeways in the County.

- *Traffic congestion has been eased somewhat through traffic mitigation programs.* Since 1982,

more than 25 traffic mitigation agreements have been signed to reduce the number of auto trips attracted to a development site. The Silver Spring Transportation Management District expands this concept over an entire area and encourages reduced use of the car by offering incentives such as transit fare discounts and ride-sharing matching services.

Environment and Conservation

- *The region continues to suffer from poor air quality.* The 1990 Clean Air Act Amendments will require many changes in the region such as cleaner fuels, use of gasoline vapor recovery facilities, transportation demand management, more clustered development, and the potential use of California standards for car emissions.

- *More sewage treatment capacity has been constructed.* Great strides were made in improving water quality by adding sewage treatment capacity in the region, improving, in addition, the level of treatment given to waste water. Capacity was added at Blue Plains (309 million gallons per day (mgd)), Piscataway (30 mgd), and Western Branch (30 mgd). Levels of treatment were improved to state of the art levels with phosphorus removal, a phosphate detergent ban, and dechlorinization.

- *There is more control over the extension of water and sewer service.* The County first adopted the "Comprehensive Water Supply and Sewerage Systems Plan" in 1970. This Plan enables the County to stage the extension of sewer and water service consistent with the recommendations expressed in local master plans, thus directing growth where it belongs. However, there are areas where the recommendations of the master plans have not yet been implemented in the Water and Sewer Plan. This nonconformity has been recognized by the relevant agencies.

- *Montgomery County has more reservoirs.* Two reservoirs serving Montgomery County have been constructed since 1970. Little Seneca Lake in Black Hill Regional Park provides both water storage and recreational opportunities for Montgomery County residents. The second reservoir is located in West Virginia.

- *Montgomery County has made great progress in protecting stream valleys.* About 11,000 acres have been set aside in parkland to protect our fragile stream valleys.

- *There are more regulations to protect environmentally sensitive areas than in 1970.* The County employs a wide variety of regulations during the development process to minimize the effects of development on the environment. Included in these are stormwater management requirements, stream valley buffers, and forbidding development in the 100-year ultimate floodplain or on steep slopes.

- *Montgomery County has made some progress in protecting water resources, but many streams still do not achieve water quality standards set by the State of Maryland.* Land acquisitions, conservation easements, and land use management techniques such as large lot zoning have helped Montgomery County protect its water resources. The improvement in the Potomac River has been extraordinary. However, many streams do not achieve State water quality standards. Greater emphasis will be needed to control pollution from both urban and agricultural stormwater run-off and to maintain and restore stream biological integrity.

- *There are comprehensive guidelines for development.* "The Environmental Management of Development in Montgomery County, Maryland" was approved for use in 1983. This manual provides a comprehensive set of guidelines to be used by developers, Planning staff, and the Planning Board when preparing and reviewing an application for development.

- *Some roadway alignments have been modified to minimize environmental impacts.* Montgomery

County has modified some alignments recommended in the General Plan to reduce impacts on environmentally sensitive areas. Some of the major roads recommended in the 1950s and 1960s, which used stream valleys to create a parkway-like environment and to minimize grading, have been deleted or rerouted.

- *Noise mitigation is required.* The 1983 "Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Planning and Development" require that individual developments mitigate noise impacts in residential areas. The purpose of these guidelines is to reduce highway related noise impacts.

- *Tools to protect and preserve our historic and architectural heritage were created.* In 1979 the Montgomery County Council adopted the "Master Plan for Historic Preservation" and enacted the Historic Preservation Ordinance, creating the Historic Preservation Commission. As of October 1991, 231 historic sites and 15 historic districts, such as Kensington, Sandy Spring, and Hyattstown, have been designated.

Housing

- *The variety and choice in residential development has been enhanced.* By using townhouse and cluster zones in master plans, Montgomery County greatly increased the number of housing choices.

- *Tools were created to concentrate residential development near transit.* In the early 1970s, the County created new zones to concentrate residential development in mixed use areas near Metrorail stations through the Transit Station Residential (TSR) zone, Transit Station Mixed Use zone (TSM), and Central Business District (CBD) zones. Development in these zones has not been as much as anticipated, in part because of economic constraints.

- *Montgomery County's stock of affordable housing has grown and been distributed throughout the County thanks to the Moderately Priced Dwelling Unit Ordinance, which was enacted in 1973.* This law requires 12.5 to 15 percent of housing in new residential developments of 50 or more units to be provided at below-market sales prices or rents. As of the end of 1990, 7,800 MPDUs have been constructed under this program. Despite this progress, Montgomery County continues to suffer from a lack of affordable housing. As of the fall of 1991, there were about 8,300 applicants for low and moderate priced housing.

- *Government owned land has been used to help meet our housing needs.* The re-use of Belt Junior High School and Pleasant View Elementary School, and the re-development of Kensington Junior High School for an elderly housing complex are good examples.

- *The County government more aggressively pursues scattered sites for affordable housing.* In addition, new programs mix income groups in government sponsored affordable housing to compensate for the major reduction in federal funds for housing.

INTRODUCTION

The General Plan's land use goal provides a platform which underlies the relationships and connections among the other goal topics. The land use goal focuses on the pattern of land use in Montgomery County.

This fact sheet presents information about the major types of land uses in Montgomery County: housing; employment; farmland and rural open space; and recreation, parks and community facilities. Transportation, the environment, community identity and design and the County's relationships with other neighboring governments are not highlighted but form an underlying set of opportunities and constraints to the general land use pattern. Together, all the goals and objectives give guidance to area master plans and functional plans which set specific locations for individual land uses for each piece of property in the County.

The fact sheet concludes with a discussion of the overall land use pattern and the County's supply of land. Additional information about housing and the environment is available in the previous fact sheets on those topics. Information on transportation, community identity and design, economic activity, and regionalism will be available in later fact sheets.

I. CHANGES IN LAND USE

The amount of land in Montgomery County is fixed; how it is used is not. The land area of Montgomery County is approximately 495 square miles, or about 320,000 acres. Information is available on how the general land uses of the County have changed between 1960 and 1991. The following are some of the more significant observations from a comparison between the two time periods.

* **Between 1960 and 1991, the amount of developed land has increased over three times.** In 1960, about 49,000 acres of the County had been developed while in 1991 the corresponding amount is about 155,000 acres. These amounts represent about 15 and 48 percent of the total land area, respectively. Developed land includes residential, community facilities, parks and recreation, commercial and industrial, as well as other uses such as right-of-ways for transportation and utilities.

Summary of Land Use, 1960–1991
(in Acres)

	1960 Number	1960 Percent	1991 Number	1991 Percent
Single-Family	23,700	7.5%	86,800	26.7%
Multi-Family	700	0.2%	6,700	2.1%
Commercial	1,000	0.3%	5,600	1.7%
Industrial	1,000	0.3%	2,800	0.9%
Loc.Gov., Institutions, Fed. Install, other open	10,600	3.3%	22,800	7.0%
Park & Rec.*	6,800	2.1%	24,100	7.4%
Vac. Forest, Ag.	263,400	82.8%	167,300	51.6%
Other, including ROW	10,800	3.4%	8,400	2.6%
TOTAL**	318,000	100.0%	324,500	100.0%

* Some parkland is included in other categories.

** Totals vary due to differences in tabulations of rights-of way and islands.

Source: Montgomery County Planning Department

* **Residential uses are the most common land use, accounting for about 60 percent of the developed land in 1991.** In 1991, there were about 93,000 acres of land in residential use. The next most common developed uses were park and recreation uses with about 24,000 acres. Other community facilities, government and other open space accounted for about 23,000 acres. Office, commercial, retail and industrial uses had about 8,400 acres while transportation and utility right-of-ways accounted for about 6,000 acres in the developed areas.

* **The proportions among the developed land uses, while having changed somewhat, remained relatively stable between 1960 and 1991.** Between 1960 and 1991, the table shows that the proportion of developed land devoted to residential and commercial uses increased as did land for parks, recreation and open space. Smaller proportional increases occurred in community facilities,

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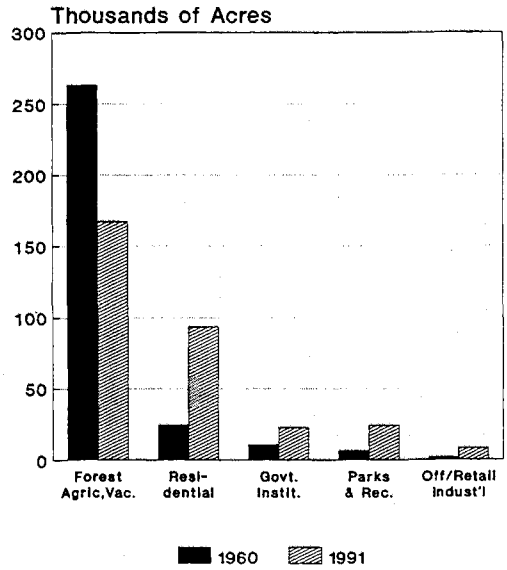
Between 1960 and 1991 Land Use Changed Toward Developed Classifications



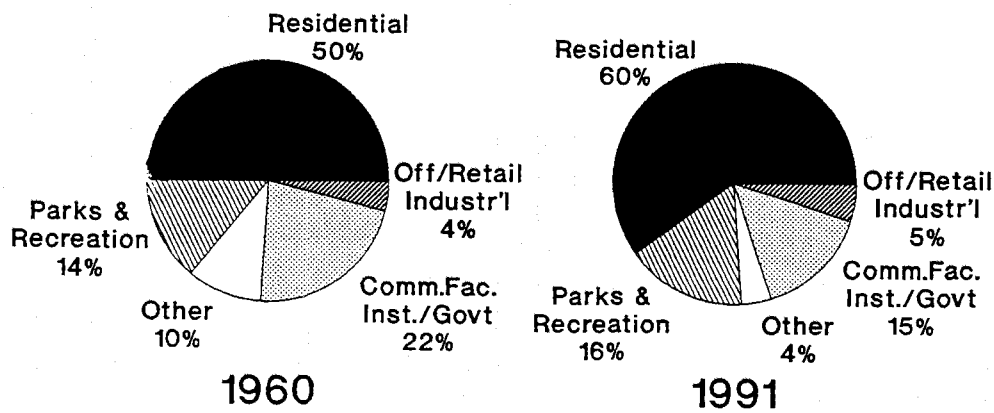
Source: Montgomery County Planning Dept.

government uses, institutions and transportation and utility right-of-ways.

*** The distribution of land by major zoning category has changed significantly since 1960. The changes in zoning have often tended to limit, rather than encourage, changes in use. An example of this is the introduction of rural zones to protect farmland.** In 1960, over 98 percent of Montgomery County's zoned land was zoned for single-family residential use; by 1991, this percentage had declined to just over 50 percent. The most significant shift was that of over 40 percent of the County's zoned land from single-family residential zoning to the newly created rural zones. Multi-family residential zoning also experienced a significant percentage increase from 0.4 percent to 1.7 percent of the total. About 17 percent of the multi-family capacity is currently vacant or redevelopable.

Two other changes highlighted by the table of zoning distribution are the development of

The Percentage of Residential and Park Uses Increased Between 1960 and 1991



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mixed-use zones as a significant zoning category and the increase in land zoned for commercial and industrial use from 1.1 percent to 3.9 percent. (It is important to note that although the actual number of acres of land zoned for commercial, industrial and multi-family use is still very small compared to other categories, the yields per acre of jobs and housing units in these zones is comparatively high.)

Percentage Distribution
of Montgomery County's Zoned Land
by Zoning Category
1960 - 1991

Zone	1960	1991
Commercial	0.4%	1.1%
Industrial	0.9%	2.8%
Mixed Use	N.A.	1.4%
Multi-Family	0.4%	1.7%
Single-Family	98.3%	51.2%
Rural	N.A.	40.8%
Other	N.A.	0.9%
Total	100.0%	100.0%

Note: Total is less than the County's total acreage because most water areas and many rights-of-way are not zoned.

Source: Montgomery County Planning Department, Maryland State Tax Assessor's Parcel File, and ...On Wedges and Corridors, 1964, February 1992

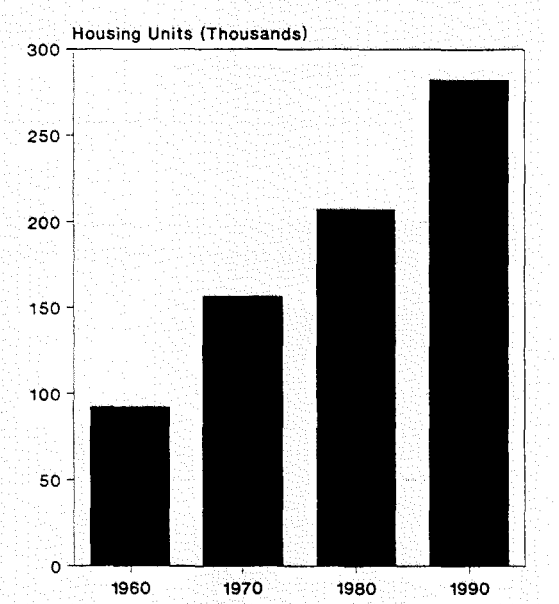
II. RESIDENTIAL LAND USE

Montgomery County's housing stock has grown substantially in quantity and variety since the 1969 General Plan was adopted.

A. Quantity

*** The number of housing units in the County grew by 83 percent between 1970 and 1990, from 161,000 to 296,000.** The larger increase occurred in the 1980s when the number of housing units increased by 37 percent, or 79,500 units. The amount of growth in the 1970s was 34 percent, or 55,000 units.

*** Montgomery County's 83 percent growth exceeded the region's rate of 56 percent.** The County's growth rate was less than that of Fairfax County, where the housing stock increased by more than 127 percent, from 141,000 units to 320,000 units, but more than Prince George's County, where the housing supply increased by only 35 percent, from 200,000 units to 270,000. (The data includes the cities in each county.)



Source: U.S. Bureau of the Census
and Montgomery County Planning Dept.

B. Housing Types

*** Between 1970 and 1990, the composition of Montgomery County's housing stock changed significantly.** Single-family detached houses declined from a 68 percent share to a 52 percent share, while townhouses emerged as a major housing type. In fact, townhouses increased from about 1 percent of the housing stock, or 2,400 units, in 1970 to a significant 17 percent or 50,500 units, by 1990. Townhouse completions were 39 percent of all residential completions from 1981 through 1990, reaching a high of 53 percent in both 1982 and 1983. The percentage

mixed-use zones as a significant zoning category and the increase in land zoned for commercial and industrial use from 1.1 percent to 3.9 percent. (It is important to note that although the actual number of acres of land zoned for commercial, industrial and multi-family use is still very small compared to other categories, the yields per acre of jobs and housing units in these zones is comparatively high.)

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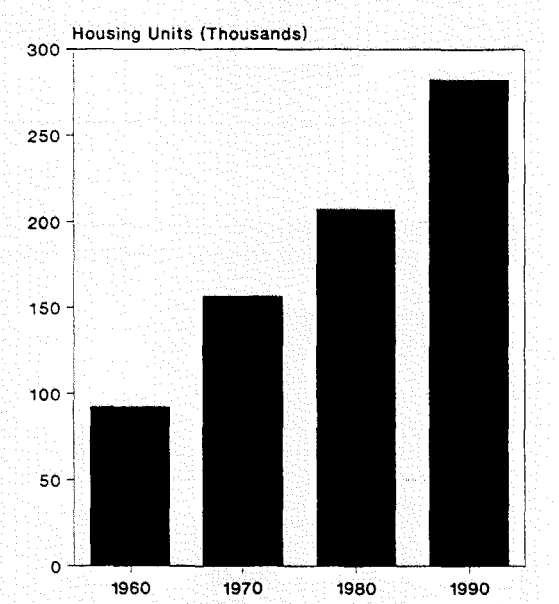

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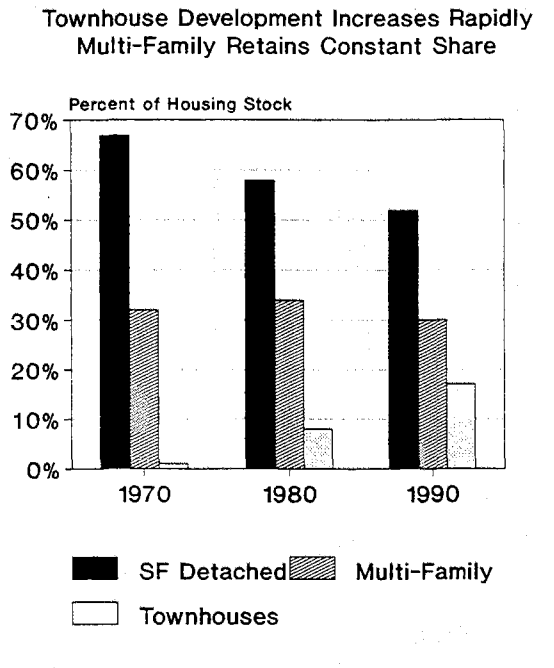
of townhouses completed relative to the percentage of single-family detached houses has been declining since 1986, however.

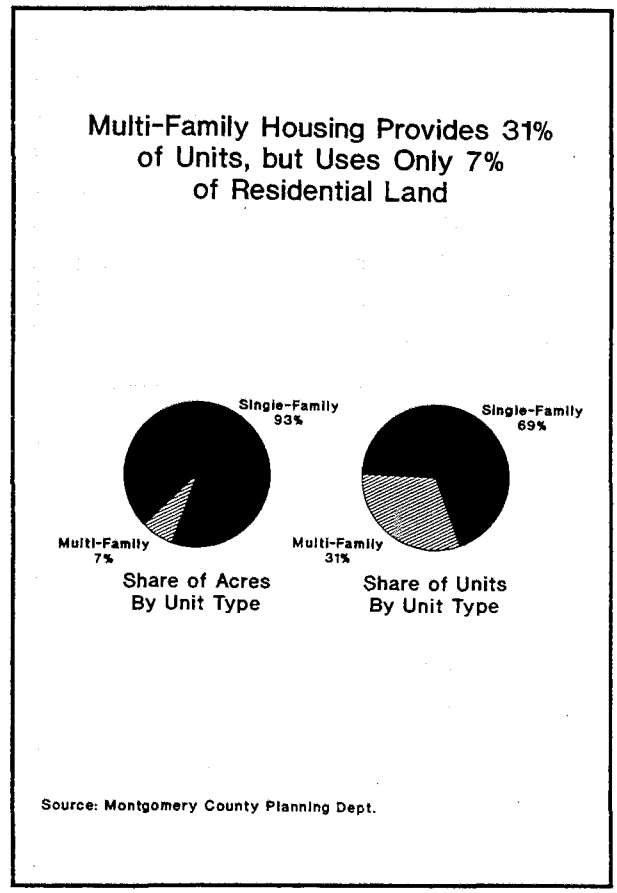
*** Multi-family housing retained a comparatively constant share of the housing supply, declining slightly from 31 percent in 1970 to 30 percent in 1990.** The most dramatic growth in the number of apartments took place in the preceding decade, the 1960s, when new construction boosted the total by 33,000 units, from 18 percent to 31 percent of all housing units.Multi-family housing occupies 7 percent of residential land in 1991 (2 percent overall), while accommodating 31 percent of all housing units in 1992.



Source: U.S. Bureau of the Census and Montgomery County Planning Dept.

C. Large Lot Residential Wedge

*** Area master plans and functional plans since 1969 have further defined the wedge.** All master plans since 1969 have considered areas zoned for lots of one and two acres as the residential wedge. In 1981, the Agricultural Reserve was



Source: Montgomery County Planning Dept.

created by the adoption of the *Functional Master Plan for the Preservation of Agriculture & Rural Open Space*. These actions have articulated these two types of wedge areas. This section describes the residential wedge while the agricultural wedge is discussed in Section V.

*** The residential wedge is now characterized by single-family, detached houses on lots of one and two acres.** Houses on large lots existed before the adoption of the General Plan, of course, but the location, zoning and quantity of such housing has become more clearly defined in the intervening period.

*** In 1991, nearly 57,000 acres of land were zoned for lots of 1 and 2 acres, representing almost 20 percent of the County's land area.** More than 40 percent of this area is tax exempt, however, usually meaning that it is in public or non-profit use such as golf courses or parks. Of the remainder, about 27,000 acres are vacant or redevelopable, and more than 13,000 housing units

are currently located in these zones. About 25 percent of the residential wedge is within the sewer envelope. (This land is classified as residential in the table of zoned land by zoning category.)

D. Future Residential Growth

1. Development Capacity

*** The total capacity of residentially zoned and planned land ranges from 440,000 to 480,000 housing units.** In general, the low figure represents the capacity of the land if it were developed at its current base zoning density. The high presumes extensive use of floating zones such as planned development and other higher density zoning options.

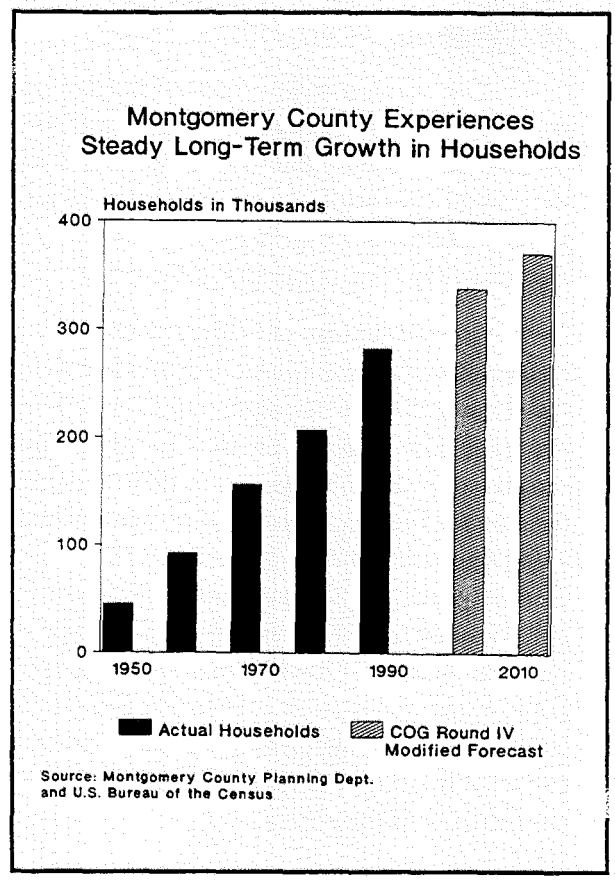
*** If growth were to continue at the 1980s pace, Montgomery County would near the build-out of its zoned capacity for housing within 20 years.** As the household forecast section shows, the pace is expected to be slower in the next decades.

*** Of the total zoned capacity, between 146,000 and 183,000 units remain to be built.** About 296,000 housing units already exist. In September 1991, the pipeline of approved development contained 33,200 units, 23 percent of the total low remaining zoning capacity.

*** Eight percent of the total residential development capacity is located in the County's ten current Metrorail station sector plan areas.** This percentage would increase if planned transit-oriented development in the I-270 corridor, such as that in Germantown and the Shady Grove Study Area, were included. (The increase in the percentage of capacity associated with planned transit-oriented development will be available at the Planning Board worksession.)

2. Household Forecast

*** Household growth is expected to continue, but at a slower pace between 1990 and 2000 than Montgomery County experienced in the 1980s.** The Planning Department's Round IV



Modified Intermediate Forecast predicts that the County will see the construction of 56,000 new housing units by 2000 compared to 70,000 in the previous decade. The forecast expects the total number of households to reach 371,000 by 2010. (Planning Department forecasts are consistent with Council of Governments' forecasts and are expressed in terms of households rather than housing units. The number of housing units tends to be slightly higher than the number of households).

III. EMPLOYMENT LAND USE

The amount of land used for employment has grown more rapidly than expected by the 1969 General Plan. Employment land use has also been more intensive than envisioned and oriented toward office and service uses rather than the anticipated industrial and manufacturing uses.

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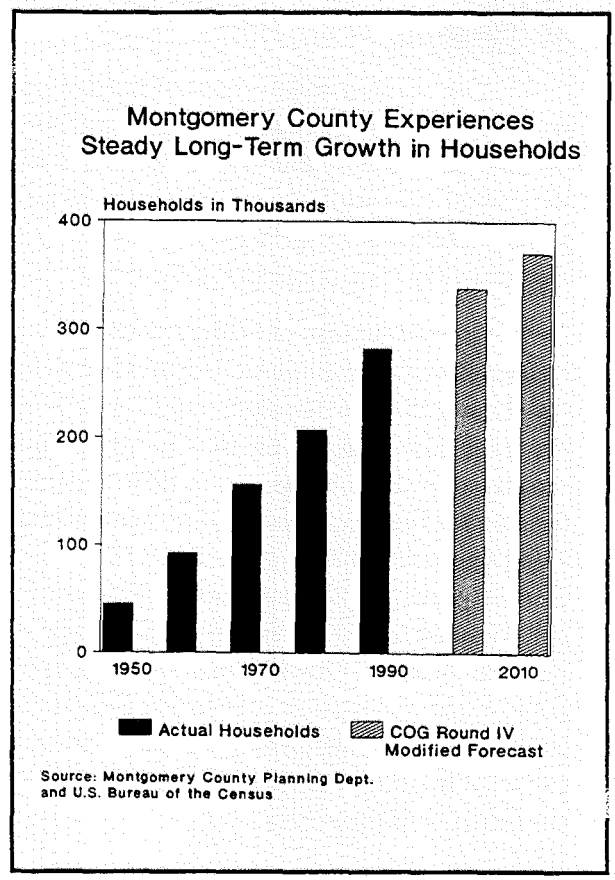

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A. Quantity

* **The number of jobs located in Montgomery County has more than doubled since 1970.** Montgomery County Planning Department data shows that total at-place employment in Montgomery County grew from 182,000 in 1970 to 455,000 in 1990, an increase of 150 percent.

* **The percentage of Montgomery County residents working in the County has increased.** Nearly 60 percent of Montgomery County's employed residents worked in the County in 1987, compared to about 54 percent in 1970. Although the General Plan expected employment growth along the corridors and in the urban ring, the radial pattern of the Plan implied that the central city, Washington, D.C., would remain the primary job location. The change in the geographic distribution of residents' jobs makes this less and less true. Most of the County's jobs are located as expected in centers along the corridor or within the urban/suburban ring.

* **Montgomery County's share of regional employment increased as Washington, D.C.'s share continued to shrink.** Between 1970 and 1989, the County's share of regional employment grew from 15 to 18 percent. During this period Washington, D.C.'s share of regional employment fell from 43 percent to 28 percent. According to the U.S. Bureau of Economic Analysis, Montgomery County's growth of 113 percent exceeded the region's 78 percent, but was smaller than Fairfax County's growth of 270 percent.

B. Future Growth in Employment

1. Development Capacity

* **The total full development job capacity of employment-related zoned and planned land in Montgomery County ranges from 1,080,000 jobs to 1,340,000 jobs.** Existing buildings account for about 40 percent of total capacity. Of the total capacity, space for 620,000 to 880,000 jobs remains to be built. In September 1991, the pipeline of approved development contained 125,000 jobs.

* **If growth were to continue at the average annual rate of the years between 1970 and 1990, Montgomery County would have enough zoned capacity for jobs well beyond 2040, based on the low estimate of capacity.** Growth is expected to be slower in the next decades, however.

* **About 17 percent of the total employment related development capacity is located in the County's ten Metrorail station sector plan areas.** This percentage would increase if planned transit-oriented development in the I-270 corridor, such as that planned for the Shady Grove area, were included. (The increase in the percentage of capacity associated with planned transit-oriented development will be available at the Planning Board worksession.)

2. Employment Forecast

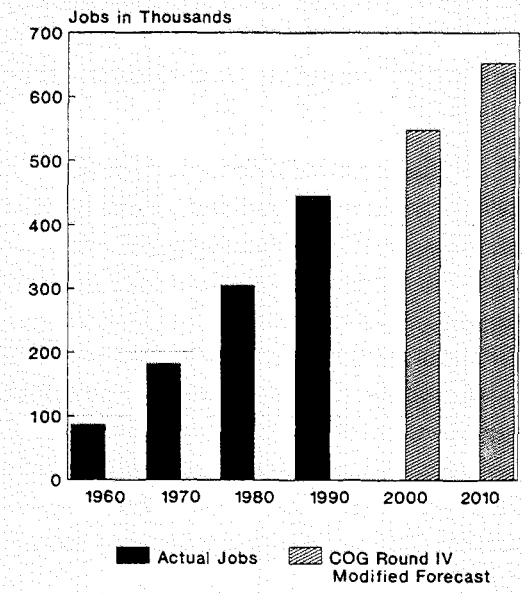
* **Continued employment growth is expected in the coming decades, but at a slower rate than that of the past 20 years.** Montgomery County is expected to add about 200,000 jobs over the next 20 years, boosting total employment to 650,000 by 2010.

C. Employment Types

* **Contrary to the General Plan's expectations, there has been greater growth in office employment and space than in industrial employment and space.** New office space accounted for 60 percent of total square footage of non-residential completions between 1979 and 1989, adding almost 28 million square feet during the decade, while industrial space accounted for only 20 percent of completions. In addition, industrial space has been used predominantly for research and development or warehousing, rather than manufacturing as the General Plan envisioned.

* **Private employers in Montgomery County are predominantly small, with only 19 companies employing more than 1,000 people.** The top three employers in Montgomery County, IBM, Marriott Corporation and the Chesapeake and Potomac Telephone Company, are dispersed

Montgomery County's Employment Growth Is Projected to Slow After 1990



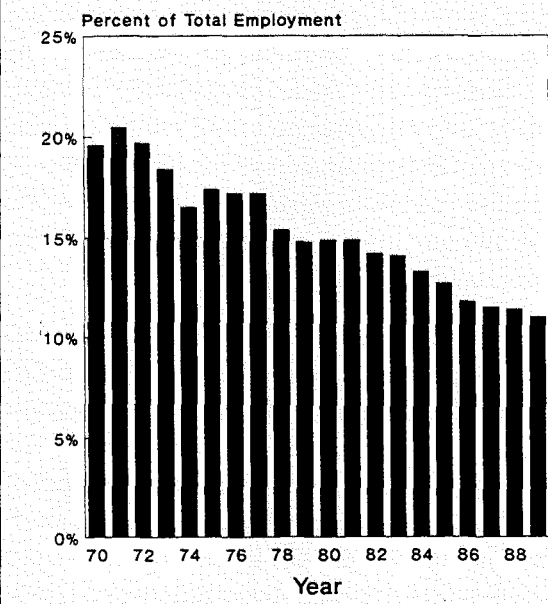
Source: Montgomery County Planning Dept.

geographically, but are located primarily in the urban/suburban ring.

* **Many of Montgomery County's major private employers have been located in the County since before 1970.** Companies that have employed over 2,000 people in the County since 1970 include Vitro Corporation and GEICO in the urban/suburban ring and the IBM Corporation in both the ring and the I-270 corridor. Other major employers that have located major facilities in the I-270 corridor since before 1970 include Fairchild Industries, Bechtel, NUS Corporation, National Geographic Society and Watkins-Johnson Company. The Chesapeake and Potomac Telephone Company, located within the urban/suburban ring, has provided continuous employment in Montgomery County since before the General Plan's adoption. Consistent with the General Plan, no major private employment centers are located in wedge areas.

* **As the County's employment base diversifies, the federal share of employment continues to shrink.** In 1970, almost one of every five employees in Montgomery County worked for the federal government. By 1990, even though federal employment had grown by over 30 percent to 42,000 employees, only one of every ten employees in Montgomery County worked for the federal government. The County is home to several of the federal government's largest campuses, including the National Institutes of Health, the Food and Drug Administration, the National Naval Medical Center, the Department of Energy and the National Institute of Standards and Technology. In 1970, 18 federal agencies existed in the County. In 1990, this number had increased by only 1 to 19 agencies.

Federal Share of Total Employment Has Declined Gradually for Two Decades



Source: Montgomery County Planning Dept.

* **Contrary to the expectations of the General Plan, Montgomery County's fastest growing employment sector since 1970 has been the service sector rather than manufacturing.** The Gen-

eral Plan envisioned significant growth in manufacturing. However, between 1970 and 1990 manufacturing declined from 5 percent to 4.4 percent as a share of total at-place employment. The service sector unexpectedly represented more than one-third of total at-place employment in the County, up from 21 percent in 1970. The retail sector followed with over 16 percent of at-place employment.

* **The character and intensity of use at employment centers have changed.** Prior to 1970, headquarters of large County employers such as Vitro Corporation, National Geographic, and GEICO were typically located in low-rise buildings in large park-like settings. After 1970, additional gross floor area was added to many existing employment centers and new ones were developed. This additional density more closely follows the wedges and corridors concept as envisioned in the General Plan. Office buildings have become more site intensive, thereby requiring less land per employee. Two federal agencies, the National Oceanographic and Atmospheric Administration and the Nuclear Regulatory Commission, have built tall office buildings within walking distance of major transit stations. The multi-story buildings at Rock Spring Park are another example of more intense office development in the urban/suburban ring.

* **An estimated 17.5 million square feet of retail space is located in 217 shopping centers across Montgomery County, an increase of almost 6 million square feet since 1970.** Based on data gathered from the 1990 Kalis's Shopping Center Leasing Directory, five urban/suburban ring and I-270 corridor locations - Silver Spring, Bethesda, Rockville, Germantown and Gaithersburg - account for more than 80 percent of the growth in retail space. The Gaithersburg area alone accounts for almost half of all new shopping center space since 1970.

* **The size of shopping centers and their anchor stores has changed during the last 20 to 25 years.** Between 1970 and 1990, the size of a prototypical grocery store almost tripled from under 20,000 square feet to nearly 60,000 square feet. As a result, grocery chains now prefer to locate in relatively large neighborhood shopping centers, ideally containing 100,000 square feet of space or more. This suggests that the development of small neighborhood shopping centers with standard grocery stores may be unlikely in the near future.

* **Regional mall space has grown since 1970.** Two new regional malls have been completed since 1970 in the urban/suburban ring and the I-270 corridor, White Flint Mall in North Bethesda and Lake Forest Mall in Gaithersburg. Major additions to the County's other two regional malls, Montgomery Mall and Wheaton Plaza, also have been made since 1970, and Wheaton Plaza has been enclosed. Every regional mall except Lake Forest Mall now has structured parking facilities, allowing the land to be used more intensely.

IV. RELATIONSHIP OF HOUSING TO EMPLOYMENT

* **In 1990, the County-wide ratio of existing jobs to existing housing units was approximately 1.5 to 1.** This is in line with the General Plan's land use objective of having a balanced relationship between residential growth and economic activities. Since Montgomery County households have an average of about 1.5 workers, a jobs/housing ratio of between 1.4 and 1.6 is reasonably balanced.

* **The potential future County-wide ratio of jobs to housing, based on the development capacity of all currently zoned and planned acreage for these uses, could range from 2.4 to 2.8 jobs per housing unit.** This zoned ratio of jobs to housing does not appear to be consistent with the General Plan's objective to "obtain a balanced relationship between residential growth and economic opportunities" although the Plan did not specify an exact ratio.

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The General Plan objective concerning the balance of jobs and housing addressed the issue on a County-wide basis. The Plan clearly did not expect each smaller geographical area to strive for such a balance.

The buildout ratio of jobs to housing may be overstating the number of jobs. On average, employment sites use a smaller proportion of their holding capacity than housing. Industrial and retail buildings are designed for the functional use of their occupants more than to maximize floor area ratio (FAR). Many commercial uses, such as shopping centers and gasoline filling stations, prefer one or two story buildings even where a higher FAR is allowed. Surface parking is often preferred because it is usually more convenient and is much less expensive. The combination of low structures, green area, surface parking, and setback requirements results in lower than maximum use of available FAR. A housing site is considered fully developed, on the other hand, if it contains a housing unit of greater assessed value than the value of the land on which it is located, regardless of the size of the unit, setbacks and other development factors.

V. FARMLAND AND RURAL OPEN SPACE

* **The General Plan's commitment to farmland preservation has been reinforced by subsequent land use policies and zoning actions.** Changes in zoning, especially the adoption of the Rural Density Transfer (RDT) Zone and the introduction of the Transferable Development Rights (TDR) Program, have done much to protect Montgomery County farmland from residential development. In 1981, approximately 90,000 acres were rezoned to the Rural Density Transfer Zone and designated as the Agricultural Reserve. These zoning efforts complement state and local programs to purchase easements for the purpose of farmland protection as well.

* **The loss of farmland has slowed appreciably since 1969.** From January 1981 to November 1991, there have been only 76 subdivisions approved (213 lots) in the RDT Zone. This compares to 750 lots approved in 1978 alone. The decrease illustrates the dramatic decrease in development activity in the Agricultural Reserve.

* **The number of farms increased from 654 to 669 between 1969 and 1991.** At the same time, the average size of a farm declined from 177 acres to 155 acres.

* **The County's commitment to farmland preservation was reaffirmed in 1988.** In 1988, the Montgomery County Council appointed a working group to evaluate the Agricultural and Rural Open Space Preservation Programs. After thorough examination, the work group reaffirmed the agricultural and rural open space programs in Montgomery County and in particular, the 1980 *Functional Master Plan for the Preservation of Agriculture and Rural Open Space.*

* **Since 1981, land use and zoning strategies in the wedge have differentiated between agricultural and rural open space preservation and low density residential land use.** The Rural Density Transfer (RDT) Zone, the Rural Zone and the Rural Cluster (RC) Zone now distinguish the Agricultural Wedge from the Residential Wedge. The acreage in each zone is as follows: RDT - 90,000 acres, the Rural Zone - 4,000 acres, and Rural Cluster - 21,000 acres. The Residential Wedge with its one- and two-acre zoning is discussed in Section II.

* **Almost 32,000 acres of farmland are protected by State and County easements.** The protected land includes over 26,000 acres in easements through the County's TDR program, over 2,000 in the County's Agricultural Easement Purchase Program, almost 2,000 in the Maryland Environmental Trust, and another 1,700 acres in the Maryland Agricultural Land Preservation Foundation program.

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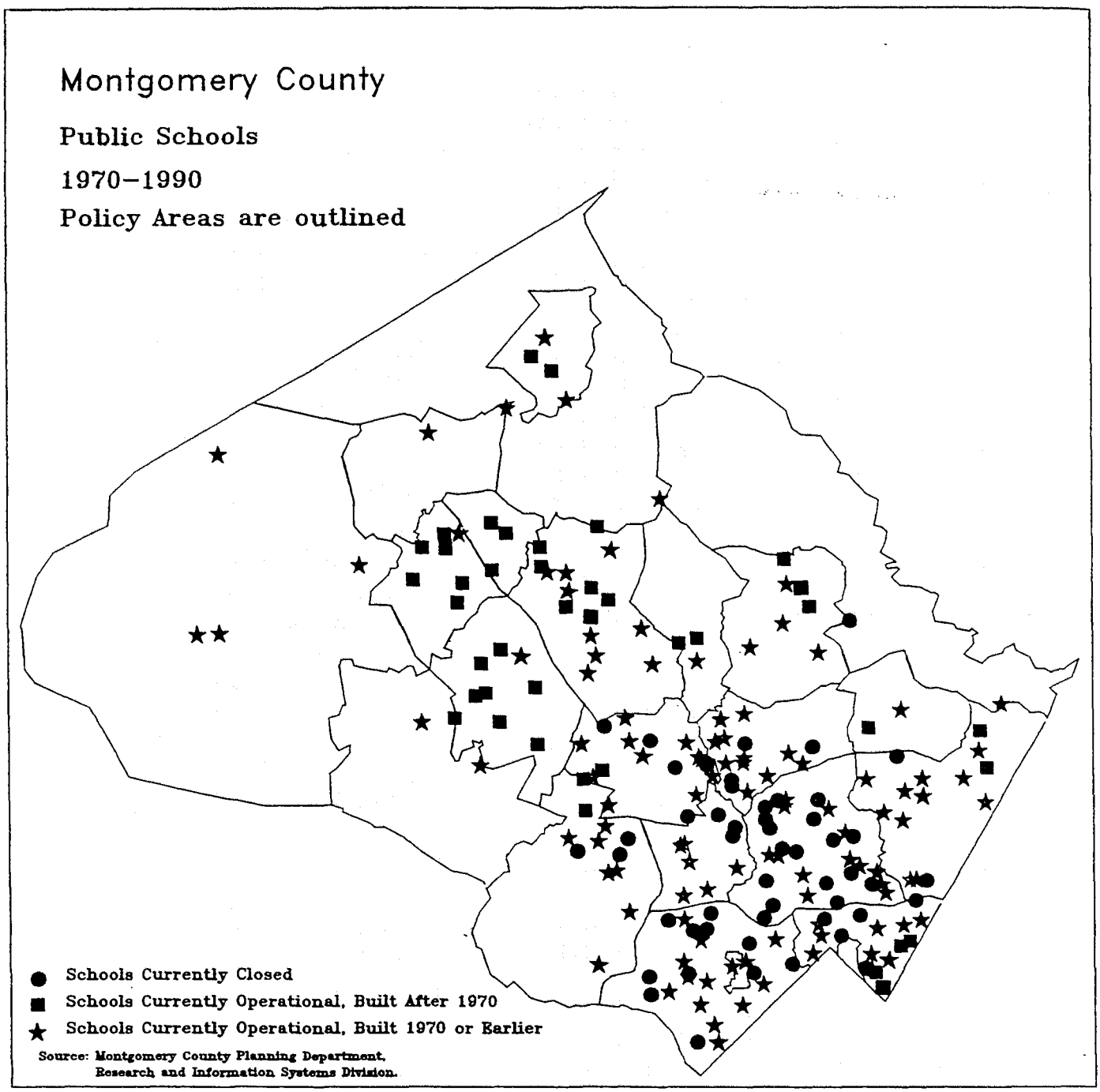
Montgomery County
Public Schools
1970–1990
Policy Areas are outlined
Schools Currently Closed
Schools Currently Operational, Built After 1970
Schools Currently Operational, Built 1970 or Earlier
Source: Montgomery County Planning Department,
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Sugarloaf Mountain area account for the majority of this land. The Trust has land in other parts of the County as well. The Izaak Walton League and the Audubon Naturalist Society also have open space in the County.

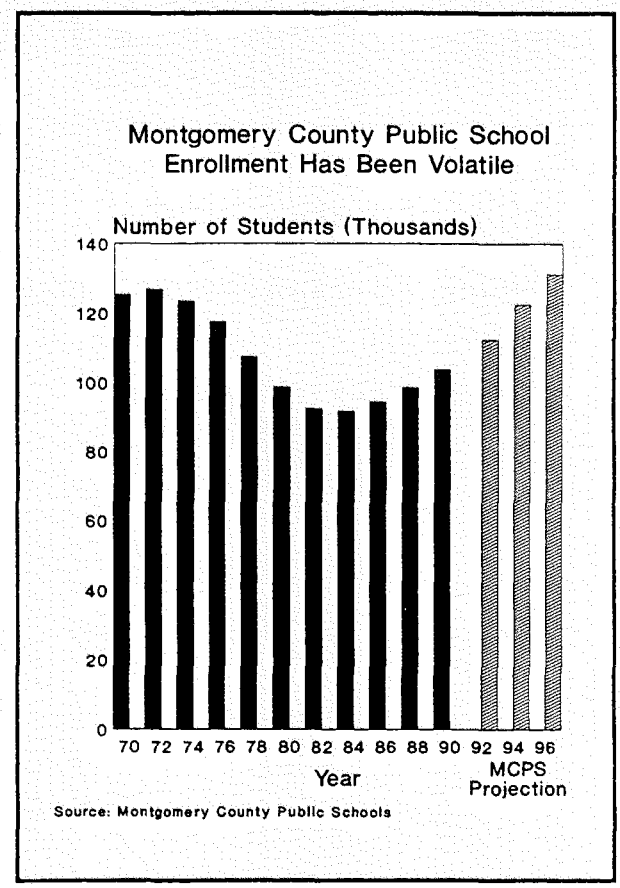
* **The Washington Suburban Sanitary Commission (WSSC) has over 3,000 acres of undeveloped land in Montgomery County.** While the primary purpose of this hilly, wooded land is to protect two adjoining lakes used for public water supply, the WSSC allows hunting, fishing, boating, horseback riding and picnicking.

VI. COMMUNITY FACILITIES

A. Public Schools

* **School enrollment has been quite volatile over the past 20 years.** In 1972, a record 127,000 school children enrolled in Montgomery County public schools. Eleven years later, in 1983, enrollment dropped to a 30-year low of 91,000. Since 1983, school enrollment has been growing steadily, to 107,000 in 1991 and is expected to reach a new record of 129,000 by 1996.

* **Since 1970, Montgomery County has closed 63 schools, reopened 12 of these schools and built an additional 40 new schools.** The number of operational schools has declined 10 percent between 1970 and 1990 to 168 schools, including 9 special needs facilities. However, there has been almost no loss of classrooms due to the modernization of older schools and the larger size of new schools. The County has adapted closed schools for a variety of uses, including senior citizen centers, government offices, recreation centers, and day care or eldercare centers. Some space has been leased to non-profit organizations and private and parochial schools. Montgomery County Public Schools' capital expenditures totaled $635 million between 1970 and 1990. Over 50 percent of total capital expenditures for the past 20 years has been spent since 1987, during which time 17 new schools were built and school closings ceased.



* **The distribution of schools across Montgomery County has shifted reflecting changes in population distribution.** New subdivisions within the I-270 corridor have created increased demand for new schools up-County. At the same time, demand has decreased for schools in older neighborhoods in the urban/suburban ring as children grow up and their parents remain in their homes rather than selling to young families. Approximately 60 percent of all new schools have been built in the I-270 corridor areas of Gaithersburg and Germantown. Similarly, closed school facilities are located almost entirely within the urban/suburban ring, with the greatest number of school closings in the Bethesda and the Kensington/Wheaton areas.

* **Since 1970, Montgomery College enrollment has soared 350 percent to about 22,400 in 1990 and total college land holdings have grown by 200 percent.** The college operated two campuses in 1970, a 13-acre site in Takoma Park and an 82-acre site in Rockville. In 1978, Montgomery

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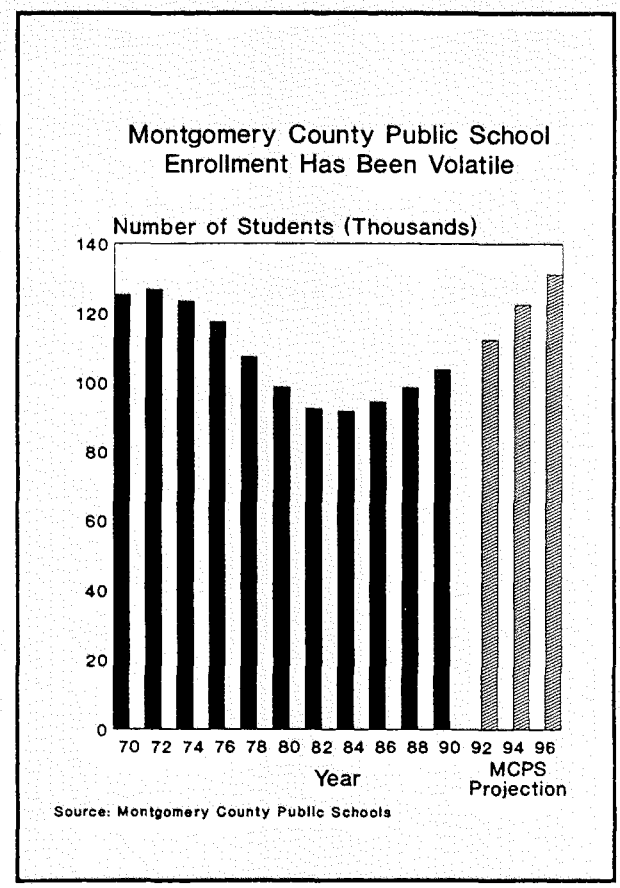

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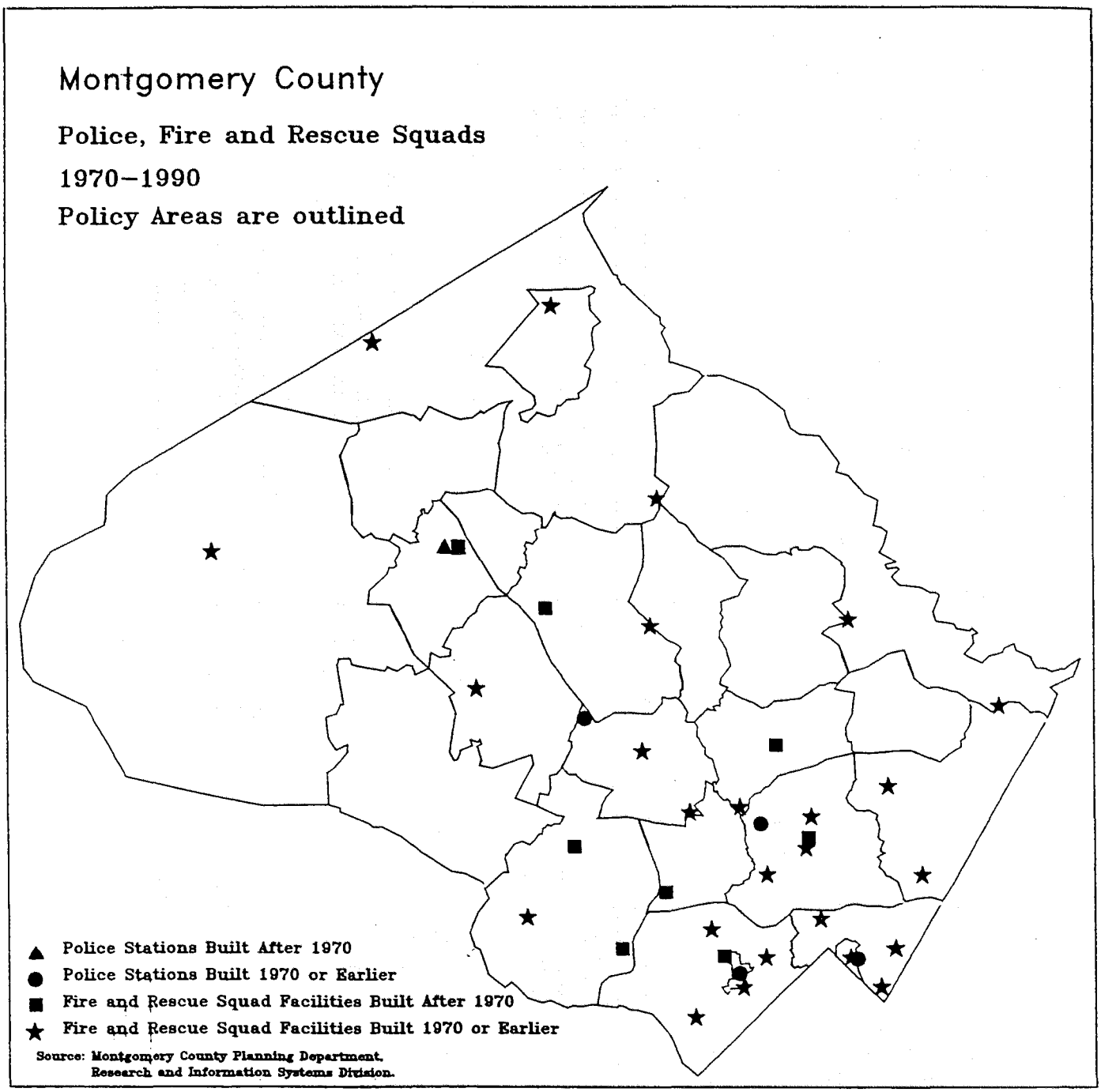
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Police, Fire and Rescue Squads
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Policy Areas are outlined
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Source: Montgomery County Planning Department.
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County opened a new 204-acre campus in Germantown to provide educational services to residents in the I-270 corridor, thereby increasing total acreage to almost 300 acres.

B. Fire, Rescue and Police

* **The number of police, fire and rescue facilities has grown moderately over the the past 20 years.** Currently, 19 independent fire departments operate 33 fire and rescue stations in Montgomery County. Police protection is provided through five police districts scattered throughout the County. Since 1970, one new fire department, the Germantown Volunteer Fire Department, and eight new fire and rescue stations have been built, predominantly in the urban/suburban ring and southern portions of the wedge areas. In addition, one new police station in Germantown has added coverage to the I-270 corridor.

C. Parks and Recreation

* **The amount of County parkland has increased slightly more than the number of households.** Between 1970 and 1991, M-NCPPC parks increased from 14,708 acres to 27,611 acres, an 88 percent increase, while the number of households increased by 80 percent. New parks were added in all categories: two large regional parks up-County and one in eastern Montgomery County; several stream valley parks; special parks like the Maryland Horse Center, the Martin Luther King Recreational Park, and Rockwood Manor and Woodlawn conference centers; Blockhouse Point and Green Farm Conservation Parks; numerous new and rehabilitated community-use parks; and recreational facilities and community centers.

* **A significant proportion of new parkland is in the area of greatest population growth, especially the I-270 corridor.** The early 1970s, in particular, saw a large number of new parks in the Rockville, Gaithersburg and Germantown areas.

* **In addition to County parks, the County has about 15,000 acres of national, State and municipal parks.** The principal national park in the County is the 3,100-acre C&O Canal Historical Park. It includes 36.7 miles of the old towpath, a boat ramp, picnicking and camping areas, and the popular Great Falls Recreation Area. There are four significant State parks: the 6,000-acre Seneca State Park, a stream valley park with a developed section in Germantown; the Patuxent State Park, an undeveloped strip along the Patuxent River; the Matthew Henson State Park between Veirs Mill Road and Georgia Avenue and the McKee-Beshers Wildlife Management Area, adjoining the C&O Canal. Eleven municipalities have their own park systems, with a total of about 1,500 acres and considerable recreational facilities.

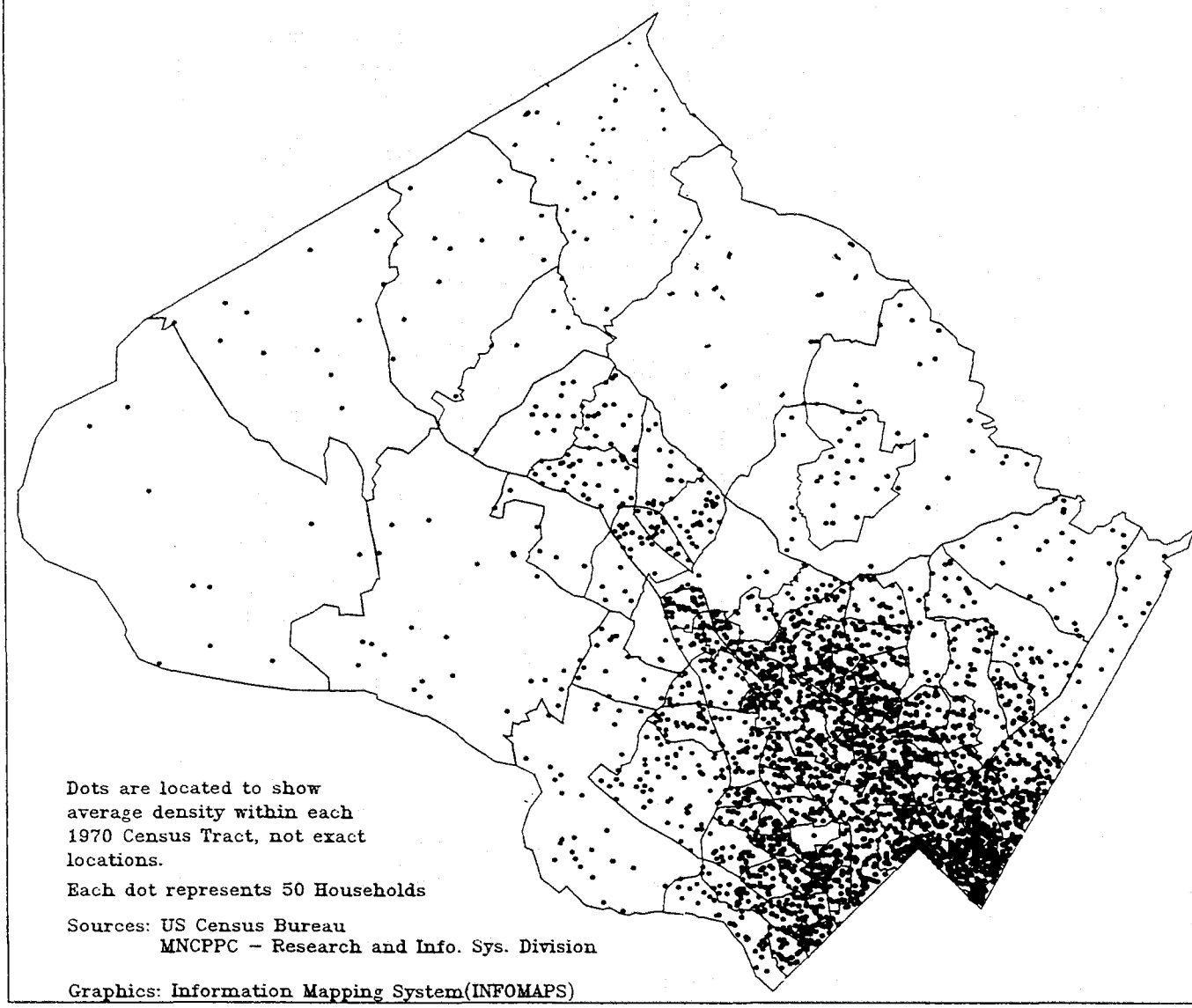
* **Montgomery County has over 5,000 acres of golf courses and country clubs.** In 1975, Montgomery County had six public golf courses and 23 private golf and country clubs, some of which are still nationally known for the tournaments they host or other features. Today, there are 7 public golf courses and 19 private golf and country clubs, averaging about 200 acres each. All of those that no longer exist were in the I-270 corridor or in the Silver Spring area.

D. Libraries and Hospitals

* **Montgomery County maintains one of the largest municipal library systems in the country with a library circulation of over 7.5 million volumes.** The number of branch libraries in the County has nearly doubled since 1970. Ten of the 18 branch libraries have been built since 1970 and 2 of the 4 regional libraries have been built since 1970. Two branch libraries have been closed and replaced by newer facilities and one library in the wedge has been closed permanently. Eleven libraries are located in the urban/suburban ring, 5 are in the wedge and another 6 are in the I-270 corridor. There are currently plans for two new facilities in Damascus and Fairland.

* **Five accredited hospitals with space for 1,600 hospital beds and two military hospitals serve the residents of Montgomery County.** Four of these hospitals, Suburban Hospital in Bethesda, Holy Cross Hospital in Silver Spring,

Geographic Distribution of Households
by 1970 Census Tracts
Montgomery County, Maryland



Dots are located to show average density within each 1970 Census Tract, not exact locations.

Each dot represents 50 Households

Sources: US Census Bureau
MNCPPC – Research and Info. Sys. Division

Graphics: Information Mapping System(INFOMAPS)

Geographic Distribution of Households
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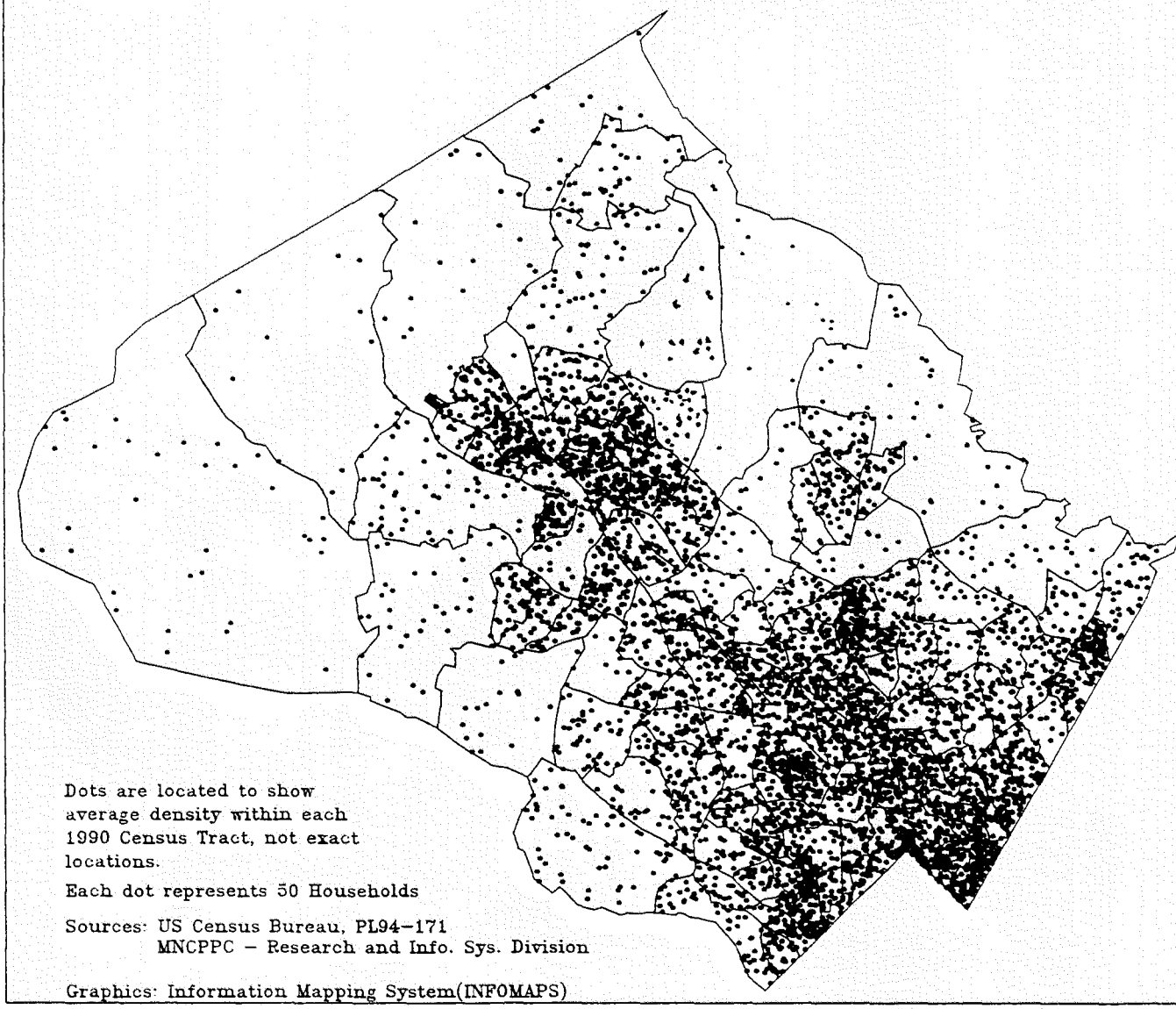

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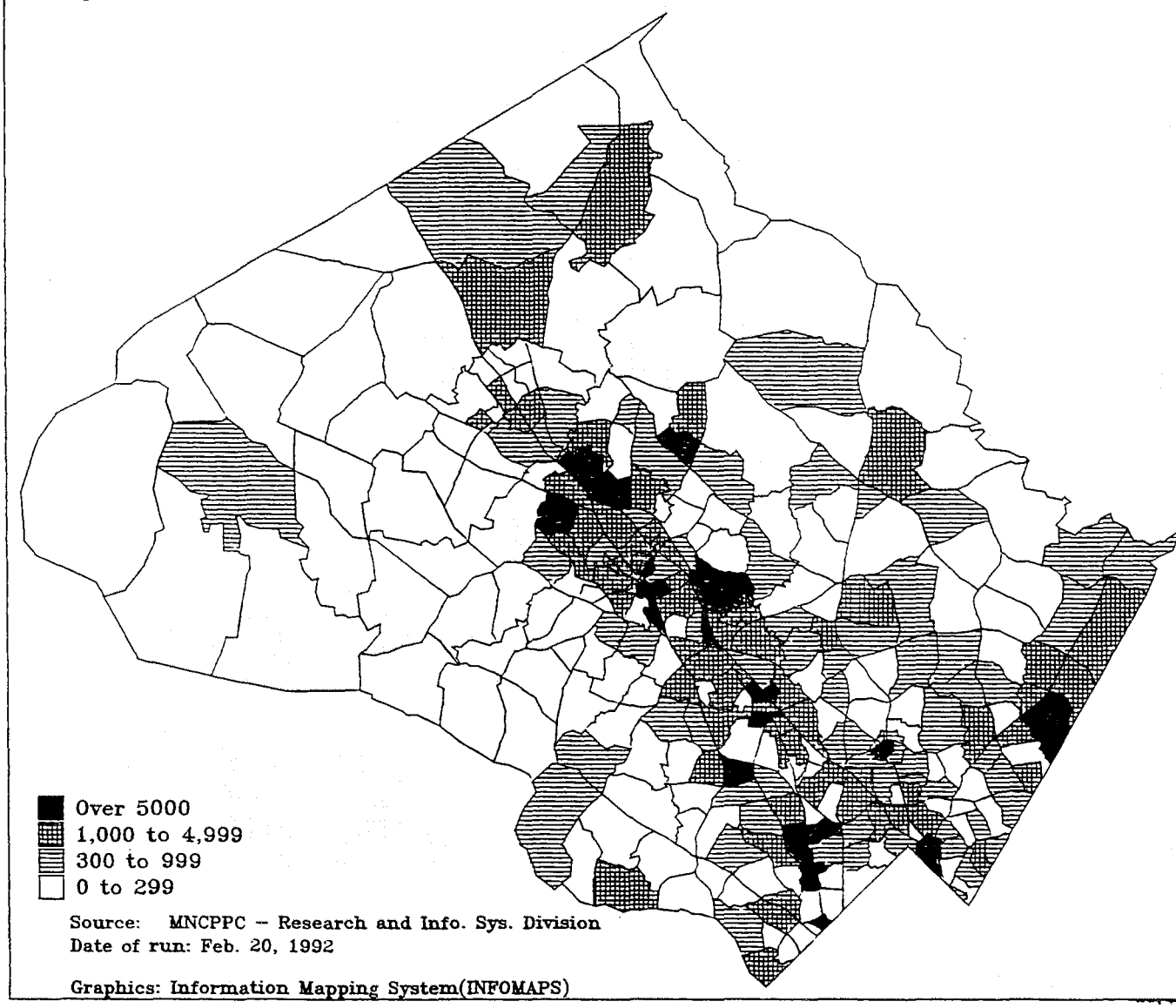
Sources: US Census Bureau, PL94-171
MNCPPC - Research and Info. Sys. Division

Graphics: Information Mapping System(INFOMAPS)

Montgomery County

Job Distribution as of January 1991

By New MNCPPC Traffic Zones



Source: MNCPPC – Research and Info. Sys. Division
Date of run: Feb. 20, 1992

Graphics: Information Mapping System(INFOMAPS)

Montgomery General Hospital in Olney, and Washington Adventist Hospital in Takoma Park, have been in operation since before 1970. All have been expanded and modernized in the past 20 years. Shady Grove Adventist Hospital opened in 1979 to better serve the medical needs in the growing I-270 corridor. In addition, Montgomery County is home to two military hospitals: Bethesda Naval Hospital and Walter Reed Army Medical Center, and to the National Institutes of Health (NIH).

VII. LAND USE PATTERN AND INTERRELATIONSHIPS

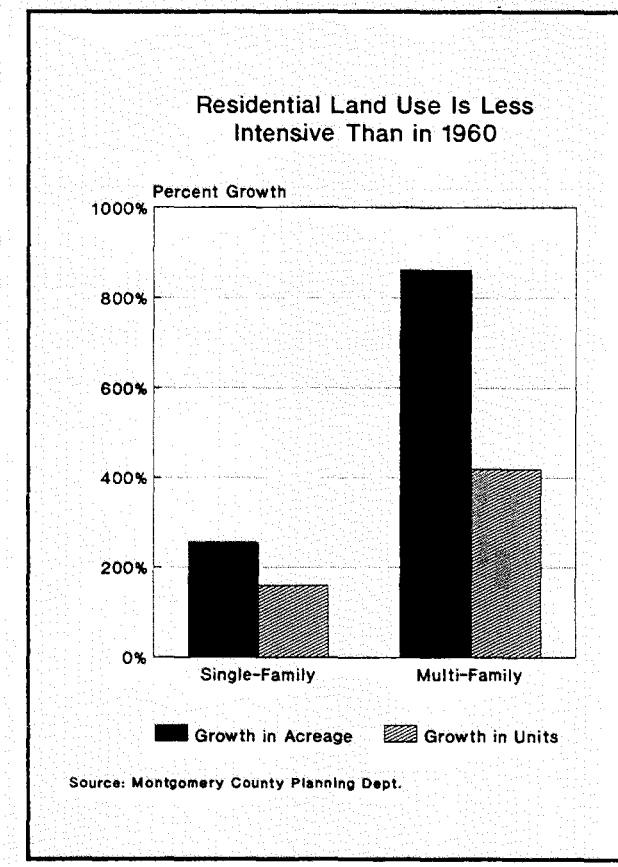
A. Residential Pattern

*** The pattern of residential growth in Montgomery County has basically followed the wedges and corridors concept since the adoption of the General Plan.** The attached maps represent the geographic distribution of households in 1970 and 1990. They illustrate that growth has occurred predominantly in the I-270 corridor, the urban/suburban ring and the satellite communities, especially Olney. Growth in residential wedge areas has been substantial and is generally consistent with the land use recommendations expressed in the General Plan and subsequent area master plans.

*** The amount of land in residential use in the County has increased comparatively more than the number of housing units between 1960 and 1991.** In 1960, 8 percent of the County's land area was in residential use. By 1991, the percentage had increased to 29 percent. Overall, the housing stock grew by just over 200 percent while the amount of land used for housing grew by almost 270 percent.

B. Employment Pattern and Intensity

*** The distribution of employment locations in Montgomery County has basically followed the wedges and corridor pattern of the General Plan, as illustrated by the following map.** The map divides the County's traffic zones



into five major categories of employment intensity. The darkest patterns indicate the highest concentration of jobs. Traffic zones with more than 5,000 jobs are generally located in the urban/suburban ring and in the I-270 corridor. In the ring, the highest concentrations are in the four central business districts, the City of Rockville and the Rock Spring and West Farm office/industrial park areas. Employment is generally intense throughout the I-270 corridor and centered along I-270 for the most part, with the airpark to the northeast the most distant intensive location.

In addition, the larger towns and the satellite communities of Olney and Damascus have significant numbers of jobs, generally providing goods and services to local residents. Farming, parks, limited local retail and public services such as schools are the major forms of employment in the wedge although the PEPCO and NIH facilities also offer limited employment there.

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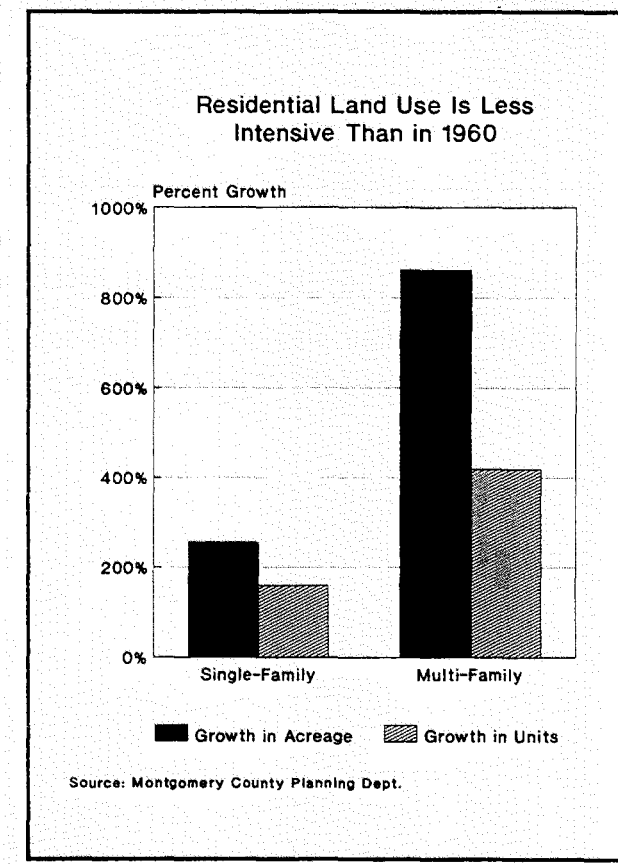

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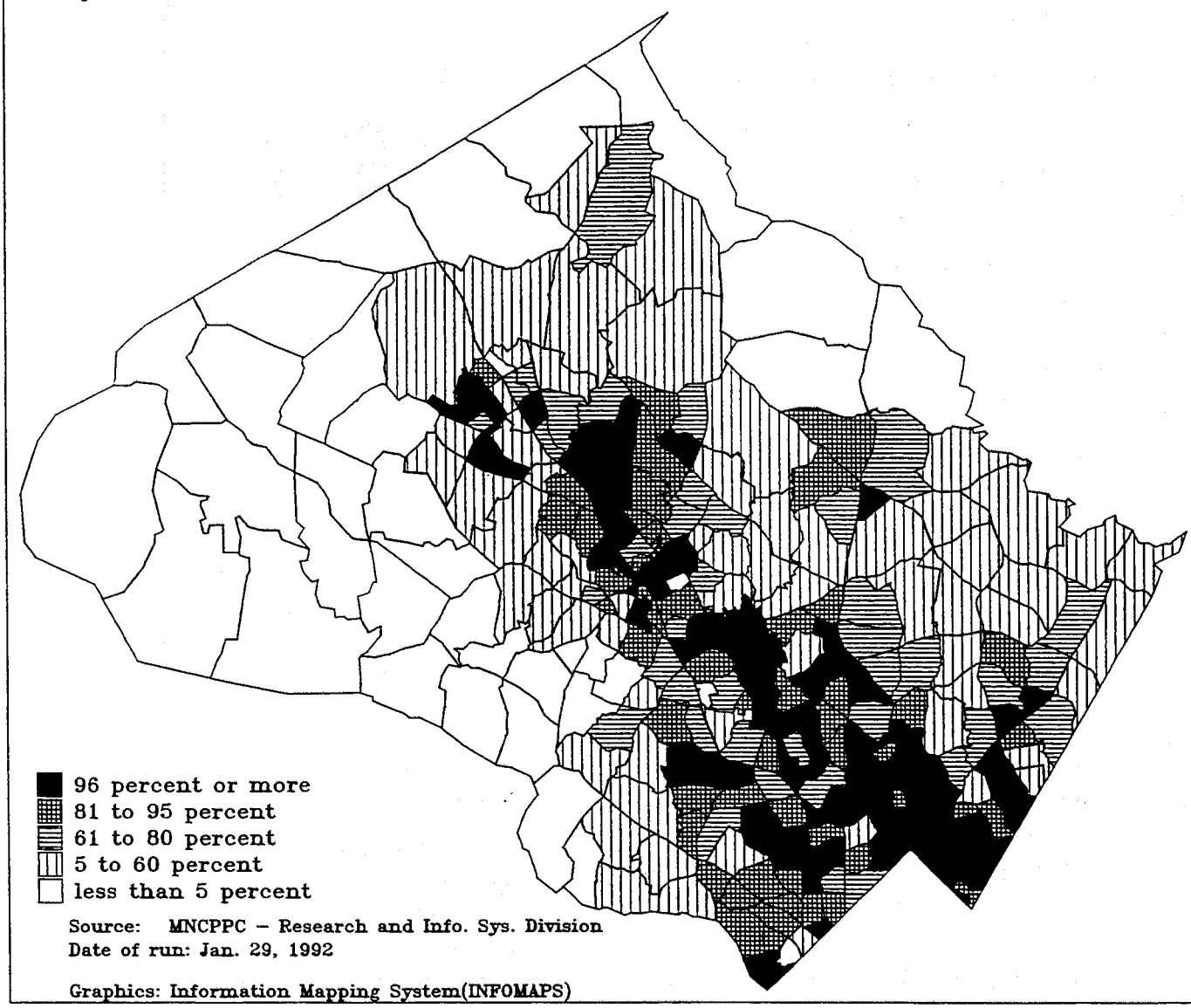
Percentage of Households within a 1/4 Mile Radius of
Ride-On Bus Stops or within 1/4 Mile of Metrobus Line
By New MNCPPC Traffic Zones



Source: MNCPPC - Research and Info. Sys. Division
Date of run: Jan. 29, 1992

Graphics: Information Mapping System(INFOMAPS)

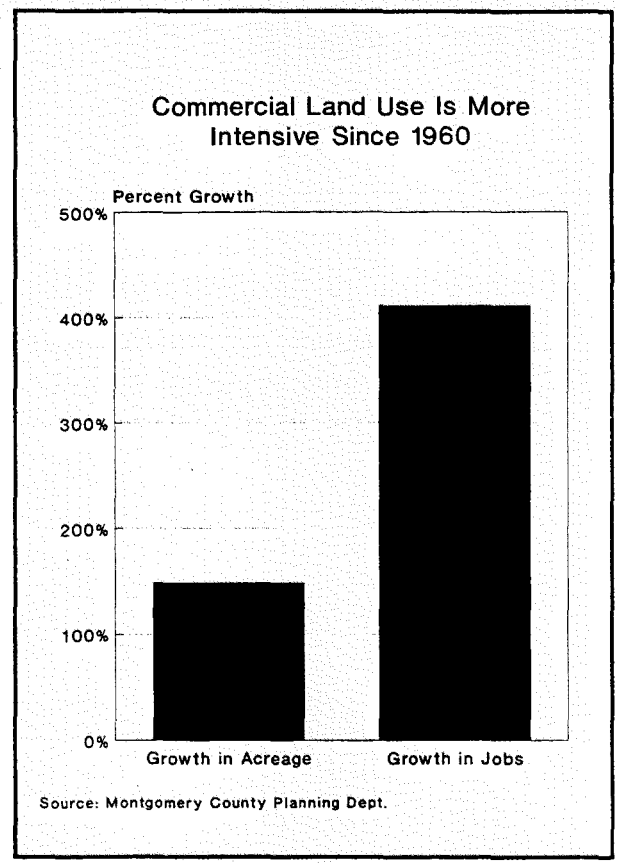
* **Over 46 million square feet of non-residential space was completed in Montgomery County between 1979 and 1989.** The Gaithersburg East area captured almost one-quarter of the County's non-residential completions during the 1980s with an annual average of more than one million square feet completed. The I-270 corridor areas together accounted for a large proportion of total non-residential completions. As called for in the General Plan, non-residential completions in the wedge areas have been minimal.

* **Redevelopment efforts in Silver Spring and Bethesda have helped maintain economic activity in the urban/suburban ring.** Between 1980 and 1990 a significant amount of redevelopment occurred in the urban/suburban ring. Land uses around the urban/suburban ring Metro stations have intensified. The Bethesda and Silver Spring Central Business Districts (CBDs) alone accounted for more than 13 percent of total non-residential completions and the entire ring accounted for over one-third of total non-residential completions between 1980 and 1990.

* **Land used for employment is being developed more intensively than it was in 1970.** Between 1960 and 1991, the number of acres of land used for employment (commercial, industrial, governmental and institutional) grew almost 150 percent, from 12,600 to 31,200 acres. However, during this same time period, employment jumped over 415 percent, indicating the increase in intensity. The growing use of structured parking at employment locations and the increase in average building height have allowed this change.

C. Transit Availability Pattern

The accessibility of transit is an indicator of the County's pattern of development and of the status of its public transportation system for providing service for the County's residents. A series of maps have been prepared which show the percentage range of households within each traffic zone that are within a 1/4 mile walk of a Ride-on or Metrobus line or a 1/2 mile walk of Metrorail or MARC rail stations. The distances are those

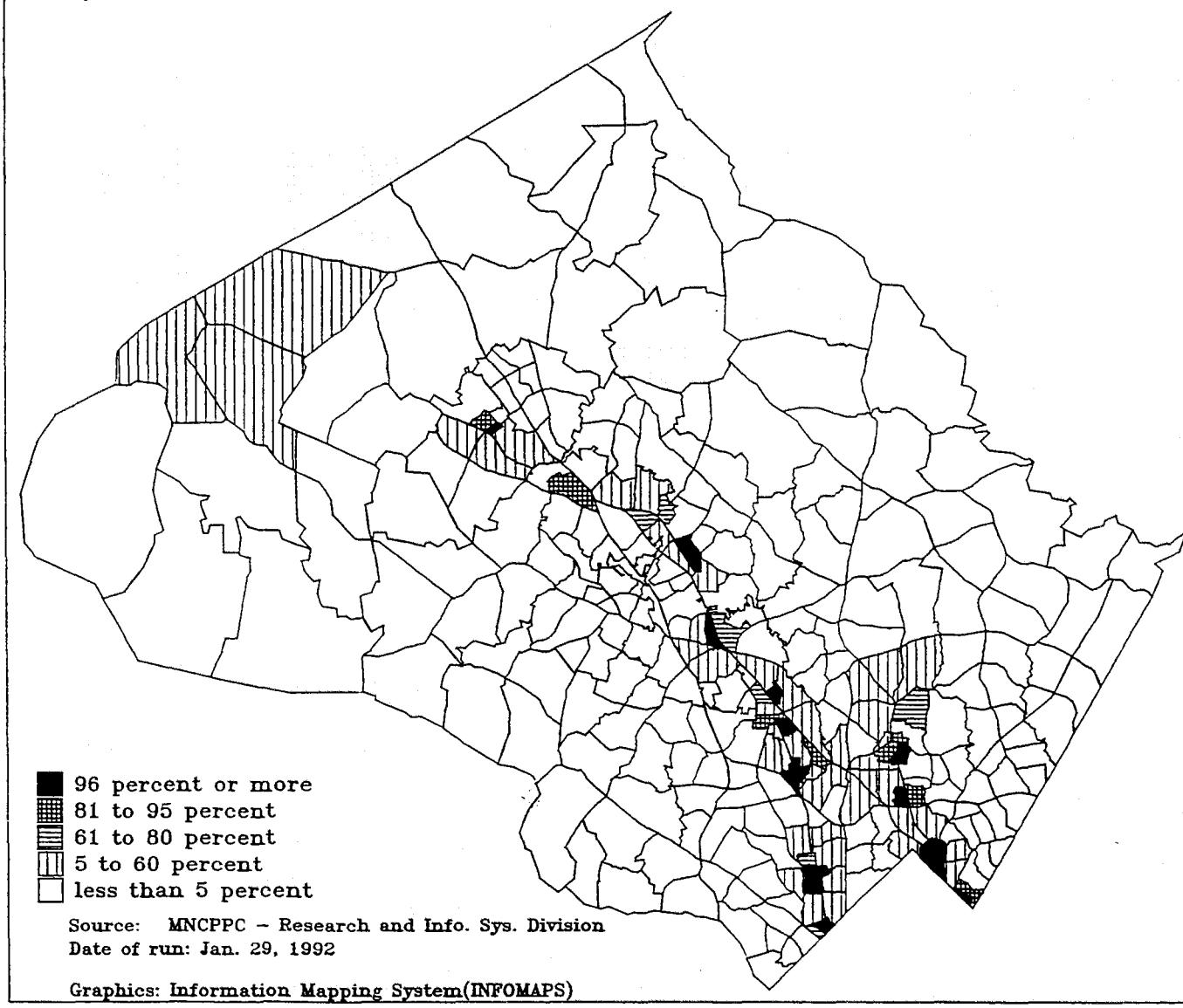


people are typically willing to walk to each form of transportation.

* **Generally speaking, the residential land uses located throughout the urban/suburban ring and the I-270 corridor are well-served by public transit service.** Most areas within the urban/suburban ring and the I-270 corridor have 60 percent or more of their households within 1/4 mile of transit service and extensive areas have 80 percent or even 95 percent or more accessible to transit. The satellite communities of Olney and Damascus are also well served by accessible public transit. The areas along US 29 north of the Capital Beltway, however, appear to be more distant from bus service than many other similar areas.

The transit accessibility in the upper northwestern part of the County reflects the clustering of the relatively few households in those areas near the Barnesville and Dickerson MARC stations.

Percentage of Households within a 1/2 Mile walking distance of Rail Stations, including Marc Train and Metro Rail, By New MNCPPC Traffic Zones



Source: MNCPPC – Research and Info. Sys. Division
Date of run: Jan. 29, 1992

Graphics: Information Mapping System(INFOMAPS)

D. Changes in Land Use

*** As discussed in Section I, a comparison of land use categories between 1960 and 1991 shows a significant increase in the amount of developed acreage.**

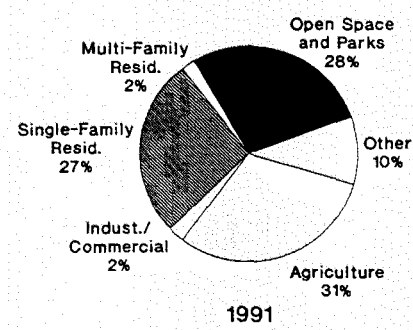
*** The largest category of developed land in the County continues to be single-family residential.** Single-family residential acreage (including townhouse) increased by over 266 percent while multi-family acreage increased by more than 857 percent.

*** Acreage in employment related categories (commercial, industrial, and government installations) increased by over 150 percent during the same period.** Commercial and industrial uses now represent only 2.6 percent of the County's land area. Government installations and institutions represent another 7 percent.

*** Acreage in park and recreation uses also increased substantially, by more than 17,000 acres, or 254 percent, between 1960 and 1991.** Park and recreational uses now account for more than 7 percent of the County's land area.

*** Fifty-nine percent of the County's land area is used for agriculture, open space and parks;** one-third of the County's total land area is in agricultural use.

59% of Montgomery County's Land Is Used For Agriculture, Open Space, and Parks



1991

Source: Montgomery County Planning Dept.

HOUSING FACT SHEET

INTRODUCTION

Montgomery County evolved from a post-war bedroom suburb of Washington, D.C., composed primarily of single-family detached houses, to a significantly more independent economy, with a wide mix of housing types between 1960 and 1990. The transition was under way when the General Plan was adopted in 1970, but at that early stage, many of its implications were not yet clear. The General Plan Refinement effort offers a timely opportunity to evaluate the Plan's housing goals and objectives in light of the changes in the community.

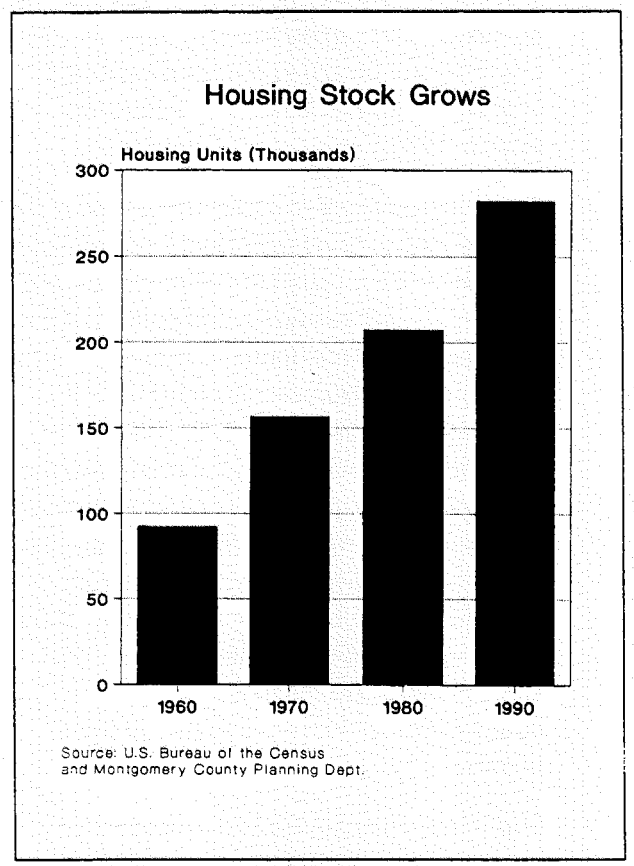
I. HOW WE HAVE CHANGED

A. Housing Stock

Montgomery County's housing stock has grown substantially in quantity and variety since the 1969 General Plan was adopted.

- *The number of housing units in the County grew by 83 percent between 1970 and 1990, from 161,400 to 295,700.* The larger increase occurred in the 1980s when the number of housing units increased by 37 percent, or 79,500 units. The rate of growth in the 1970s was 34 percent, or 54,840 units.

- *The average annual increase in the housing stock has varied tremendously in recent decades, dependent on factors such as mortgage rates, jobs, the business cycle, and changes in government policies.* U.S. Census data indicates that the 1970s were a period of moderate growth. An average of about 5,500 housing units were added to the housing stock per year. This relatively slow growth was due to the sewer moratorium, national recession, record inflation, and other factors. The 1980s experienced more rapid growth, averaging 8,000 units per year, as a result of the end of the sewer moratorium and the development boom in the latter part of the decade which was fueled in part by strong housing demand from the baby boomers. The 1960's also exhibited strong but less dramatic growth in the housing supply, of 6,400 units per year.



The largest annual increase in the housing supply occurred in 1966 when 10,445 units were constructed. This high number was almost matched in 1986 with the addition of 10,364 new units to the housing stock. The smallest annual increases occurred in 1975 and 1976 when only 2,281 and 2,042 units were added.

- *Montgomery County's 83 percent growth rate between 1970 and 1990 exceeded the region's rate of 56 percent.* During this period, the County's growth rate was less than that of Fairfax County, where the housing stock increased by more than 127 percent from 140,800 units to 320,300 units, but more than Prince George's County, where the housing supply increased by only 35 percent from 200,200

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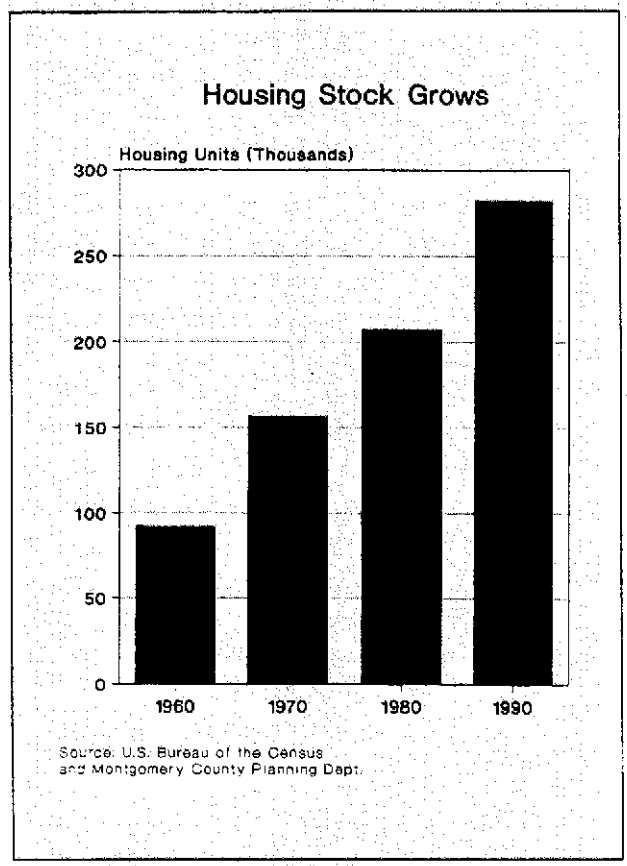

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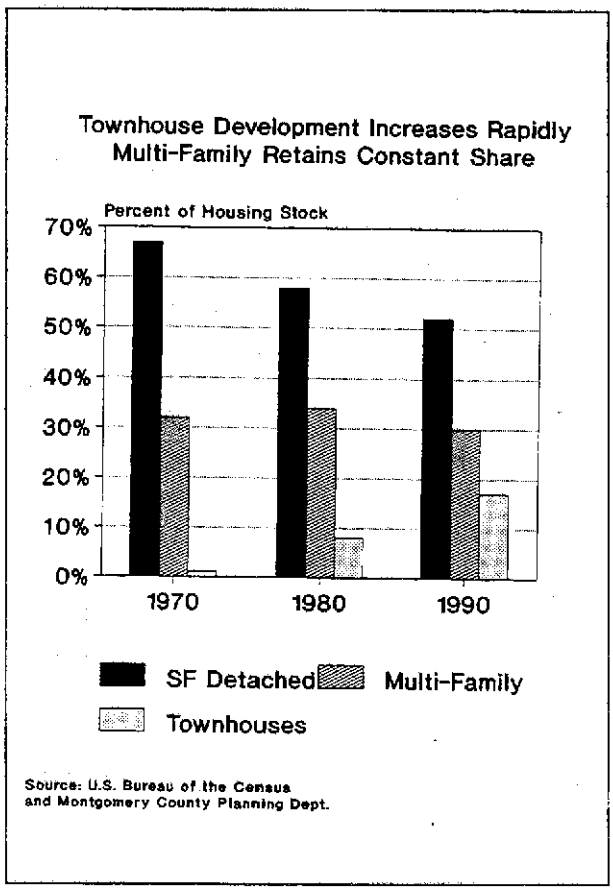
units to 270,100. (The Fairfax County data includes the Cities of Fairfax and Falls Church.)

- *Between 1970 and 1990, single-family detached houses declined from a 68 percent share of the housing stock to a 52 percent share.* In other words, single-family detached houses constituted over two-thirds of the County's housing stock in 1970, but just over half in 1990.

- *Townhouses emerged as a major component of the housing supply, rising from about 1 percent, 2,420 units, in 1970 to a significant 17 percent, 50,540 units, by 1990.* Townhouse completions were 39 percent of all residential completions from 1981 through 1990, reaching a high of 53 percent in both 1982 and 1983. The percentage of townhouses completed relative to the percentage of single-family detached houses has been declining since 1986, however. The appearance of townhouses as a major housing type was facilitated by the creation of the RT or residential townhouse zones in 1963 and by changes to the traditional single-family zones in the 1970's to permit townhouses.

- *Multi-family housing retained a comparatively constant share of the housing supply, declining slightly from 31 percent in 1970 to 30 percent in 1990.* The most dramatic growth in the number of apartments took place in the preceding decade, the 1960s, when new construction boosted the total by 33,000 units, from 18 percent to 31 percent of all housing units.

- *Townhouses were not the only new housing type to appear during the 1970s and 1980s:* "plex *units", especially quadraplexes; zero lot line single-family units; and stacked towns and flats also emerged as new housing choices for County residents.* The number of units of these new housing types was limited, however, because they are only permitted in a few zones. In addition, the County passed legislation permitting accessory apartments in single-family homes as a special exception use. This legislation legalized this relatively affordable form of housing.



"Plexes" are attached configurations of a small number of units, typically four. Their exteriors tend to resemble large single-family detached houses while their interiors are similar to townhouses. (Duplexes have been available for many years, but combinations of three or more units are relatively new.) Zero lot line units are single-family detached houses located on or very close to their lot lines on one or more sides. Stacked towns and flats are most like four story garden apartments in which some units resemble apartments and other units resemble townhouses.

- *The pattern of growth in the housing supply has basically followed the wedges and corridors concept during the decades since the adoption of the General Plan.* The attached maps of the geo-

graphic distribution of households in 1970 and 1990 show intense growth in the I-270 corridor, the US 29 area, the urban ring, and the satellite cities, especially Olney. Growth in the wedge has generally been modest in keeping with the Plan. (Households are used as a surrogate for housing units in these maps. Although vacant units would typically mean that there are more housing units than households, the Census data, from which the maps are derived, permits the most reliable comparisons.)

- *Montgomery County is nearing the build-out of its zoned capacity for housing.* According to a 1987 estimate, the County has the capacity to accommodate a total of about 440,000 housing units on its residentially zoned land. Of that total capacity, 144,300 units remain to be built. Keep in mind that 295,700 housing units already exist. In September 1991, the pipeline of approved development contained 33,200 units, 23 percent of the total net remaining zoning capacity.

  Only about eight percent of the total residential development capacity is located in the transit station sector plan areas in spite of the fact that many of the transit areas were designated as the centers of the corridor cities and were targeted for the most intensive growth by the 1969 General Plan. (The Planning Department is currently updating its estimate of residential development capacity based on changes in master plans and other factors.)

B. Tenure Characteristics

- *Montgomery County residents tend to own their own houses, and the proportion of those who do has increased in recent decades.* In 1970, 61 percent of all households were owners; by 1990, the percentage had risen to 68. One factor in this change has probably been the increase in the number of condominium apartments in the County. Condos are often more affordable to moderate income households who might otherwise be priced out of the "for sale" housing market.

  Condo conversions were so frequent in the 1970s that the County Council passed the first of a series of laws in 1979 to discourage them and to assist displaced tenants. Although new condominiums were constructed in the 1980s, there were few conversions after 1981.

- *More Montgomery County households own their own homes than Maryland households or households nationwide.* In 1990, 68 percent of Montgomery County's housing units were owner-occupied, as compared to 65 percent of the housing in Maryland and 64 percent of the units nationwide.

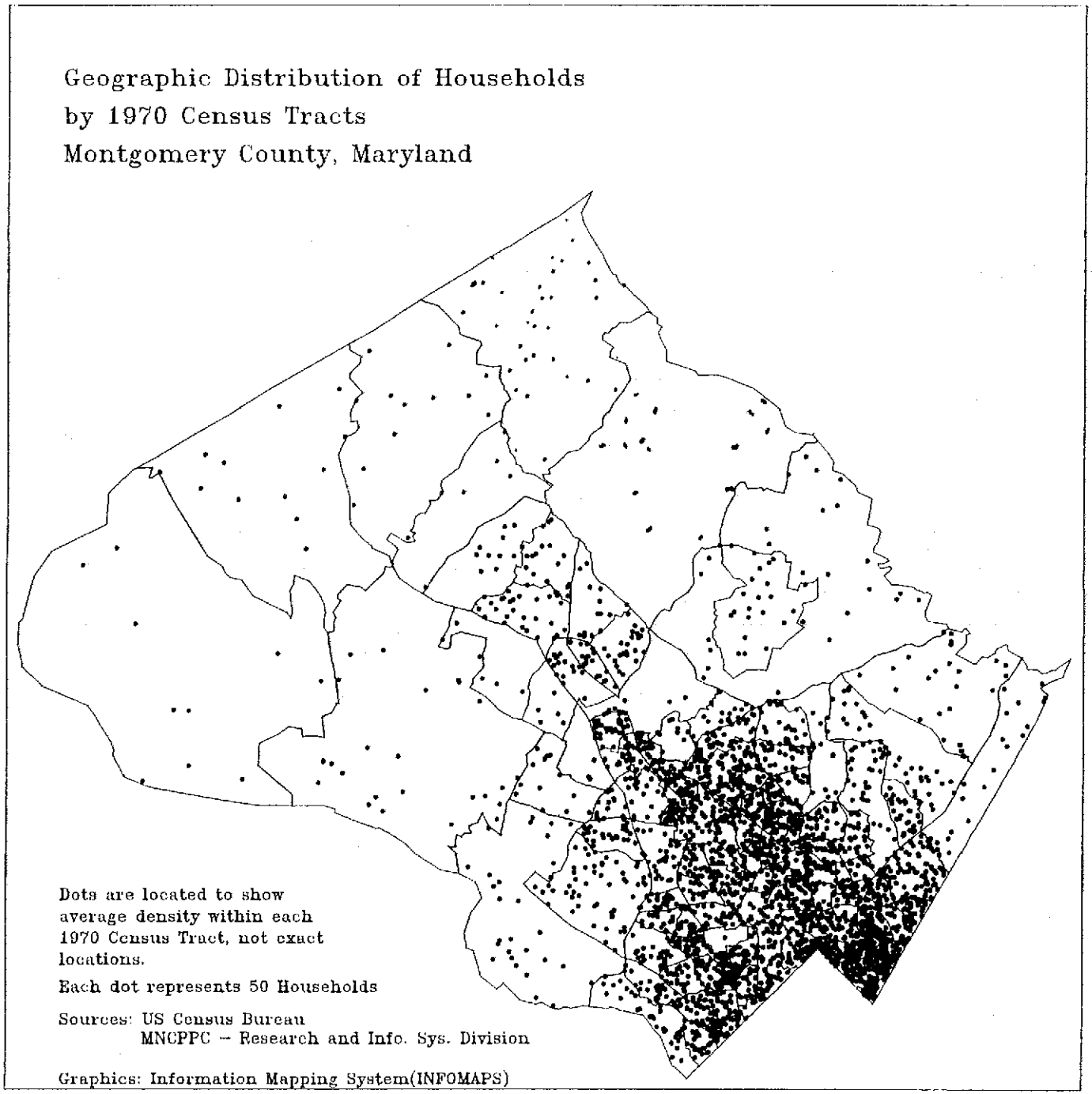
C. Housing Costs

Montgomery County's median housing prices are among the highest in the nation, but so are its household incomes:

- *Montgomery County's housing prices climbed steeply during the last two decades.* The median price of new single-family homes, including both attached and detached units, increased by 429 percent, from $41,100 in 1970 to $217,290 in 1990. The increase is particularly substantial because the share of typically lower priced townhouses was so small in 1970 compared to 1990. Generally, the increase in the number of townhouses could have been expected to moderate the overall increase in prices.

- *Existing home prices were also rising, from a median of $31,800 in 1970 to a median of $164,500 in 1990, an increase of 417 percent.* Again, resale townhouses would affect the 1990 median but would not have been a factor in 1970.

- *The Washington area is among the ten most expensive metropolitan area housing markets in the United States.* Even in that context, Montgomery County's new home prices are 19 percent higher than the Washington, D.C. area me-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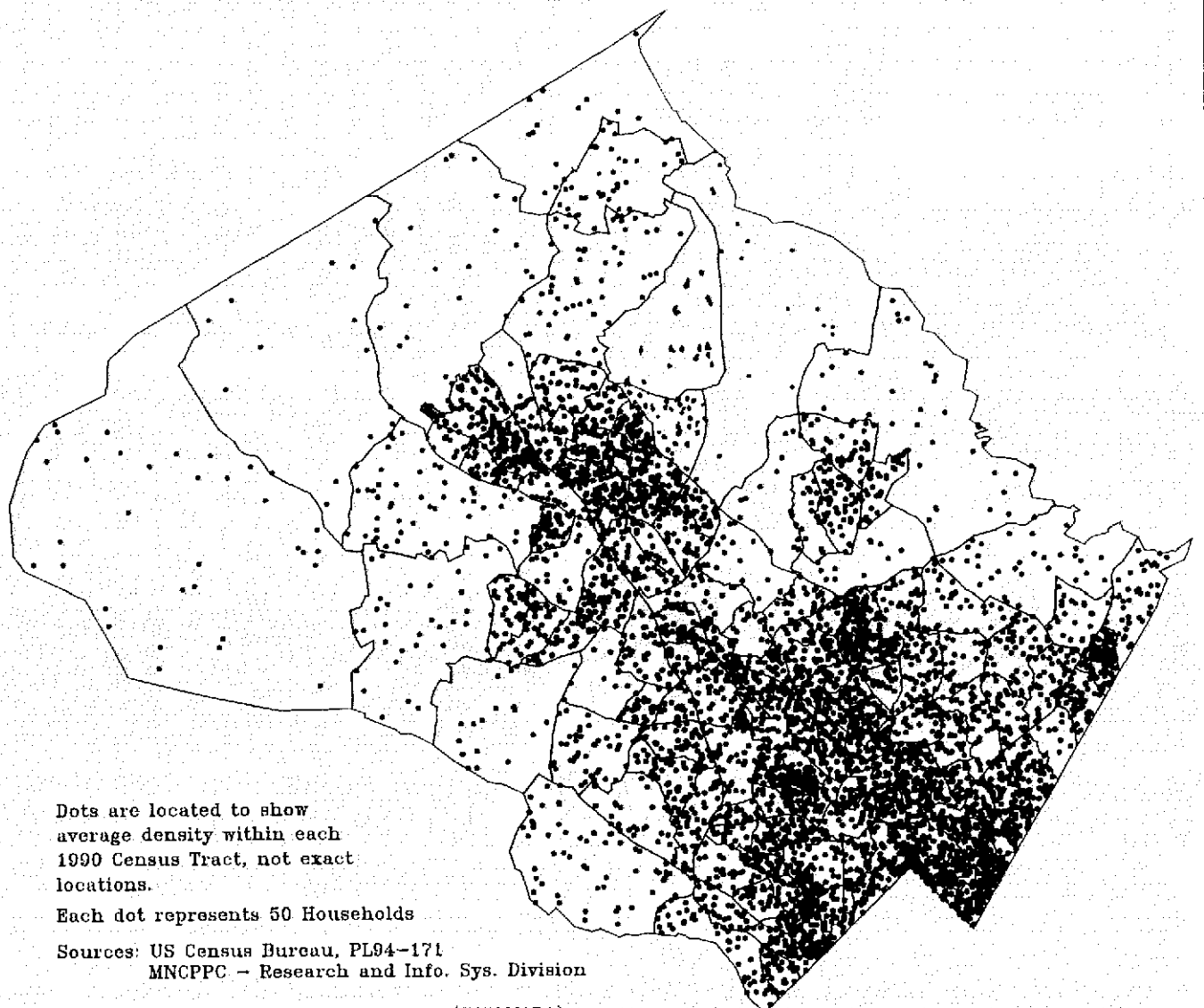

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Sources: US Census Bureau, PL94-171
MNCPPC - Research and Info. Sys. Division

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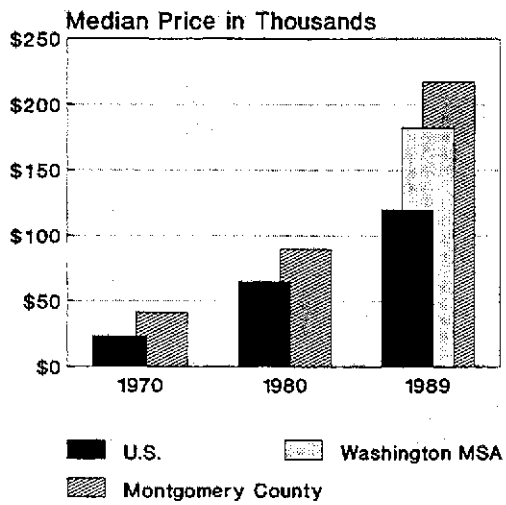
dian and 81 percent higher than the national median. The relationships have not changed significantly since the General Plan was adopted. While new home prices in Montgomery County increased by 429 percent, the nation's median rose almost as much, 413 percent.

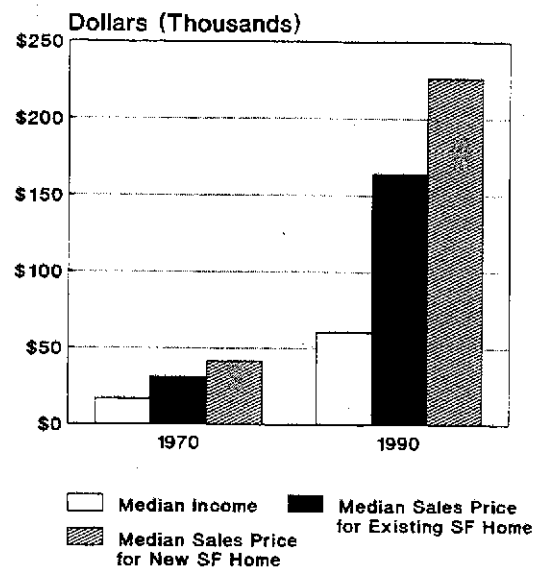
Housing Costs Have Escalated
Median Price of New Homes in the County Is 81% Higher than U.S. Median



Source: Montgomery County Planning Dept.
U.S. Bureau of the Census and U.S. Dept. of Housing and Urban Development

- *One significant factor in the growth in housing prices is the increase in household incomes.* The median household income in Montgomery County grew 263 percent, from $16,710 in 1970 to an estimated $60,586 in 1990. Nationally, median household income grew 243 percent. The growth in incomes, however, fell far short of the increase in housing prices nationally and locally. In addition, a major source of income growth, the large increase in dual income families, also means a less competitive position in the housing market for other types of households, such as single-parent households.

Housing Prices Increased
More Rapidly Than Income



Source: Montgomery County Planning Dept. and U.S. Bureau of the Census

- *Another element in the enormous increase in housing prices is the tremendous growth in the median size of a new single-family house.* Nationally, median unit size grew by more than 500 square feet, from 1,385 square feet in 1970 to 1,905 square feet in 1990, an increase of almost 38 percent. Local data is not strictly comparable to the national data because of the difficulty locally in distinguishing between basements, which are included in the national statistics, and cellars, which are not. Since cellars are rarely built today, the 1990 Montgomery County median which includes basements is probably the most similar in methodology to the national figure. It shows a median size of over 2,900 square feet per new unit in the County in 1990, more than 50 percent larger than the national median. A primary reason for the increased size of housing units appears to be the strong demand for move-up housing among baby boomers.

- *Montgomery County's most affordable "for sale" housing is located primarily in the I-270 corridor and the US 29 area.* This pattern is illustrated by the attached map which shows the percentage of 1986 through 1990 housing sales by traffic zone with prices of $140,000 or less in constant 1990 dollars. The $140,000 price was selected because it is approximately the highest price that a moderate income household, a household with an income of 80 percent of the County median, could afford.

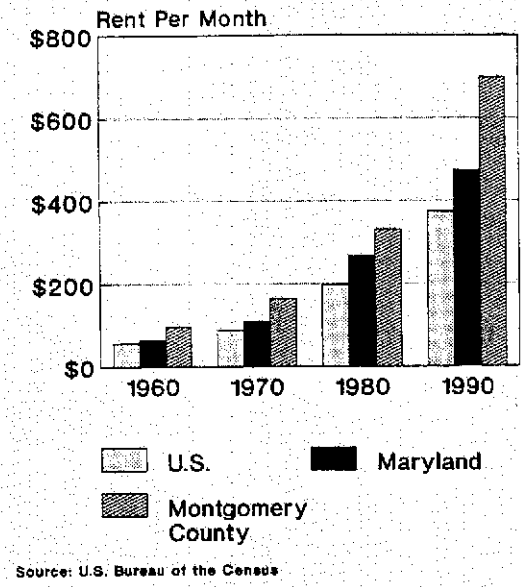
  The traffic zones with the most affordable housing prices include many with a high number of MPDUs and other affordable housing built with governmental involvement. However, they also include areas where the housing is predominately or entirely market rate, such as the up-County and urban ring areas where more than 40 percent of the units are in this price range.

- *Contract rents increased more than incomes but less than "for sale" housing costs between 1970 and 1990.* The overall increase in contract rents in Montgomery County was 323 percent during this period, from $165 per month in 1970 to $698 per month in 1990.

- *Median contract rents in Montgomery County are substantially higher than the statewide and national medians.* The County's median is 48 percent higher than Maryland's median of $473 per month and 87 percent higher than the United States' median of $374.

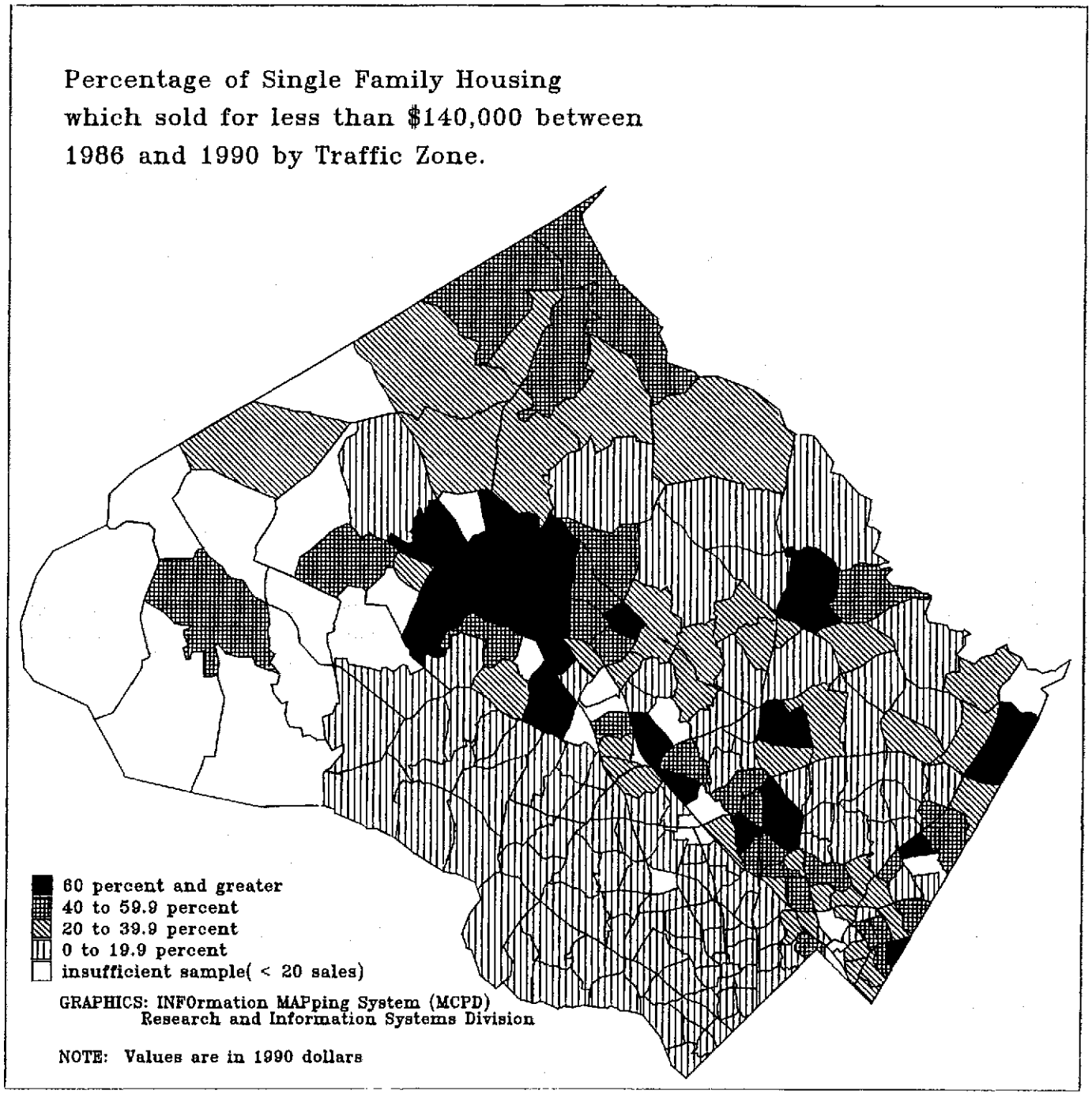
- *On the whole, rental apartment vacancy rates have risen in recent years, but the national increases have far exceeded local increases.* National vacancy rates rose steadily from 6.5 percent in 1982, 1.5 percent higher than Montgomery County, in 1982, to a peak of 11.4 percent in 1988, 7.1 percent higher than Montgomery County. Since then, national rates have declined by about half a percentage point a year to 9.5 percent in 1990. In contrast, the lowest vacancy rate in Montgomery County was 2.6 percent in 1984; the highest was 4.9 percent in 1990. County rates declined in 1989, as did national rates, but rose the next year.

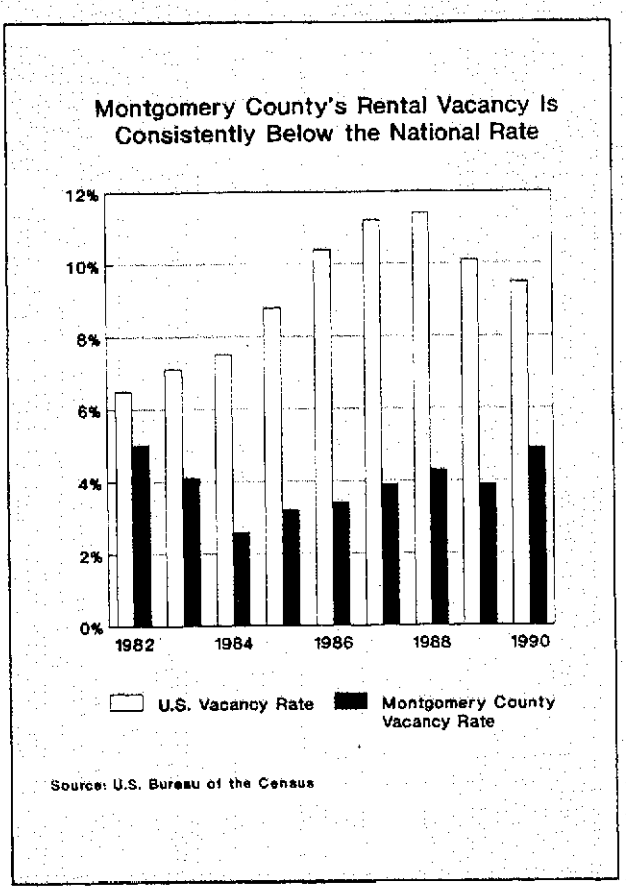
Median Contract Rent in Montgomery County Consistently High Than in U.S. and State



Source: U.S. Bureau of the Census

- *Montgomery County's current rental apartment vacancy rates are in line with the industry standard of 5 to 6 percent.* Although Montgomery County rental apartment vacancy rates have been rising, they are still far below national rates. A vacancy rate of 5 to 6 percent is generally considered a sign of a healthy market. A rate in this range means that there are enough units available to offer prospective renters a variety of choices and to permit owners to maintain or remodel units between tenants while still permitting the opportunity to make a reasonable profit. A low vacancy rate, such as Montgomery County's 2.6 percent in 1984, means a tight market with very few choices available to renters. A high rate, such as the national rate, may mean that paying the debt service and operating a building are not economically feasible.


Percentage of Single Family Housing
which sold for less than $140,000 between
1986 and 1990 by Traffic Zone.
60 percent and greater
40 to 59.9 percent
20 to 39.9 percent
0 to 19.9 percent
insufficient sample(< 20 sales)
GRAPHICS: INFOrmation MAPping System (MCPD)
Research and Information Systems Division
NOTE: Values are in 1990 dollars



The increased number of vacancies in Montgomery County and nationwide have a number of causes. In the County, the relatively rapid construction of multi-family housing in the mid-eighties and the current recession are probably major factors. In the United States the economy is considered a primary cause, especially in the northeast where a large proportion of the country's multi-family housing is located and where the economy has been unhealthy for a number of years.

D. Affordability

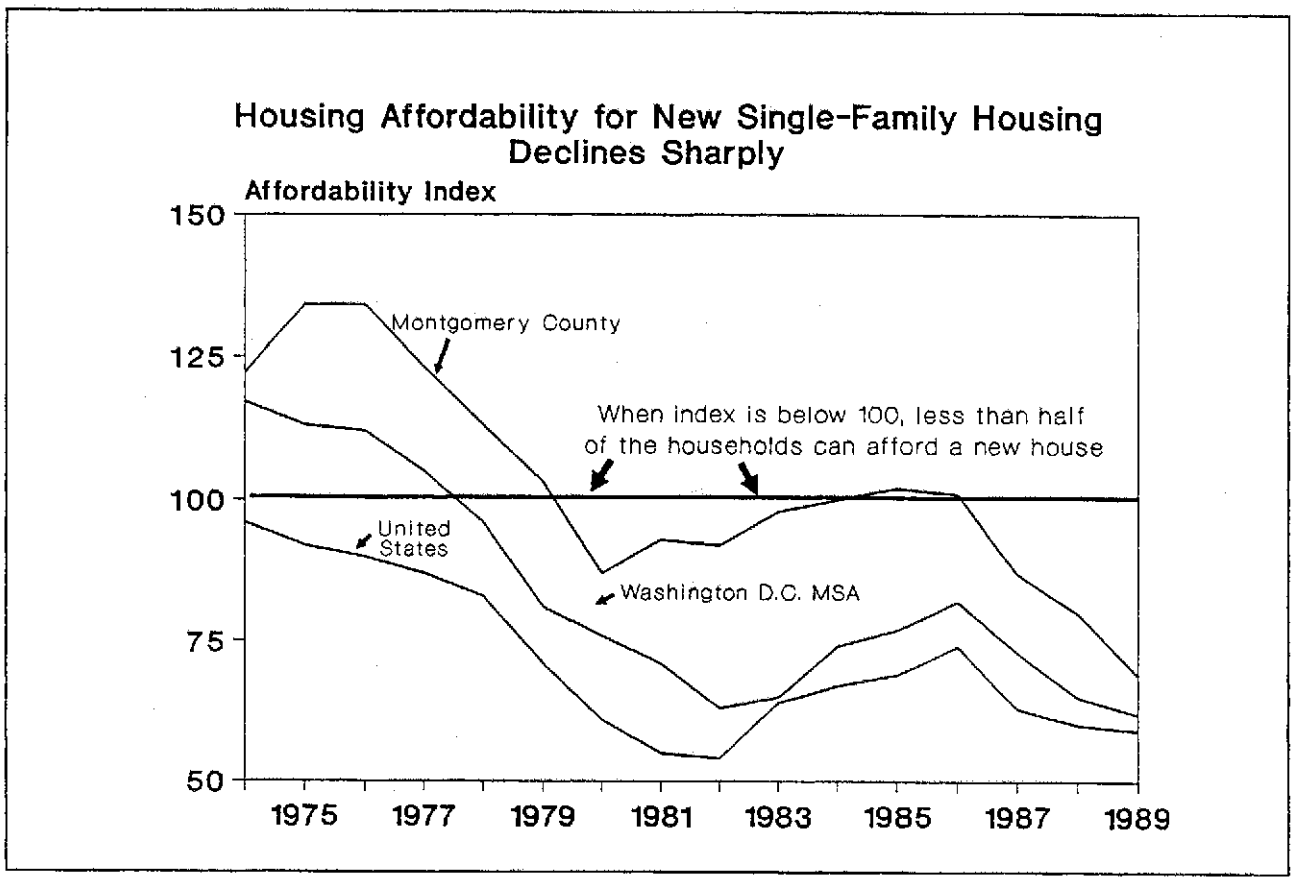
Many County residents and even more current employees in the County who are prospective residents cannot afford appropriate housing in the County.

- *Based on the Montgomery County Planning Department's housing affordability index, the affordability of new housing in the County has declined substantially since the mid-1970s.* In 1970, a median income household could afford to pay more than the median price for a new house. Today, the median income household probably cannot afford a typical new house. An index of 100 means that the median income household should be able to afford the median priced new house. When the index is below 100, the median income household cannot afford the typical house. Montgomery County's affordability index for new houses dropped 65 points from a desirable high of 134 in 1975 and 1976 to 69 in 1989. However, existing housing is more affordable than new housing with a 1989 index of 93. (The affordability index is not available prior to 1974).

- *Surprisingly, the affordability index shows that Montgomery County's new housing is consistently more affordable to its residents than new housing in the Washington, D.C. MSA and the nation is to their residents.* In 1989, Montgomery County's index was 69 compared to 62 for the MSA and 59 for the United States. This gap has narrowed in recent years.

  The index is only a relative measure; it is not comparable to the percentage of households that can or cannot afford housing. Its value is to highlight the position of the median income household in one place or period of time relative to other areas or times. In addition, the index only measures the ability of households that already live in an area to afford housing in that area. It does not include households that might want or need to live in the area but cannot find suitable housing.

- *Another measure of affordability is the ratio of household income to housing costs.* Generally, a household that spends less than 20 percent of its gross income for housing is apt to be financially comfortable while a household that spends 35 percent or more is frequently struggling to survive financially. Most financial analysts consider an expenditure of more than 30 percent of household income for housing undesirable.



- *Only 5 percent of Montgomery County households that own their own housing spent more than 35 percent of their incomes for housing costs in 1987.* Another 4 percent spent between 30 and 35 percent while 68 percent spent less than 20 percent. This pattern also occurs at the national level where 15 percent of households paid more than 35 percent of income in 1987, another 6 percent paid between 30 and 35 percent, and 56 percent spent less than 20 percent.

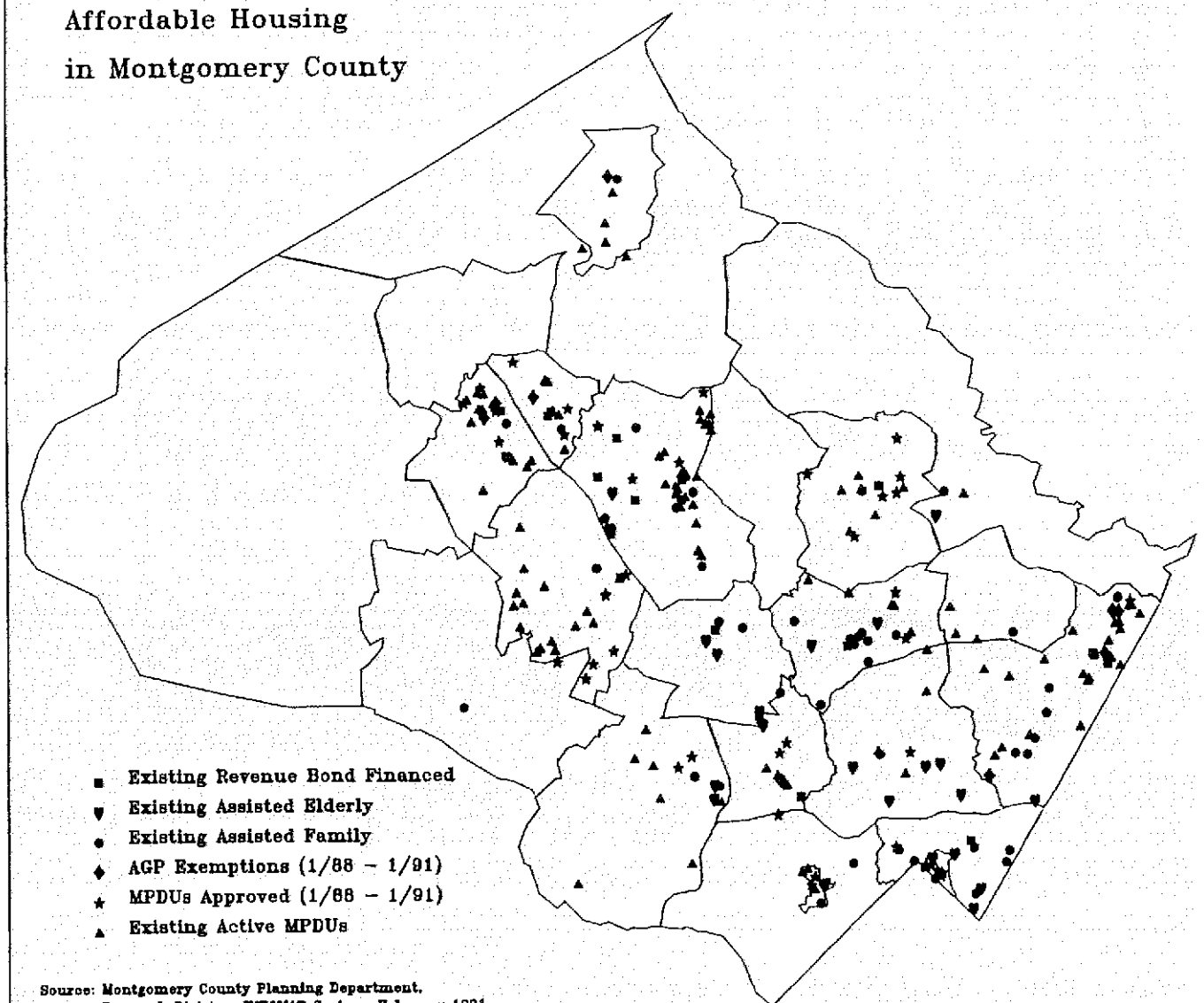
  Homeowners are frequently "house poor" when they first purchase a house, but in most cases, growth in income soon exceeds growth in housing costs, greatly improving their financial positions. The national data is similar to Montgomery County's but includes utility costs, which are not part of the local calculation. Thus, although Montgomery County homeowners are better off than their national counterparts, the difference is probably exaggerated by the variation in cost components.

- *Nonetheless, housing affordability is still a serious problem for many County households.* The Housing Opportunities Commission waiting list of those needing low and moderate income housing had reached a high of over 8,000 in the fall of 1991. Over 1,000 of those households were reported to be homeless.

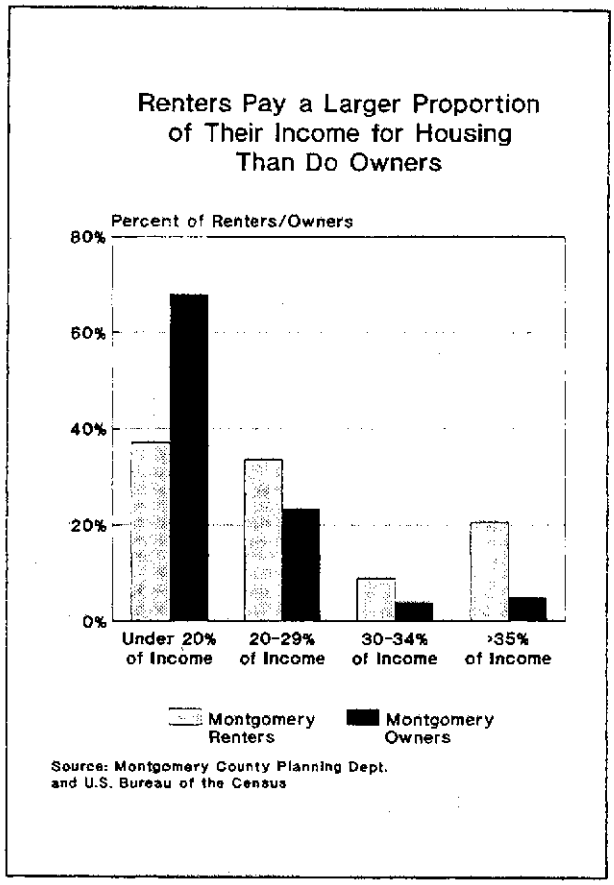
- *Nationally and locally, renters tend to pay a larger proportion of their incomes for housing than do owners.* Almost 21 percent of Montgomery County renters spent 35 percent or more, 9 percent spent between 30 and 35 percent, and only 37 percent spent less than 20 percent of household income for housing costs in 1987. Nationally, an even greater proportion of renters were bearing an undesirably high rent burden. Thirty-nine percent spent more than

Map 1

Affordable Housing in Montgomery County



Source: Montgomery County Planning Department,
Research Division, INFOMAP System. February 1991.



35 percent of income, 10 percent spent between 30 and 35 percent, and only 25 percent spent less than 20 percent.

- *In addition to paying a higher proportion of their incomes for housing than owners pay, renters typically have substantially less income to spend.* Based on the Montgomery County 1987 Census Update Survey, the median 1986 household income of renters was $28,714, not much more than half of the median household income of owners which was $55,861. Renters tend to be young adults and elderly persons, who typically have relatively limited financial resources.

- *The Moderately Priced Dwelling Unit (MPDU) law had added about 7,800 new units of housing for moderate income families County-wide by the end of 1990, about 6 percent of all new units built after 1973.* The MPDU law, which was passed in 1973 and implemented in 1974, requires that at least 12.5 percent of the housing in developments of 50 or more units in most residential zones must be affordable to moderate income households. If more than the minimum percentage of MPDUs are provided, the developer receives a density bonus. Units may be "for sale" or rental, and the price is controlled for at least 10 years.

MPDUs are not required in most of the wedge areas because large lot zones, zones of one or fewer units to the acre, are not covered by the law. Otherwise, MPDUs are mandated County-wide. They are most prevalent, of course, in areas that experienced the greatest growth during the last 16 years since the MPDU law was implemented. In 1990, for example, 44 percent of the currently controlled MPDUs that were not publicly owned were in the I-270 corridor policy areas of Rockville, Gaithersburg, and Germantown. (The Housing Opportunities Commission has the option to buy one-third of all MPDUs.)

- *In December 1990, Montgomery County had slightly more than 16,650 units of low and moderate income housing either in the housing stock or approved for construction, including MPDUs.* The existing affordable units represent approximately 5 percent of the total County housing supply. The total includes only units which were built or are operated with governmental financial involvement or a legal mandate, such as the MPDU law. Market rate housing affordable to low and moderate income households is not included. These units are located primarily in the corridor areas and the urban ring as shown in the previous map.

E. Character Of The Housing Stock

- *On the whole, Montgomery County's housing stock is in good condition.* The County's Comprehensive Housing Strategy reports that "according to the County's most recent Housing Assistance Plan (10/1/88 to 9/30/91), of the total 282,228 housing units in Montgomery

County, approximately 3,803 owner occupied units and 2,941 rental units were in substandard condition, a total of only 2.4 percent. Of the occupied substandard units, 3,631 owner units and 1,883 rental units were suitable for rehabilitation."

- *The protection of existing neighborhoods has been a County priority during the last two decades.* The County has improved the physical appearance and facilities in neighborhoods with Neighborhood Improvement Programs funded with Community Development Block Grant funds. Community associations have been offered myriad opportunities for involvement in government decisions affecting neighborhoods, and a number of self-government powers have been granted to homeowners' associations, especially in new communities.

  Neighborhoods have been protected from outside traffic through neighborhood protection policies which inhibit cut through traffic and parking by commuters or shopping area customers who are not area residents. These policies, of course, put more pressure on arterial roads. High priority has been given to preservation of qualified historic districts and structures to maintain these special resources and, incidentally, the ambiance of the neighborhood.

- *Changes to the Zoning Ordinance to permit townhouse zoning and cluster development were first passed in the 1960s and substantially implemented in the 1970s and 1980s.* These changes altered the character of the housing stock by permitting a mixture of different housing types on a single site, including townhouses, and allowing denser development of single-family detached housing. They also permitted increased protection of the environment and preservation of open spaces in common areas.

- *An important aspect of the implementation of the General Plan was the adoption of new residential zoning tools to further its goals.* These included the Central Business District (CBD) and Transit Station Residential and Mixed Use zones (TSR and TSM) which were designed to encourage relatively dense development at transit station impact areas and in the four established central business districts. These zones were intended to strengthen the corridor city concept.

- *The corridor concept was also implemented through the use of the Town Sector (TS) Zone which was adopted at about the same time as the General Plan and was intended to encourage the development of new towns.* Churchill in Germantown and Montgomery Village are prime examples of the use of this zone.

- *Another change to the residential zones was to provide zoning for planned unit type neighborhoods.* This innovation has had a major impact on housing patterns and is the Planned Development or PD Zone. The PD Zone is a floating zone which may be recommended in the master plan and implemented through rezoning. It generally permits higher densities than the base zone while requiring site plan approval. Its development standards are relatively flexible, and the PD Zone, along with the Town Sector Zone, has probably been the most frequent location for innovative housing types, such as zero lot line single-family detached units and a variety of attached configurations developed with planned open space and recreation, and, in some cases, local shopping facilities.

  The PD Zone, Town Sector Zone, and the Transit Station Zones require development plan approval by the County Council at the time of rezoning. Development plan approval allows elected officials to evaluate density and placement of units in return for granting flexibility in zoning standards. These zones

also require site plan approval by the Planning Board.

- *The Rural Density Transfer (RDT) Zone and the Transfer of Development Rights (TDR) method of development in the designated receiving areas were developed to implement the Agricultural Reserve, the cornerstone of the wedge protection effort.* While protecting the wedge, the TDR program, like the entire MPDU program discussed above, allowed increased densities in the urban ring and the corridor areas. These programs increased the opportunities to construct townhouses and "plexes" in the Euclidean single-family zones while at the same time serving broad public policies objectives.

- *The Rural Cluster Zone was developed to provide for a mix of agricultural uses and low density residential development in close proximity to the Agricultural Reserve. This zone allows large lot residential development only (one dwelling unit for each five acres), utilizing private septic systems and wells.*

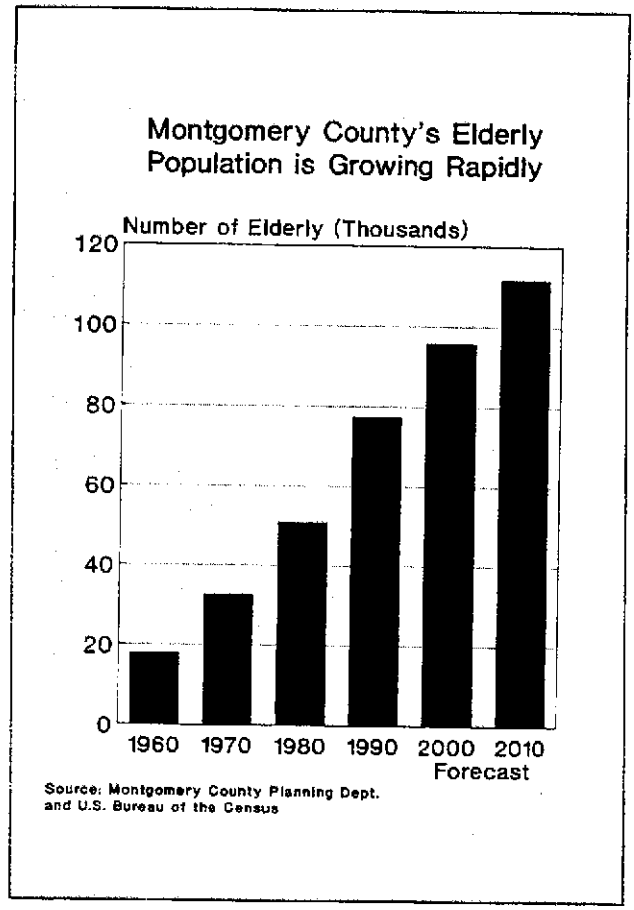
II. HOW WE EXPECT TO CHANGE

A. Demographic Trends

Anticipated changes in the composition of the population will influence the amount and type of housing needed in Montgomery County in the future.

Growing Elderly Population

- *The number of elderly people in Montgomery County's population is growing.* People are living longer and the population as a whole is larger. The 1990 Census shows a 52 percent increase in the County's population of persons aged 65 and over between 1980 and 1990. In 1990 more than 10 percent of Montgomery County's population is age 65 years and over.



- *This trend is expected to continue well into the future, slowly during the next two decades as the comparatively small depression and World War II generations reach retirement age, then very rapidly as the first baby boomers reach 65 in 2011.*

- *Age, along with income and family type, is a major determinant of housing needs and preferences.* Generally, people prefer to stay in their pre-retirement homes through their 60s. Home ownership rates remain over 80 percent to age 70 and do not drop below 50 percent until some point between age 80 and 85. The younger elderly who do move appear to seek housing with many amenities and low maintenance requirements. They often choose apartments, townhouses, or patio homes. The very elderly, over 80 or 85 years of age, often need more services, one-floor living, and easy maintenance. They usually choose standard apartments or specialized housing for the elderly if they move.

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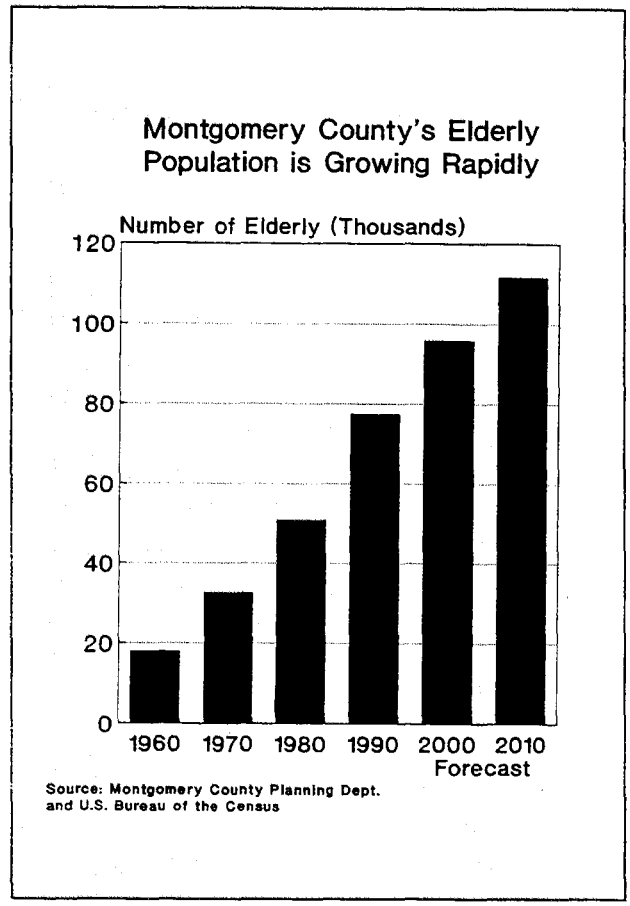

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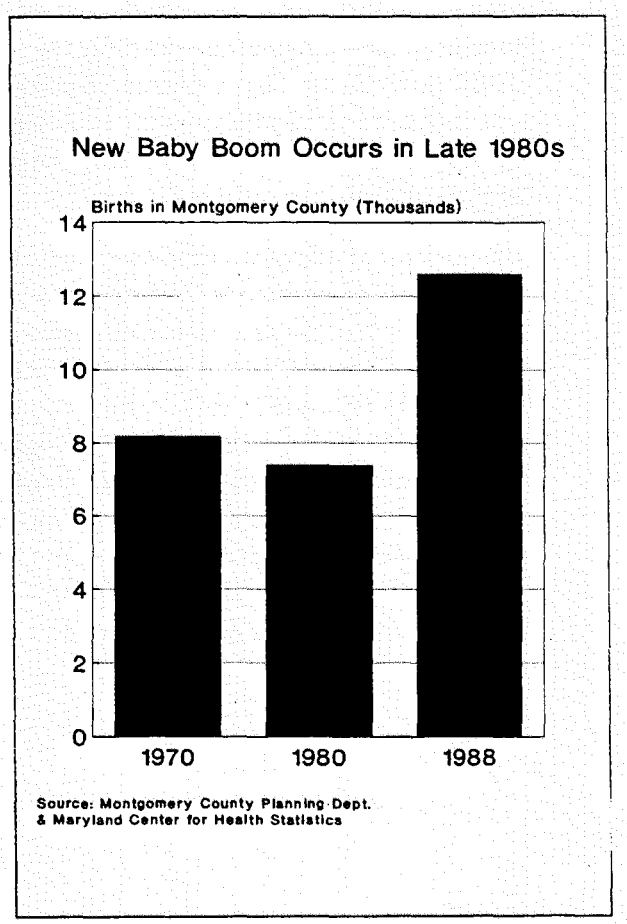
New Baby Boom

- *Americans are having more children than in any period since the post-war baby boom ended in 1964, and Montgomery County citizens are no exception.* The number of children under five years of age increased by more than 70 percent in the County between 1980 and 1990. Births reached a record high in 1988 of 12,577. (This trend is expected to end in the mid-1990's, but the babies born during this period will affect their families' housing needs for many years.)

- *At the same time, their baby boom parents are approaching middle age, the prime period for home ownership.* The combination of more children plus more adults in their higher earning years tends to mean strong demand for single-family "for sale" housing. The preference for detached units remains strong, although increasingly expensive land may make this dream impossible for some households.



Dual Income Households

- *Women entered the labor force in record numbers during the last two decades.* Housing costs and styles reflect this trend. The result has been larger houses with more amenities and labor saving devices. At the same time, many analysts believe that these households will be willing to accept smaller lot sizes in order to be closer to work and because they do not have time to maintain or enjoy a larger lot.

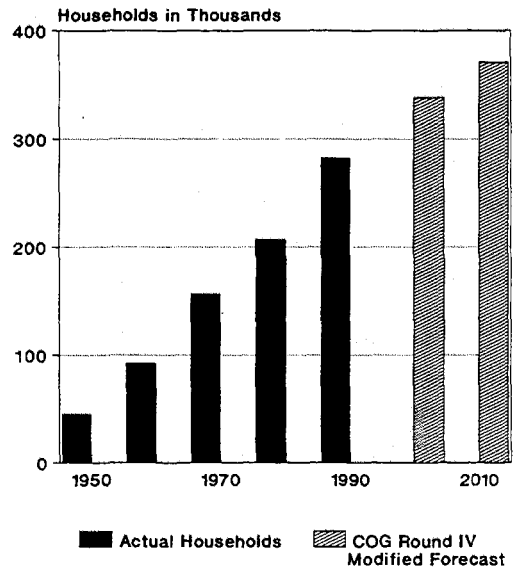
- *The trend toward a high percentage of working women is expected to continue, but the female labor force participation rate in the County is probably leveling off at about 66 percent.* In any case, housing suitable for dual income families will most likely remain a strong element of demand.

- *The other side of the trend toward dual income families is the difficulty single income households often experience in competing in the housing market.* While the divorce rate has stabilized in recent years, single parents and other singles will continue to be a sizable segment of the housing market. Many of these households have a limited ability to afford appropriate housing but need secure neighborhoods and often, a good place to raise a family.

Telecommuting

- *Some analysts believe that telecommuting, working at home by mail, telephone, computer, and fax, probably will become more widespread in coming decades.* For housing, this trend would mean that households would have more freedom in choosing where to live since distance to work would have less importance. It could also make a comfortable working space at home very desirable, whether the "office" is in lieu of a bedroom or created as additional space.

Montgomery County Experiences Steady Long-Term Growth in Households



Source: Montgomery County Planning Dept. and U.S. Bureau of the Census

Scarcity of Land for Single-Family Detached Housing

- *The single-family detached home clearly remains the "American dream" and preference, but scarce land, environmental constraints, and the high cost of providing infrastructure to serve more spread-out housing encourage denser housing.* Without a major change in the economy or public policies, the single-family detached house appears destined to become less and less available to households at or below the median income in Montgomery County.

B. Household Forecast

- *The 1990s are expected to be a period of more moderate growth in the number of households than were the 1980s.* (Council of Governments' forecasts are prepared for households rather than housing units. The number of housing units tends to be a little higher than the number of households).

- *Household growth is expected to continue, but at a slower pace between 1990 and 2000 than Montgomery County experienced in the 1980s.* The Planning Department's Round IV Modified Intermediate Forecast predicts that the County will see the construction of 56,000 new housing units by 2000 compared to 70,000 in the previous decade. The forecast expects the total number of households to reach 371,000 by 2010. *At this rate, a sizable share of the remaining residential development capacity will be exhausted in 10 years.* (However, development capacity will increase when the sectional map amendment implementing the Shady Grove Sector Plan is passed. In addition, increased residential capacity is under serious discussion in a number of other master plan updates currently under way).

This forecast anticipates a moderate revival of residential development in 1992 compared to the slowdown of the recession. Completions began to decline in 1987 and approached historic lows in 1990 and in 1991. A turnaround is expected based on continued low mortgage interest rates, the normal course of the business cycle, and pent-up demand. Low interest rates combined with negligible increases in prices should make housing a "good buy" and attract buyers back into the market.

ECONOMIC ACTIVITY FACT SHEET

INTRODUCTION

The character and extent of economic activity in Montgomery County have changed since the 1960s. The number of jobs in the County has more than doubled. The federal government now employs a smaller proportion of the resident labor force, and although many of the emerging businesses work with or under contract to the federal government, the County's economy is more diversified. In addition, the County now imports as many workers as it exports each day.

The amount of land used for employment has grown more rapidly than expected by the 1969 General Plan. Employment land use has also been more intensive than envisioned and oriented toward office and service uses rather than the anticipated industrial and manufacturing uses. Retail stores have located in the County in response to residential growth. In addition, women have entered the work force in record numbers. The increased number of dual income families affects the way the County does business by increasing demand for daycare, compatible transportation options, and increased weekend and evening business, shopping, and cultural opportunities.

Employment is dynamic and Montgomery County's role is continually evolving. Where Montgomery County was once on the frontier of business expansion outside the center city, it is now part of the center of the region, as are Arlington County, Alexandria, Fairfax County, and Prince George's County. As the County has become part of the center, the County now typically attracts more of the type of employer who, 30 years ago, would only have considered locating in Washington, D.C. Those employers who want more expansive, less expensive fringe locations now often look to Frederick and Howard Counties.

The amount of non-residential land and its density have land use and planning implications for the County. The 1964 and 1969 Plans recognized the importance of economic activity and employment in their narrative discussions and as land use objectives, but did not devote a separate goal to it. These Plans clearly expected the County to become more self-sufficient economically, but were primarily oriented toward the issues common to bedroom suburbs, such as housing and commuting.

Economic activity is essentially a quality of life issue. It is the source of funds to sustain our standard of living. In recognition of the importance of employment and economic activity to the County, this General Plan Refinement proposes to incorporate a separate goal concerning economic activity. This fact sheet offers background for such a goal. The fact sheet focuses on employment as the County's primary economic activity.

A primary source of employment data for the County is *County Business Patterns* prepared by the U.S. Bureau of the Census. Due to federal spending cutbacks, this publication is annual but has a 2-year lag time for public release. As a result, some of the economic data in this fact sheet is not as timely as might be desired. Where *County Business Patterns* is the primary source of information, indications of the effects of the recent economic downturn and other changes in the economy are not yet available.

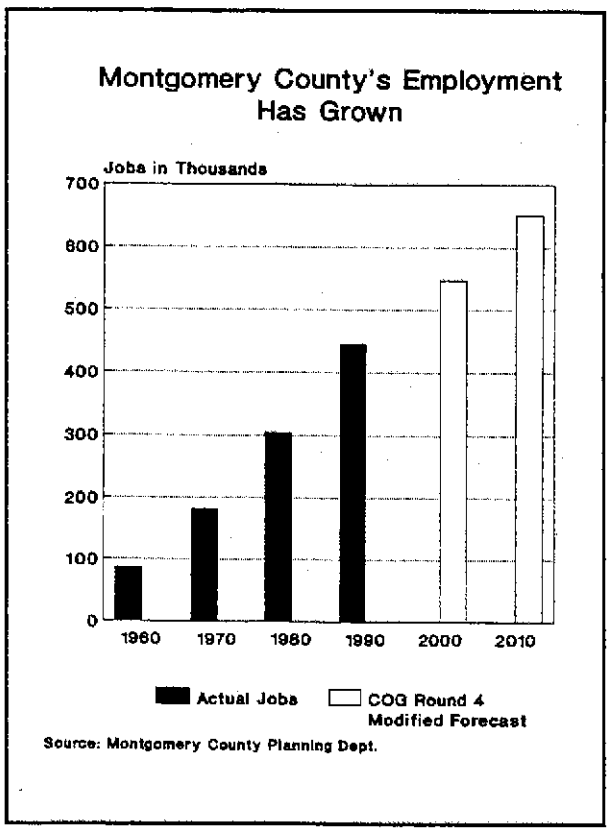
The discussion of the fiscal implications of land use and other similar issues is relatively brief. The fiscal element of the General Plan Refinement will probably suggest future studies to further explore the complex fiscal implications of land use and other fiscal issues raised throughout the Refinement process.

I. HOW ECONOMIC ACTIVITY HAS CHANGED

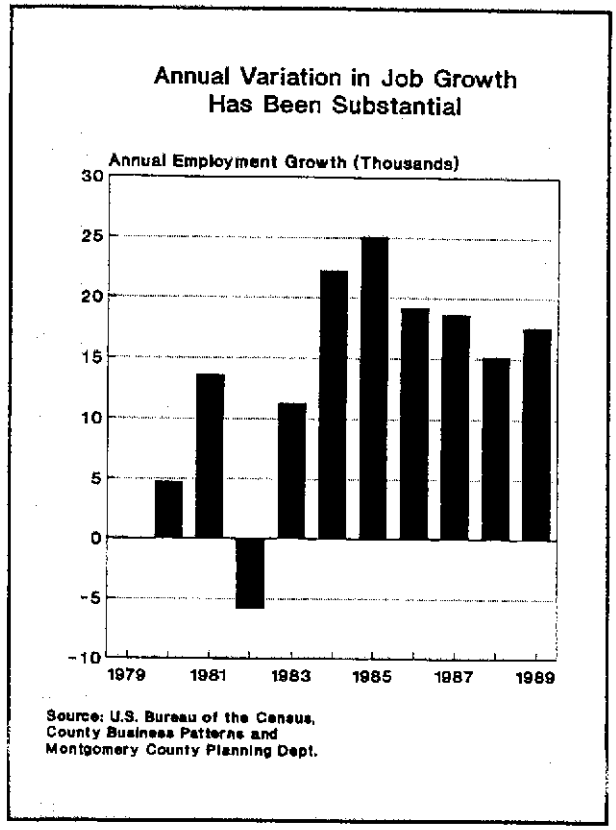
A. Quantity

1. Change in Jobs

* **The number of jobs located in Montgomery County has more than doubled since 1970.** Over 140,000 jobs were created between 1979 and 1989 alone. Montgomery County Planning Department data show that total at-place employment in Montgomery County grew from 182,000 in 1970 to 455,000 in 1990, an increase of 150 percent. In contrast, population increased by 45 percent.



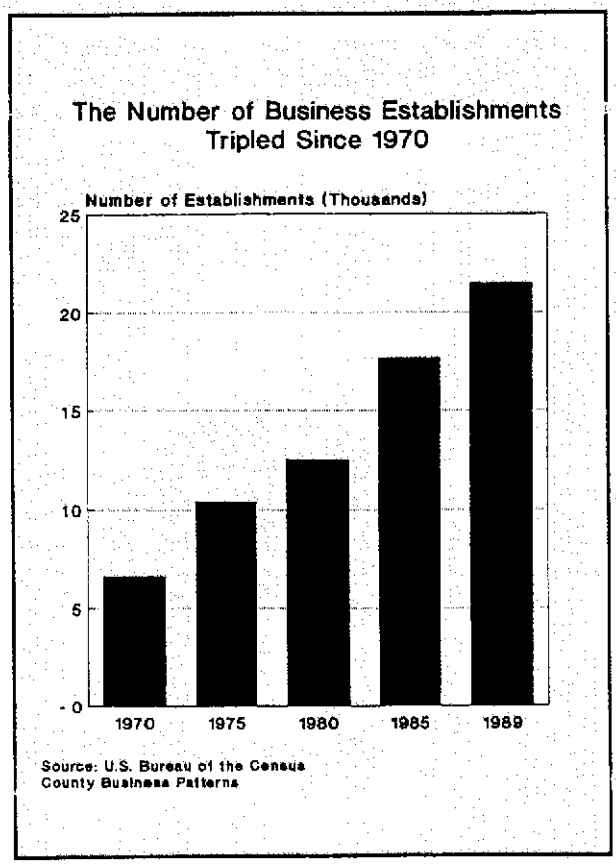
* **Montgomery County's share of Washington Metropolitan Area employment increased as Washington, D.C.'s share continued to shrink.** Between 1970 and 1989, the County's share of regional employment grew from 15 to 18 percent. During this period, Washington, D.C.'s share of regional employment fell from 43 percent to 28 percent. According to the U.S. Bureau of Economic Analysis, Montgomery County's job growth of 113 percent exceeded the region's 78 percent, but was smaller than Fairfax County's growth of 270 percent. (Note: The Montgomery County Planning Department uses *U.S. County Business Patterns* at-place employment data in most cases, but the Bureau of Employment Analysis data is used in this case to allow comparison between jurisdictions.)



2. Change in Businesses

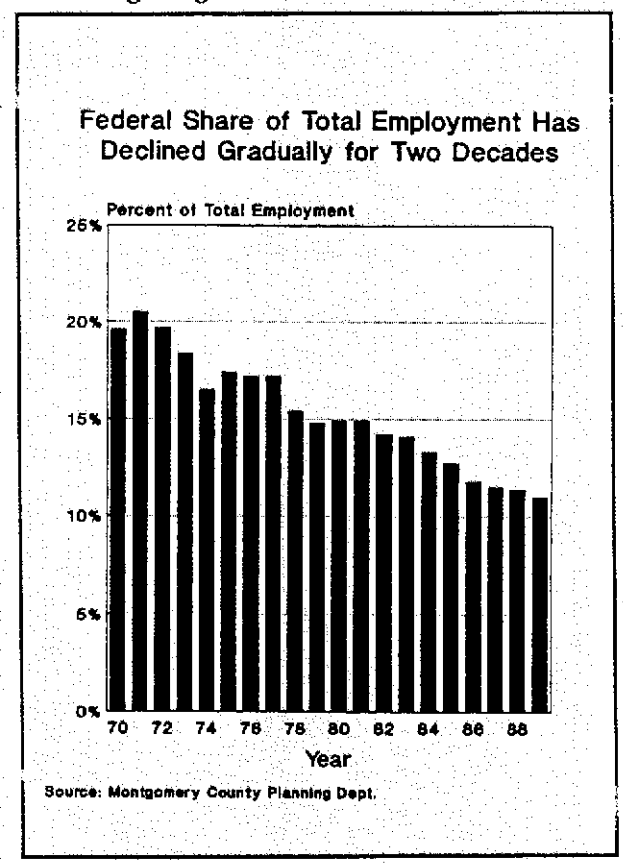
* **Only 19 private companies located in Montgomery County employ more than 1,000 people.** In 1973, there were 6 fewer, or 13, private firms of this size. The top three employers in Montgomery County are IBM, Marriott Corporation and the Chesapeake and Potomac Telephone Company. These firms were present in the County in 1973 as well. Each has a number of sites but their area headquarters are located primarily in the urban/suburban ring.

* **Most people are employed in small businesses.** The number of business establishments in Montgomery County has more than tripled since 1970.



By 1989, the number of business establishments in the County had risen from 6,650 to approximately 21,500, according to data from *County Business Patterns*. County establishments are predominantly small, as they have been consistently during the past two decades. The large majority employ fewer than 50 people. About 73 percent of all businesses employ fewer than 9 people, 22 percent employ between 10 and 49 people, 5 percent employ 50 to 249 people, and only 1 percent of the businesses employ 250 people or more.

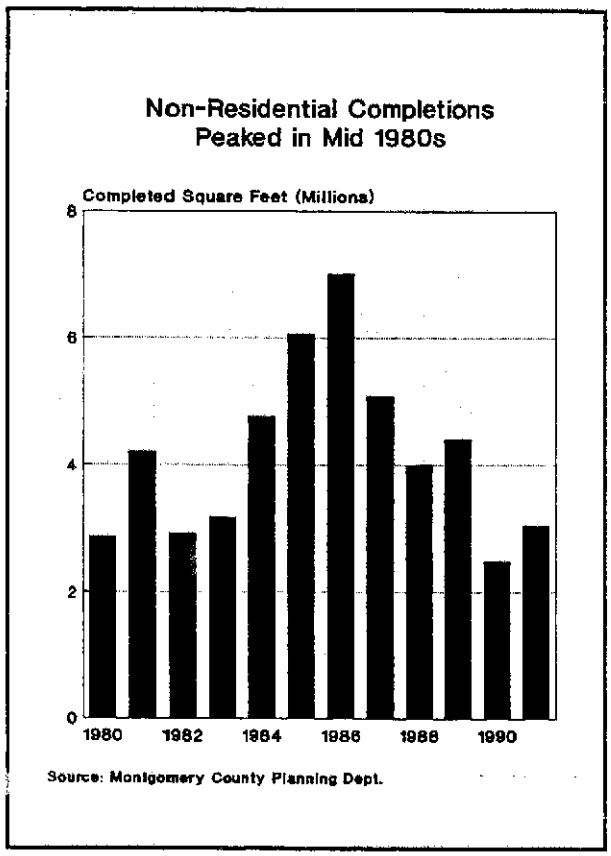
* **As the County's employment base diversifies, the federal share of employment continues to shrink, even though the number of agencies has increased slightly.** In 1970, almost one of every five employees in Montgomery County worked for the federal government. By 1990, even though federal employment in the County had grown by over 30 percent to 42,000 employees, only one of every ten employees in Montgomery County worked for the federal government. The County is home to several of the federal government's largest campuses, including the National Institutes of Health, the National Naval Medical Center, the Department of Energy, and the National Institute of Standards and Technology. In 1970, 18 federal agencies existed in the County. By 1990, this number had increased by only 1 to 19 agencies. Montgomery County's decrease in share reflects growth in the non-federal work force and the dispersion of federal employment centers over a larger region.



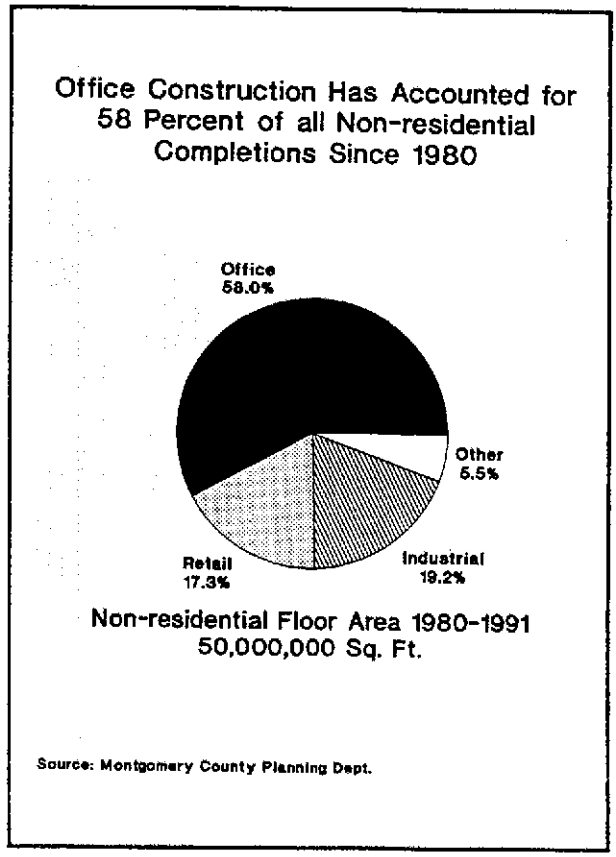
3. Change in Employment Space

* **Montgomery County has approximately 141 million square feet of employment floor area.** Thirty-eight percent, about 53 million square feet, of this space is classified as office; 22 percent, or 31 million square feet as retail; a little over 12 percent, 18 million square feet, as industrial; and 28 percent, or 40 million square feet, as "other." "Other" includes hotels, hospitals, schools, and similar, generally institutional uses. These calculations exclude miscellaneous, generally low employment intensity space such as apartment buildings and farm buildings.

* **Over 50 million square feet of non-residential space were completed in Montgomery County between 1979 and the end of 1991.** Completions peaked in the mid-1980s. The Gaithersburg East policy area captured over 23 percent of the County's non-residential completions during the 1980s with an annual average of almost one million square feet completed. The combined I-270 Corridor policy areas accounted for a large proportion of total non-residential completions. Non-residential completions in the wedge areas have been minimal.



* **In contrast to the General Plan's expectations, there has been greater growth in office space than in industrial space.** New office space accounted for 58 percent of total square footage of non-residential completions between 1979 and 1991, adding almost 29 million square feet during the 12-year period, while industrial space accounted for less than 20 percent of completions. In addition, industrial space has been used predominantly for research and development or warehousing, rather than manufacturing as the General Plan envisioned.



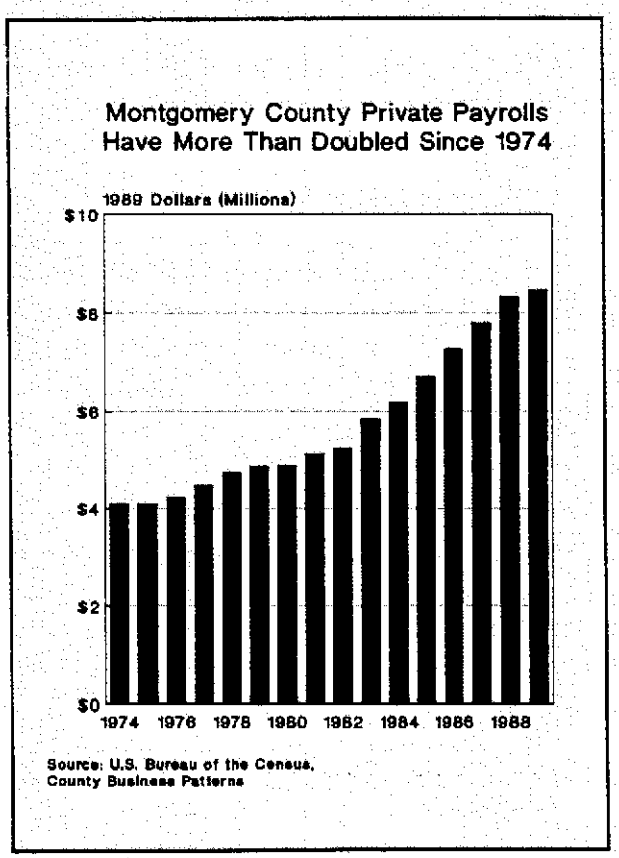
* **An estimated 17.5 million square feet of retail space are located in 217 shopping centers across Montgomery County, an increase of almost 6 million square feet since 1970.** That increase of 52 percent was only slightly more than the corresponding population increase of 45 percent during the period. Based on data gathered from the 1990 Kalis's Shopping Center Leasing Directory, five urban/suburban ring and I-270 Corridor locations - Silver Spring, Bethesda, Rockville, Germantown and Gaithersburg - account for more than 80 percent of the growth in retail space. The Gaithersburg area alone accounts for almost half of all new shopping center space since 1970.

B. Other Measures of Economic Activity

* **Total Montgomery County retail sales increased by 41 percent between 1972 and 1987, from $4.1 billion to $5.8 billion in constant 1987**

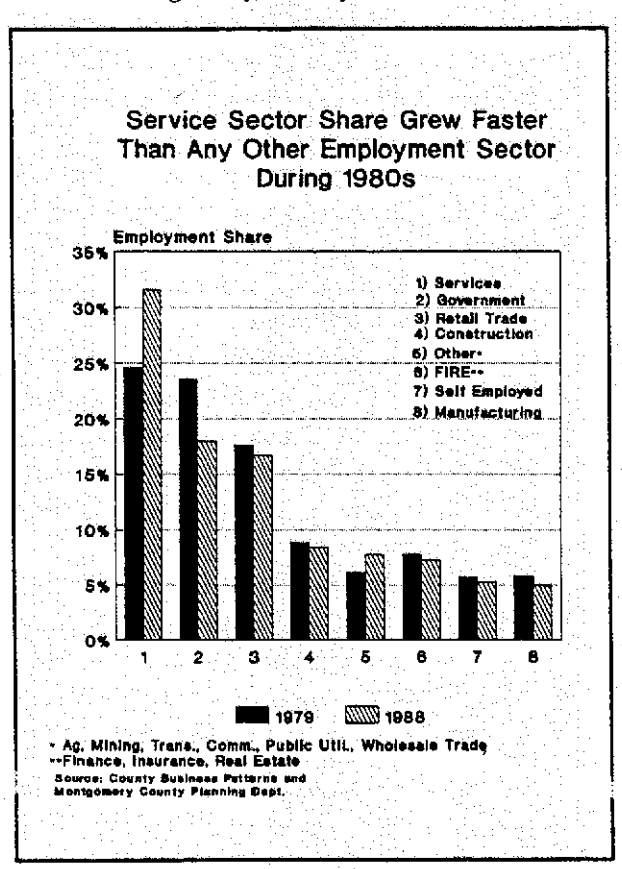
dollars. Population growth accounted for a substantial portion of the increase, although per capita sales still grew almost 13 percent, based on data from the Census of Retail Trade. In fact, sales rose approximately $1,000 per person from $7,500 in 1972 to $8,500 in 1987 in constant 1987 dollars.

* **Montgomery County's private payrolls also increased substantially between 1974 and 1989 from $4.1 billion to $8.5 billion in constant 1989 dollars, but the increase per payroll worker was only 0.5 percent.** The increase in total payroll represents growth of almost 107 percent. That increase, however, is almost entirely due to the increase in the number of payroll employees. Dollars per payroll employee increased by just over $100, from $24,790 to $24,917, in constant dollars, based on data from *County Business Patterns*. (Note that private payroll employees accounted for about 77 percent of at-place employment in 1989. Government employees, self-employed persons, employees of some non-profit organizations are among those who are not included.)



C. Employment Character

* **Many of Montgomery County's major private employers have been located in the County since before 1970.** Companies that have employed over 2,000 people in the County since 1970 include Vitro Corporation and GEICO in the urban/suburban ring and the IBM Corporation in both the ring and the I-270 Corridor. Other major employers that have located major facilities in the I-270 Corridor since before 1970 include Fairchild Industries, Bechtel, NUS Corporation, National Geographic Society, and Watkins-Johnson Company. The Chesapeake and Potomac Telephone Company, located within the urban/suburban ring, has provided continuous employment in Montgomery County since before the General Plan's adoption. Some Montgomery County employers are considering consolidating operations outside Montgomery County, however.



* **Montgomery County's fastest growing employment sector since 1970 has been the service sector, even though the General Plan**

envisioned significant growth in manufacturing. Between 1970 and 1990, manufacturing declined from 5 percent to 4.4 percent as a share of total at-place employment. The service sector unexpectedly represented more than one-third of total at-place employment in the County, up from 21 percent in 1970. The retail sector followed with over 16 percent of at-place employment.

The service sector includes most of the traditional professions as well as day-to-day personal services such as dry cleaning, beauty shops, and car repair. The practice of law and medicine, accounting, engineering, and computer programming are examples of the many professions which are classified as service occupations.

D. Intensity of Employment

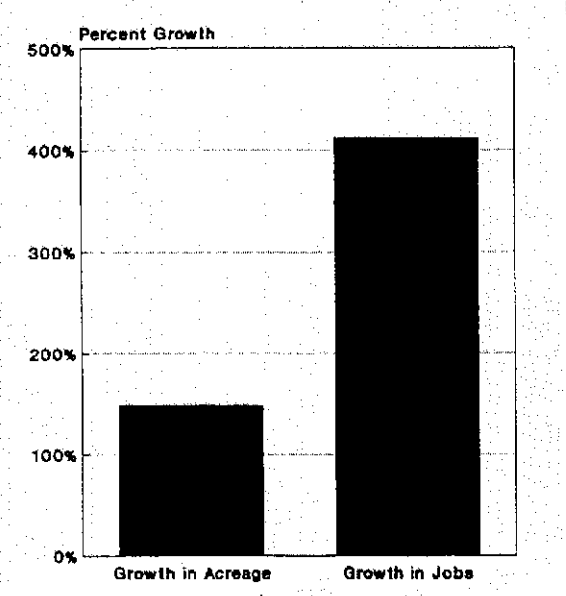
* **The intensity of use and design of employment centers have changed.** Prior to 1970, headquarters of large County employers such as Vitro Corporation, National Geographic, and GEICO were typically located in low-rise buildings in large park-like settings. After 1970, additional gross floor area was added to many existing employment centers and new ones were developed. This additional density more closely follows the wedges and corridors concept as envisioned in the General Plan. Office buildings have become more site intensive, thereby requiring less land per employee. Two federal agencies, the National Oceanographic and Atmospheric Administration (NOAA) and the Nuclear Regulatory Commission (NRC), have built tall office buildings within walking distance of major transit stations. The multi-story buildings at Rock Spring Park are another example of more intense office development in the urban/suburban ring. Consistent with the General Plan, no major private employment centers are located in wedge areas.

* **Changes in the Zoning Ordinance since 1960 have encouraged greater intensity of commercial/industrial land use.** The Central Business District (CBD) and Transit Station (TSM) zones particularly encourage more mixed use and intensity than was offered by the office park approach which was very popular in the 1950s and 1960s. The NOAA and NRC buildings noted in the preceding bullet are examples of the CBD and TSM zones respectively, both have a residential phase and ancillary retail. The greater intensity is viewed as a more efficient use of land and infrastructure, especially transportation facilities. There are businesses, however, which will probably continue to prefer an office park setting. These include high technology firms, where security for research efforts is important, and businesses, which need low, spread out buildings for laboratories, assembly areas, and truck deliveries.

While the general trend has been toward greater intensity of land use, the County has reduced the permitted floor area ratio (FAR) in several zones. The C-2 zone was the most intense commercial zone in the 1960s, allowing up to 14 FAR. The allowable density in the C-2 zone has now been reduced to 1.5 FAR. The change is not as drastic as it appears on the surface because C-2 zoning has been replaced by CBD zones in areas designated for intense development in Central Business Districts. The maximum density in the CBD-3 zone is 8. In addition, an FAR cap of up to 0.6 has been imposed on development in the I-3 zone, which previously did not have a limit.

* **Between 1960 and 1991, the number of acres of land used for employment (commercial, industrial, governmental and institutional) grew almost 150 percent, from 12,600 to 31,200 acres, while total employment jumped over 415 percent, indicating the increase in intensity.** The growing use of structured parking at employment locations and the increase in average building height are elements of this change.

* **Even with this substantial growth, commercial and industrial uses now occupy only 2.6 percent of the County's land area.** Nonetheless, 2.6 percent is a sizable increase from 0.6 percent in 1960. Institutions and government installations not occupying leased space represent another 7.0 percent of the County's land compared to 3.3 percent in 1960.



Summary of Land Use (in Acres), 1960-1992

Land Use	1960 Number	1960 Percent	1991 Number	1991 Percent
Single-Family	23,700	7.5%	86,800	26.7%
Multi-Family	700	0.2%	6,700	2.1%
Commercial	1,000	0.3%	5,600	1.7%
Industrial	1,000	0.3%	2,800	0.9%
Local Gov., Insts., Fed. Install., other open	10,600	3.3%	22,800	7.0%
Park & Recreation*	6,800	2.1%	24,100	7.4%
Vacant, Forest, Agriculture**	263,400	82.8%	167,300	51.6%
Other, including rights-of-way	10,800	3.4%	8,400	2.6%
TOTAL***	318,000	100.0%	324,500	100.0%

* *Some parkland is included in other categories.*
** *90,000 acres included in the Agricultural Reserve in 1991.*
*** *Totals vary due to differences in tabulations of rights- of-way and islands.*
Source: Montgomery County Planning Department.

* **The amount of land zoned for commercial and industrial use has also increased since 1960.** In 1991, 3.9 percent of the County's land area was zoned for commercial and industrial use compared to 1.1 percent in 1960. Another 1.4 percent was zoned for mixed use, including commercial and industrial uses. Mixed use zones were not available in 1960.

Percentage Distribution of Zoned Land by Zoning Category 1960 - 1991

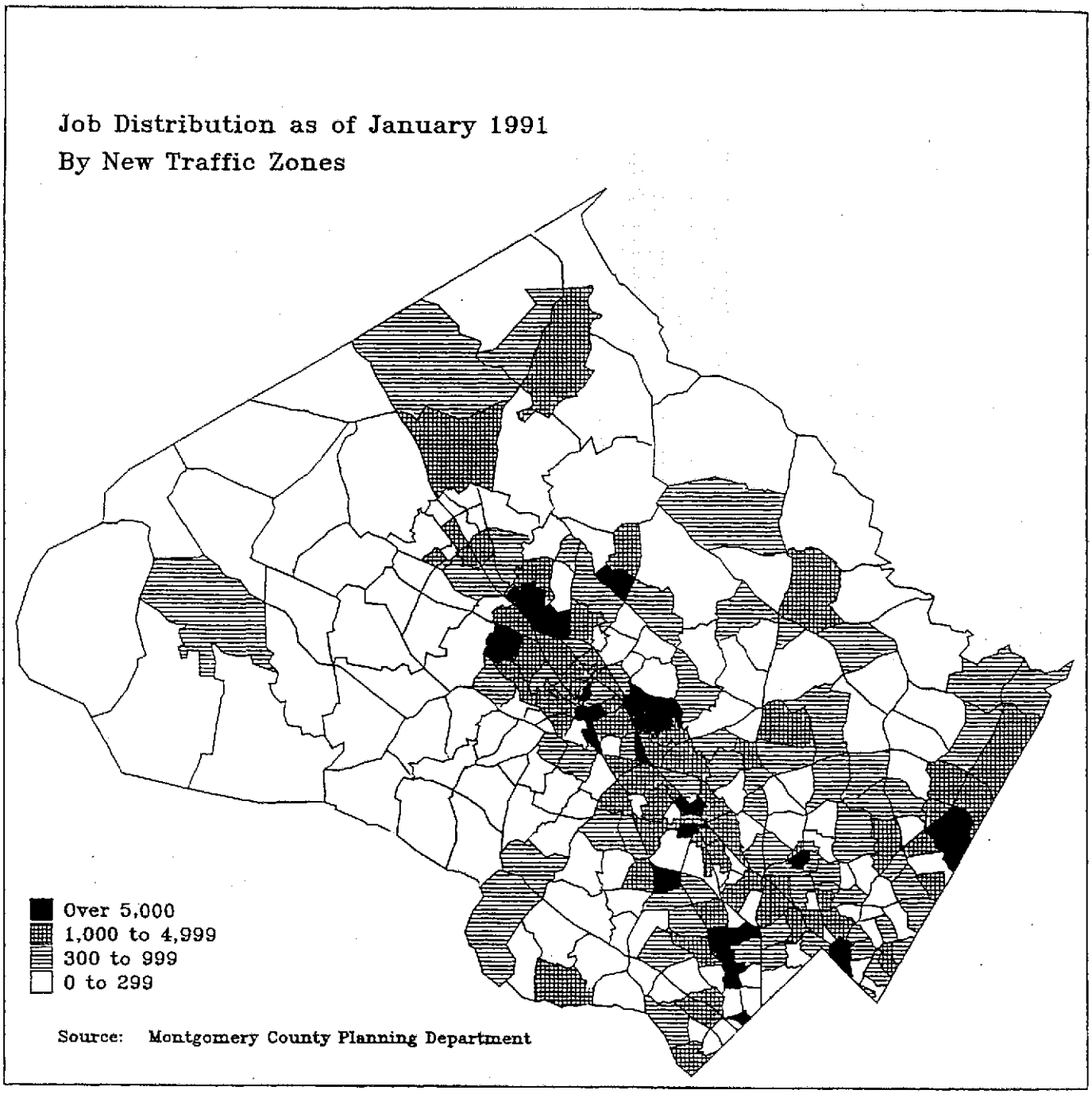
Zone	1960	1991
Commercial	0.4%	1.1%
Industrial	0.9%	2.8%
Mixed Use	N.A.	1.4%
Multi-Family	0.4%	1.7%
Single-Family	98.3%	51.2%
Rural/Agriculture	N.A.	40.8%
Other	N.A.	0.9%
	100.0%	100.0%

Note: Total is less than the County's total acreage because most water areas and some rights-of-way are not zoned.

Source: Montgomery County Planning Department, Maryland State Tax Assessor's Parcel File, and the ...On Wedges and Corridors, 1964.

Land use and zoning distributions of County land are not strictly comparable. Special exceptions, the variety of zones used for government land, residentially zoned parking lots, and other special situations sometimes mean that the actual use is different from the primary type of use designated by the zone.

* **Regional mall space has grown since 1970.** Two new regional malls have been completed since 1970 in the urban/suburban ring and the I-270 Corridor, White Flint Mall in North Bethesda and Lakeforest Mall in Gaithersburg. Major additions to the County's other two regional malls, Montgomery Mall and Wheaton Plaza, also have been built since 1970, and Wheaton Plaza has been enclosed. Every regional mall except Lake-


Job Distribution as of January 1991
By New Traffic Zones
Over 5,000
1,000 to 4,999
300 to 999
0 to 299
Source: Montgomery County Planning Department

forest Mall now has structured parking facilities, allowing the land to be used more intensely.

* **The size and intensity of neighborhood shopping centers and their anchor stores has changed during the last 20 to 25 years.** Between 1970 and 1990, the size of a prototypical grocery store almost tripled from under 20,000 square feet to nearly 60,000 square feet. As a result, grocery chains now prefer to locate in relatively large neighborhood shopping centers and prefer those containing 100,000 square feet of space or more.

E. Geographic Distribution of Employment

* **The distribution of employment locations in Montgomery County has basically followed the wedges and corridor pattern of the General Plan, as illustrated by the map.** The map divides the County's traffic zones into five major categories of employment intensity. The darkest patterns indicate the highest concentration of jobs. Traffic zones with more than 5,000 jobs are generally located in the urban/suburban ring and in the I-270 Corridor. In the ring, the highest concentrations are in the four central business districts, the City of Rockville and the Rock Spring and West Farm office/industrial park areas. Employment is generally intense throughout the I-270 Corridor and centered along I-270 for the most part, with the airpark to the northeast the most distant intensive location.

In addition, the larger towns and the satellite communities of Olney and Damascus have significant numbers of jobs, generally providing goods and services to local residents. Farming, parks, and limited local retail and public services such as schools are the major forms of employment in the wedge, although the PEPCO and NIH facilities also offer limited employment there.

* **The percentage of Montgomery County residents who work in the County has increased.** Approximately 59 percent of Montgomery County's employed residents worked in the County in 1987, compared to about 54 percent in 1970. Although the General Plan expected employment growth along the corridors and in the urban ring, the radial pattern of the Plan implied that the central city, Washington, D.C., would remain the primary job location. The change in the geographic distribution of County residents' jobs makes this less and less true.

* **Redevelopment efforts in Silver Spring and Bethesda have helped maintain economic activity in the urban/suburban ring.** Between 1980 and 1990, a significant amount of redevelopment occurred in the urban/suburban ring. Land uses around the urban/suburban ring Metro stations have intensified. The Bethesda and Silver Spring Central Business Districts (CBDs) alone accounted for more than 13 percent of total non-residential completions, and the entire ring accounted for over one-third of total non-residential completions between 1980 and 1990.

F. Agricultural Employment

* **The General Plan's commitment to farmland preservation and agricultural jobs has been reinforced by subsequent land use policies and zoning actions.** Changes in zoning, especially the adoption of the Rural Density Transfer (RDT) Zone and the introduction of the Transferable Development Rights (TDR) Program, have done much to protect Montgomery County farmland. In 1981, approximately 90,000 acres were rezoned to the Rural Density Transfer Zone and designated as the Agricultural Reserve. These zoning efforts complement state and local programs to purchase easements for the purpose of farmland and farming activity protection as well.

* **The loss of farmland has slowed appreciably since 1969.** From January 1981 to November 1991, there have been only 76 subdivisions approved (213 lots) in the RDT zone. This compares to 750 lots approved in rural areas in 1978 alone. The decrease illustrates the dramatic decrease in development activity in the Agricultural Reserve.

* **The number of farms increased from 654 to 669 between 1969 and 1991.** At the same time, the av-

erage size of a farm declined from 177 acres to 155 acres.

* **More than 100,000 acres of Montgomery County land are currently used for farming, according to the Maryland State Tax Assessor.** This land represents almost one-third of the total area of the County.

* **Almost 32,000 acres of farmland are protected by private, State and County easements.** The protected land includes over 26,000 acres in easements through the County's TDR program, over 2,000 acres in the County's Agricultural Easement Purchase Program, almost 2,000 acres in the Maryland Environmental Trust, and another 1,700 acres in the Maryland Agricultural Land Preservation Foundation program.

G. Employment Related Education

* **During the past decade, Montgomery County has significantly strengthened educational opportunities for its work force by developing and expanding centers for higher education.** These centers are designed to complement and enhance the County's position as a leader in high technology industries, management, and research. To this end, the County has committed over $40 million in land, infrastructure, and building construction in the development of satellite campuses for two major research universities: the University of Maryland and Johns Hopkins University. The presence of these campuses in the Shady Grove Life Sciences Center is considered instrumental in the continued development of high technology industries in the County. The County has also greatly expanded Montgomery College facilities, highlighted by the addition of the Germantown campus.

* **The Johns Hopkins University opened in Montgomery County in 1988 and offers master's degrees in nine professional fields.** Degree programs include: computer science, electrical engineering, technical management, public health, administrative science, applied behavioral science, special education, guidance and counseling, and interdisciplinary science studies. The University also has plans to develop a research and development park to complement its academic programs.

* **The Shady Grove campus of the University of Maryland, opened in 1983, attracts many full-time workers to its part-time degree programs offered in the evenings.** Currently, undergraduate degrees are offered in 17 fields, including computer science, management, and liberal arts. The University also offers 8 master's degree programs in a variety of technology-oriented fields, such as telecommunications management, engineering management, computer systems management, and technology management. An MBA program is also offered at the Shady Grove campus.

The University of Maryland is also part of a joint-venture with the National Institute of Standards and Technology and Montgomery County. Their Center for Advanced Research in Biotechnology conducts biotechnology research and complements the County's employment strengths in this field.

* **In addition, Montgomery College has expanded its facilities to offer additional educational and professional training opportunities in Montgomery County.** Its enrollment has soared 350 percent, and it has added the Germantown campus since 1970. Montgomery College now offers classes to 20,000 degree candidates and 13,000 continuing education students on its three campuses in Montgomery County. The college offers degree programs in a range of technologies from automotive technology to biotechnology. It also offers over 1,000 courses, programs and services that address local industry needs, some of which are offered directly at company sites. In addition, the College operates a Center for Small Business in Bethesda for small-business professionals.

* **Howard University recently opened a branch of its School of Continuing Education in the Silver Spring CBD to meet the educational needs of working adults.** The university offers non- de-

degree courses, seminars, and workshops for working adults who seek specialized technical or managerial training or who require relicensure or recertification in their professions. Programs and courses last anywhere from two days to a full semester. Howard University will also arrange specialized training and development courses to public and private agencies and businesses on their work site.

* **Columbia Union College in Takoma Park offers 7 two-year and 20 four-year degrees in health care, education, business, and the arts and sciences, as well as pre-professional programs.** The College is affiliated with Washington Adventist Hospital and is highly regarded in health career preparation.

II. CURRENT EMPLOYMENT CONDITIONS

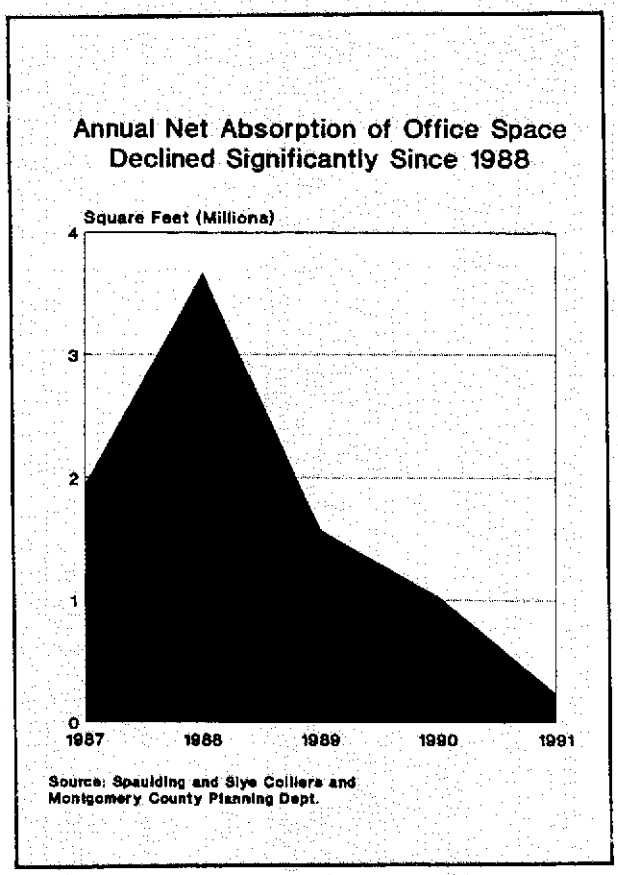
A. Employment Space Trends

1. Absorption

* **According to data from the Spaulding and Slye Colliers Office Report, Montgomery County absorbed almost 12 million square feet of leasable space in the five and one-half years from mid-1986 through 1991.** The increase occurred even though there was a net loss of occupied space in three of the four quarters of 1991.

The rate of absorption is the rate of net increase or decrease in occupied space. The quarterly Spaulding and Slye Colliers survey covers rentable commercial office and office-like industrial space in buildings of 20,000 square feet or more throughout the Washington, D.C. metropolitan area. It does not include owner-occupied buildings, government-owned buildings, or medical buildings. As a result, buildings occasionally move in or out of the rental supply as their ownership changes. The overwhelming majority of the increase in space represents new construction.

* **Montgomery County's average annual absorption of 1.8 million square feet was lower than the annual absorption in Fairfax County, Prince George's County, or Washington, D.C. between mid-1986 and 1992.** These three jurisdictions averaged annual increases of 4.3 million, 2.0 million, and 6.9 million square feet of space respectively.



* **The total rentable space or base for this growth varied greatly among the four jurisdictions.** Montgomery County increased its total rentable space from almost 17 million to almost 31 million square feet during the period; Fairfax increased from almost 27 million to over 62 million square feet; starting in the second quarter of 1986, Prince George's County grew from over 6 million to 15 million square feet; and the District increased from 48.6 million in the third quarter of 1986 to over 86 million square feet by the end of 1991.

2. Vacancy Rates

* **The strong absorption of commercial space was accompanied by relatively high and generally rising vacancy rates.** Montgomery County's comparatively moderate level of construction meant that the County also had the second lowest aver-

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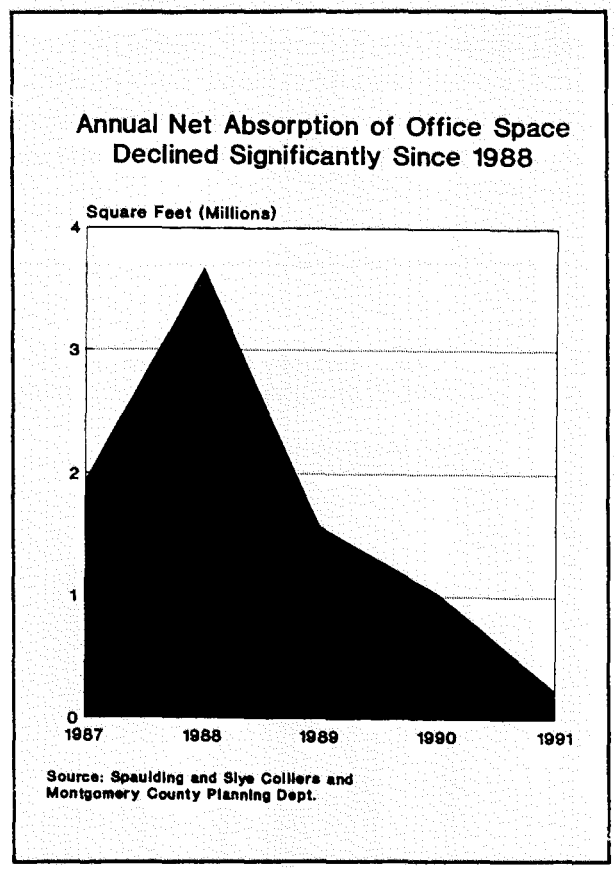

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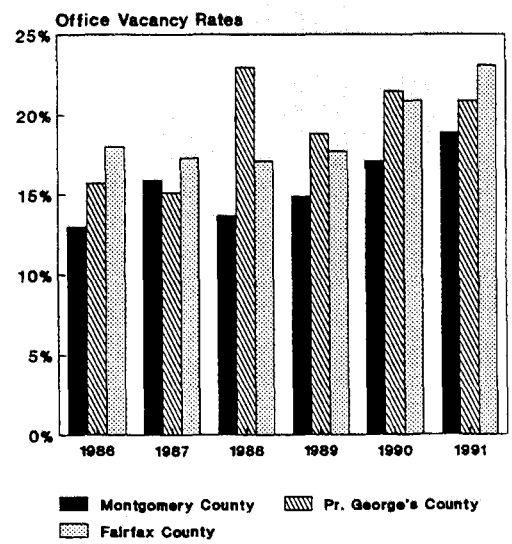
2. Vacancy Rates

* **The strong absorption of commercial space was accompanied by relatively high and generally rising vacancy rates.** Montgomery County's comparatively moderate level of construction meant that the County also had the second lowest aver-

age vacancy rate, 15.9 percent, during the five and one-half years. The County's rate ranged from a low of 10.7 percent in the second quarter of 1987 to a high of 19 percent in the second quarter of 1991.

Office Vacancy Rates Have Been Lower Than Other Suburban Counties



Note: Vacancy Rates are Reported for October of Each Year
Source: Spaulding and Slye Colliers

* **In spite of the increasing suburbanization of the regional economy, Washington, D.C. had the lowest average office vacancy rate, as well as the highest absorption of rental space of the four jurisdictions compared here.** Its average vacancy rate was 9 percent during the period from 1987 through 1991. During the same period, Fairfax County had an average rate of 18.7 percent, while Prince George's County's average was the highest at 20.1 percent.

* **Vacancy rates and space absorption generally reflect the state of the economy.** During the last five and one-half years, both Montgomery County and Fairfax County had their highest net absorption in 1988 toward the end of the boom. Absorption then decreased and vacancy rates rose during the next three years as the recession approached.

There are exceptions, however. Although vacancy rates increased in both Washington, D.C. and Prince George's County between 1989 and 1991, as the economy turned downward, both jurisdictions experienced their second highest vacancy rate during the boom. Neither had unusually high net additions to the supply of space at the time of the higher vacancy rate. In addition, Washington, D.C.'s absorption of office space has been increasing since 1989 in spite of the economic downturn. The District has probably been insulated from the recession to a greater degree than Prince George's County by its especially large federal presence.

* **One result of the rising vacancy rate for office space was that developers in Montgomery County chose to build or complete planned industrial space while backing off on office construction.** Completions of industrial square footage in 1991 exceeded 30 percent of total nonresidential completions, about 50 percent more than the annual average for industrial space between 1980 and 1992. The total industrial space completed in 1991 was almost one million square feet, the fourth highest total in the 12-year period.

B. Resident Labor Force Characteristics

* **Montgomery County's employed residents, aged 25 and over, are generally affluent and well-educated, compared to the County's entire population or to the national population.** The typical employed resident is a married man who lives in a relatively large household, works in an office building, is employed full-time, works for the private sector, and drives alone to work. (Unless otherwise noted, all of the information in this section is based on the 1987 Census Update Survey and includes all full and part-time workers aged 25 and older.)

* **The differences between the demographic characteristics of the County's employed resi-**

dents, aged 25 and older, and all County residents hold few surprises, but illustrate the composition of the resident work force. A higher proportion of employed residents are male than of all residents, although the difference is relatively small, 53 percent of workers are male compared to 47 percent of the general population. The distribution of workers by race and ethnicity is almost identical to that of the total population.

Although most workers, 73 percent, are married, workers are a little more likely to be men living alone or in a male headed household of unrelated individuals than all County residents, 6 percent compared to 4 percent. The median level of education of both groups is college graduate, but more employed residents hold graduate degrees; 28 percent compared to 24 percent for the total County population. The median level of education nationally is high-school graduate.

* **As might be expected, the median household income of employed County residents, aged 25 and over, is higher than the overall median.** In 1986, it was $61,935 in 1990 dollars compared to $56,494 for all households. It is also substantially higher than the national median, which was $31,078 in 1986 in 1990 dollars. Higher income is part of a pattern of inter-related characteristics, such as family size and housing type, which are also typical of younger and middle-aged adults.

* **Employed residents live in larger households than the overall County average.** Their average household size is 2.8 persons compared to 2.6 persons for all households, reflecting the relative likelihood that workers' households include children. Resident employees own their homes more often, 72 percent compared to 70 percent. And more of them live in single-family houses, 74 percent compared to 70 percent for all County residents. Interestingly, the percentage living in garden apartments is about the same for employees as it is for all residents while the percentage of employed residents in high-rise buildings is only 8 percent compared to 11 percent overall.

* **The typical Montgomery County worker, aged 25 and older, works in an office building, is employed by the private sector, and drives alone to work.** More than half, 51 percent, of workers who live in the County are employed in office settings. The next two most frequent job locations are retail and wholesale facilities, 11 percent, and educational facilities, 9 percent. Sixty-two percent work in the private sector, 10 percent for non-profit organizations, and 28 percent for government. Most of the workers in the 25-and-over age group drive alone to work, 72 percent, but 11 percent carpool and 9 percent take Metro, according to the 1987 Census Update. The remaining 8 percent walk, bicycle, take buses or MARC trains, or work at home.

* **While the labor force participation rate for women aged 25 and over is approaching that of men, there are some significant differences in the employment characteristics of the two groups.** A larger percentage of women work part-time than men, 21 percent compared to 5 percent. The percentage is even higher for women with children under 5, 31 percent of whom work part-time. Women are also more likely to hold jobs located in the County than men, 66 percent compared to 48 percent. Women work in office buildings a little less frequently and in educational settings more frequently than men, indicating that women remain more likely to hold teaching and related jobs. Finally, women drive to work alone a little less often and take buses or work at home a little more often. Not surprisingly, women, particularly those in their early thirties, also report the greatest need for daycare services.

* **Montgomery County's resident employees, aged 16 and older, work throughout the Washington, D.C. metropolitan area, but the majority, 59 percent, work in the County.** In 1970, 54 percent worked in the County. A complementary change in work location was a decrease in those working in Washington D.C., from 33 percent to 25 percent.

* **Young people aged 16 to 18 are an important segment of the County's work force.** In 1987, approximately two-thirds of all persons in this age group held full or part-time jobs. Sixty-two percent worked in retail and wholesale locations indicating that they constitute an important labor resource for these businesses. Judging from their high household incomes and large household sizes, most were living with their families and were also attending high school. Males worked more often than females, 54 percent compared to 46 percent.

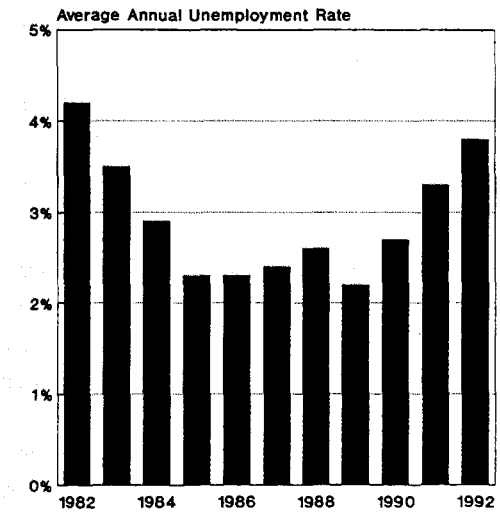
C. Labor Force Trends

* **Montgomery County's labor force, including employed residents and those actively seeking work, grew from 308,000 in 1980 to 423,000 in 1991, an increase of 37 percent.** Annual growth averaged 8,500, but two years showed a significant decline. The labor force shrank by more than 12,000 persons in 1980 and by almost 14,000 persons in 1991. Both decreases occurred during recessionary periods. In both cases, the decrease in the labor force was more than 4,000 persons greater than the number of unemployed workers for the year. This indicates that many residents chose to drop out of the labor force or to move rather than actively seek other work locally. The year with the greatest increase was 1985, when the local labor force grew by more than 25,000.

* **Montgomery County's unemployment rate remains low.** During the 11-year period from 1982 through February 1992, rates have ranged from a low of 1.8 percent in March 1990 to a high of 4.2 in 1982, another recessionary period. The rate was at 3.8 percent in February 1992. The annual average for the period is 2.9 percent, which approximates the minimum rate of 3 percent that economists believe is necessary to allow choices for employees and employers and reasonable transitions between jobs.

* **Montgomery County's unemployment rate is consistently below the Maryland and national rates.** Montgomery County's rate has generally been between 50 and 60 percent of the State rate and 40 to 50 percent of the national rate. In February 1992, when Montgomery County's rate was 3.8 percent, Maryland's was 7.5 percent and the U.S. was 7.3 percent. (These rates are unusual in that the State's rate has usually been below the federal rate in the past.)

The Unemployment Rate Has Remained Below Four Percent Since 1983



Note: 1991 and 1992 data are for the month of February
Source: Maryland Department of Economic Employment Development, U.S. Bureau of Labor

D. County Economic Policy

* **"To ensure the continued quality of life which exists in the County," the County Executive issued a "Plan for Economic Stability" for Montgomery County in January 1992.** The strategy statement responds to Montgombery County's current economic downturn as well as more general economic issues. It contains four "strategic thrusts" for the 1990s as follows:

" - Retain and attract Federal research and regulatory agencies;

- Focus on knowledge-based industries and institutions;

- Enhance the growth of existing businesses; and
- Strengthen the workforce to meet present and future needs."

This statement constituted part of the Executive's comments on the Annual Growth Policy. The statement also called for a reasonably balanced ratio of jobs and housing and for more concentrated development in Metro station areas to use the County's infrastructure more efficiently. The statement is also part of Montgomery County's *Strategic Plan for Economic Development for the 1990s.*

III. RELATIONSHIP OF HOUSING TO EMPLOYMENT

* **In 1990, the County-wide ratio of existing jobs to existing housing units was approximately 1.5 to 1.** One measure of balance between housing and jobs is one job for each resident worker. Using this measure, the County's current situation is consistent with the General Plan's land use objective of a balanced relationship between residential growth and economic activities. Since Montgomery County households have an average of about 1.5 workers, a jobs/housing ratio of between 1.4 and 1.6 is reasonably balanced.

* **The potential future County-wide ratio of jobs to housing, based on the development capacity of all currently zoned and planned acreage for these uses, could range from 2.4 to 2.7 jobs per housing unit.** This zoned ratio of jobs to housing does not appear to be consistent with the General Plan's objective to "obtain a balanced relationship between residential growth and economic opportunities," although the Plan did not specify an exact ratio.

However, the buildout ratio of jobs to housing may be overstating the number of jobs that will actually develop. On average, employment sites use a smaller proportion of their zoning holding capacity than housing. Industrial and retail buildings are designed for the functional use of their occupants more than to maximize FAR. Many commercial uses, such as shopping centers and gasoline filling stations, prefer one- or two-story buildings even when a higher FAR is allowed. Surface parking is often preferred because it is usually more convenient and is much less expensive. The combination of low structures, green area, surface parking, and setback requirements results in lower than maximum use of available FAR. On the other hand, a housing site is considered "fully developed" if it contains a housing unit of greater assessed value than the value of the land on which it is located, regardless of the size of the unit, setbacks, and other development factors.

* **The General Plan objective concerning the balance of jobs and housing addressed the issue on a County-wide basis.** The Plan clearly did not expect each smaller geographical area, such as an individual master plan or sector plan area, to strive for such a balance. In fact, the Growth Management Advisory Work Group questioned the use of the jobs/housing ratio in area master plans. Balance is only one element that master plans consider when establishing the vision for an area. There are many others.

IV. FUTURE COUNTY EMPLOYMENT

A. Development Capacity

* **The total full development job capacity of employment- related zoned and planned land in Montgomery County ranges from 1,023,000 jobs to 1,269,000 jobs.** Existing buildings account for about 41 percent of low capacity and 33 percent of the high. Of the total capacity, space for 605,000 to 850,000 jobs remains to be built. In September 1991, the pipeline of approved development contained enough space to serve about 125,000 jobs, or about 10 percent of the high capacity.

* **If growth were to continue at the average annual rate of the years between 1970 and 1990, Montgomery County would have enough zoned capacity for jobs well beyond 2040, based on the**

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* **The share of the County-wide budget for agencies reporting directly to the County Executive grew from 31 to 45 percent between 1970 and 1980; it has remained at that level ever since.** Departments within County government that have increased most in funding over the past 20 years include Correction and Rehabilitation, Human Resources and Human Relations, Community and Economic Development, and Transportation. Mass transit expenditures experienced their greatest increase in the first half of the 1980s when staffing increased for the Ride-On system and the main portion of the Metrorail system opened to Shady Grove.

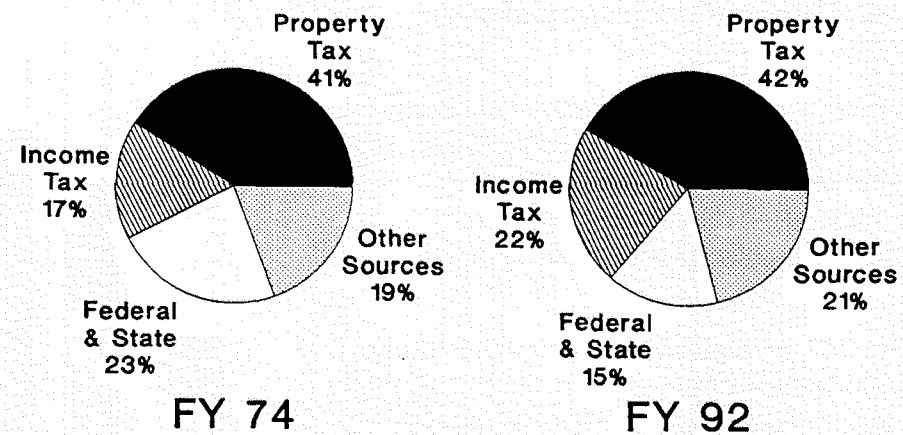
2. Sources of Revenue

* **The largest single revenue source for the operating budget is property taxes.** Since FY 74, property taxes have accounted for a roughly constant 40 percent of County revenues. Since 1978, the proportion of that share that is paid for out of residential property taxes has dropped from 73 to 67 percent, while non-residential property taxes have increased accordingly to 33 percent from 27 percent. The non-residential share includes business personal property tax on furniture, equipment, and public utility property.

* **Reflecting a national trend, State and federal contributions to the operating budget have decreased.** Their share has fallen from a high of 23 percent in FY 74 to 15 percent in FY 92.

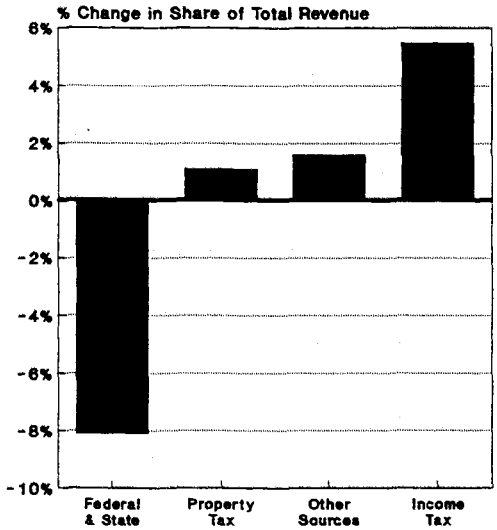
* **County income tax has grown as a percentage of total revenue, from 16.5 to 22.1 percent, between FY 74 and FY 92.** Adjusted for inflation, income tax has increased from 1.7 to just over 2.0 percent of household income since FY 74. More incomes in the highest tax bracket, increasing numbers of resident workers, and changes in federal tax statutes account for much of this increase.

Share of Revenue from Federal and State Sources Declined While Revenue from Income Tax Increased



Source: Montgomery County Office of Management and Budget and Montgomery County Planning Dept.

Share of Total Revenue From Federal & State Sources Declined Since FY 74



Source: Montgomery County Office of Management and Budget and Montgomery County Planning Dept.

Recently, the State has passed legislation that enables the County to raise the income tax, also known as the "piggy-back" tax, to 60 percent of the State income tax. The County income tax has remained at 50 percent of the State income tax since 1971.

* **User fees accounted for 8.7 percent of County revenues in FY 92, more than in any previous year.** User fees may increase in significance should the emphasis in charging for public services shift from the general public to the consumer.

* **Since 1978, measures limiting growth in the operating budget have been in effect.** In 1978, voters passed a measure capping yearly increases in the operating budget to the rate of inflation, unless overridden by a super majority of the County Council.

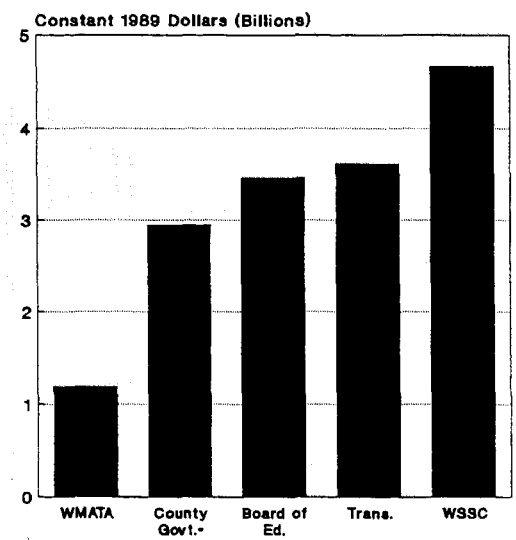
B. Capital Improvements Program (CIP)

1. Distribution and Growth

* **The CIP establishes priorities and funding schedules for public works such as roads, water supply, wastewater collection, and storm drainage.** Projects in the CIP are financed largely through the issuance of municipal bonds, which are debts that are later repaid, with interest, through taxes. In the 1980s, about two- thirds of the proceeds from the general obligation bonds issued were used to pay for the construction of roads and schools.

* **Transportation, public schools, and water and sewer service account for the majority of capital program spending since 1970.** Between 1970 and 1980, over $582 million was spent on the public school system, $544 million for general County government, $448 million for the regional transit system, and $1.4 billion for water and sewer service (in 1991 dollars). Within the general government expenditures, 33 percent went to the construction of roads, bridges, and sidewalks,

Approved Capital Expenditures Between FY 81 and FY 91 Are Highest For WSSC, Transportation and Education



* County Govt. includes typical government services such as Public Safety, Sanitation, and Health & Social Services

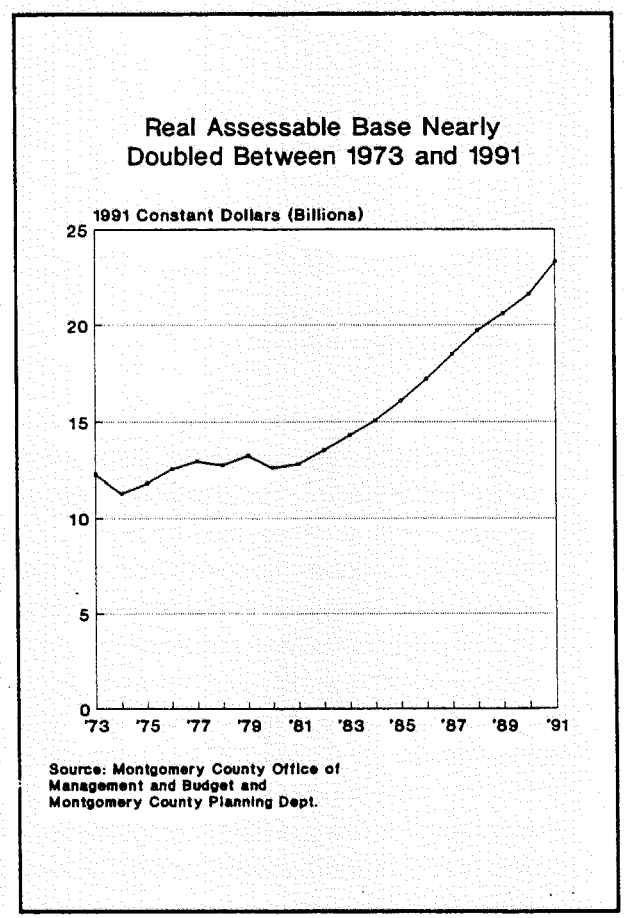
while 13 percent of the total was spent to improve public safety.

Approved CIP allocations between FY 80 and FY 92, when adjusted for inflation, total over $3 billion for County government: $1.1 billion for public schools and $2.1 billion for the Washington Suburban Sanitary Commission. Fifty-five percent of County government expenditures went for transportation, 10 percent for housing and community development, and 7.2 percent for culture and recreation during that period.

2. Revenue Sources and Assessable Base

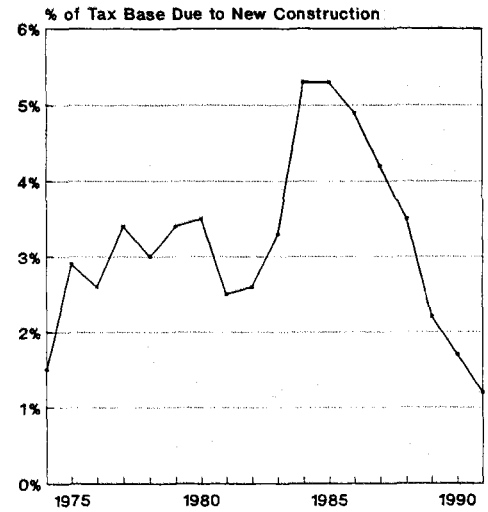
* **Montgomery County has enjoyed a AAA bond rating since 1971, meaning that the County pays the lowest possible interest rate on the money it borrows for capital projects.** Strong economic growth, combined with sound fiscal management, are largely responsible for this rating. In FY76, the County Council established several guidelines intended to help retain this rating. One was to limit to 9 percent the budget's "debt service", or the proportion of the operating budget used to pay off bond interest. Interestingly, the debt service was 11 percent of the operating budget when the County received its first AAA rating. Another guideline limits the amount of debt incurred through the issuance of bonds to 3.5 percent of the true value of all property in the County. The County has been able to operate within these guidelines since their adoption.

* **Montgomery County's real assessable tax base grew from $12.3 billion in 1973 to $23.3 billion in 1991 (in 1991 dollars) - an increase of 90 percent.** Ninety-five percent of that $11 billion increase occurred in the decade between 1981 and 1991, a period of staggering growth for Montgomery County. The share of the assessable base that comprises apartments, condominiums and homes decreased from 81 percent to 77 percent between 1973 and 1991. The base for the commercial and industrial sectors each increased by about 2 percent from 10.7 and 5.3 percent, respectively. The farm base, which now accounts for 0.4 percent of the total real assessable base, was the only class of property to decrease in total real dollar value - about 2 percent - between 1981 and 1991. The real assessable tax base represents the value of all real estate in the County upon which property taxes may be levied. Tax exempt property, such as government-owned land, is excluded from the real assessable base. By state law, the assessed value of residential property is 40 percent of its full cash value.



* **Between 1974 and 1991, new construction represented a yearly average of about 3 percent of the total real property tax base.** The annual average was about $486 million. New residential construction accounts for 78 percent of the total new construction base, and industrial and commercial construction another 21 percent. T he new construction component of the property tax base grew rapidly between 1981 and 1985, and declined almost as rapidly between 1986 and 1991.

New Construction Is a Small Proportion of the Total Real Property Tax Base



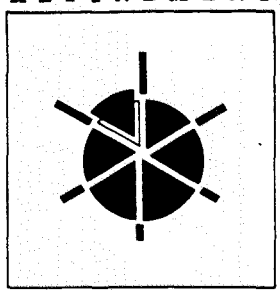
Source: Montgomery County Dept. of Finance and Montgomery County Planning Dept.

* **Residential property tax rates, set by the County, are applied to the assessed value of a property, which is determined by the State.** The County collects general property taxes for itself, 17 municipalities and 11 special service areas. While property taxes have remained roughly constant as a percentage of the operating budget, they have decreased as a percentage of median income, from 3.7 percent in FY 74 to 1.4 percent in FY 91. The total tax rate has also decreased to compensate for rising property assessments, from a high of 3.97 in FY 76 to 2.93 per $100 of assessed value in FY 92.

* **State and local law limits increases in property taxes in several ways.** Since 1978, the State has capped the revenue raised from general taxes to that raised from the previous year (excluding new construction). The law allows for the limit to be exceeded if a public hearing is first held. State law also provides an automatic tax credit against increases of more than 10 percent in the assessed value of owner-occupied residential property. A further limitation came in a 1990 County Charter amendment, when voters passed a measure which caps tax revenue from most properties to the local rate of inflation, unless overridden by the vote of seven Councilmembers.

* **Current, future, and proposed taxes on developers link development approval with the provision of funds for roads and other capital improvements.** Impact taxes, which are expected to total 1.7 percent of the proposed capital budget in FY 93, may be levied on new development to increase road capacity where it is currently insufficient to allow further development. There are currently two such areas. In addition, a County-wide construction excise tax, to be phased in beginning in 1993, will be levied for new construction or additions, with rates that vary by type and size of construction. The County Executive and Council are also considering the creation of special taxing districts, called development districts, in areas of growth such as Germantown West. Owners of land in a development district would be allowed development approval in return for an agreement to stage their development, support a transportation management program, and to pay a tax based on the amount of new development proposed. Legislation has been submitted to establish a system development charge (SDC) to offset the cost of CIP water and sewer projects required to serve new development.

General Plan
REFINEMENT



...on WEDGES and CORRIDORS

TRANSPORTATION FACTS

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* **The share of the County-wide budget for agencies reporting directly to the County Executive grew from 31 to 45 percent between 1970 and 1980; it has remained at that level ever since.** Departments within County government that have increased most in funding over the past 20 years include Correction and Rehabilitation, Human Resources and Human Relations, Community and Economic Development, and Transportation. Mass transit expenditures experienced their greatest increase in the first half of the 1980s when staffing increased for the Ride-On system and the main portion of the Metrorail system opened to Shady Grove.

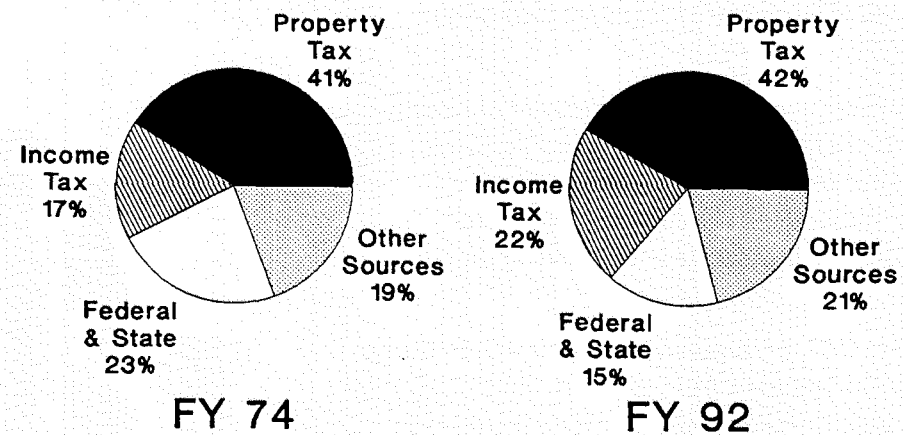
2. Sources of Revenue

* **The largest single revenue source for the operating budget is property taxes.** Since FY 74, property taxes have accounted for a roughly constant 40 percent of County revenues. Since 1978, the proportion of that share that is paid for out of residential property taxes has dropped from 73 to 67 percent, while non-residential property taxes have increased accordingly to 33 percent from 27 percent. The non-residential share includes business personal property tax on furniture, equipment, and public utility property.

* **Reflecting a national trend, State and federal contributions to the operating budget have decreased.** Their share has fallen from a high of 23 percent in FY 74 to 15 percent in FY 92.

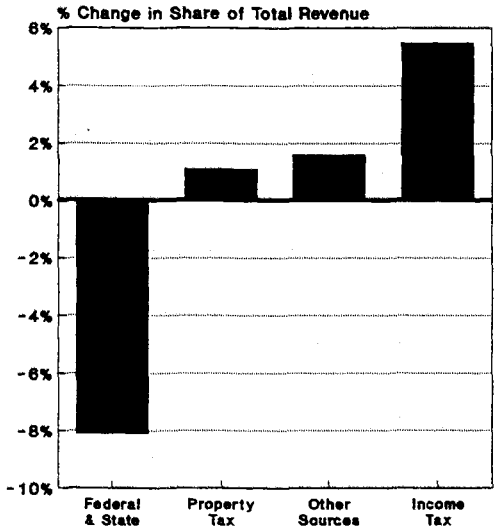
* **County income tax has grown as a percentage of total revenue, from 16.5 to 22.1 percent, between FY 74 and FY 92.** Adjusted for inflation, income tax has increased from 1.7 to just over 2.0 percent of household income since FY 74. More incomes in the highest tax bracket, increasing numbers of resident workers, and changes in federal tax statutes account for much of this increase.

Share of Revenue from Federal and State Sources Declined While Revenue from Income Tax Increased



Source: Montgomery County Office of Management and Budget and Montgomery County Planning Dept.

Share of Total Revenue From Federal & State Sources Declined Since FY 74



Source: Montgomery County Office of Management and Budget and Montgomery County Planning Dept.

Recently, the State has passed legislation that enables the County to raise the income tax, also known as the "piggy-back" tax, to 60 percent of the State income tax. The County income tax has remained at 50 percent of the State income tax since 1971.

* **User fees accounted for 8.7 percent of County revenues in FY 92, more than in any previous year.** User fees may increase in significance should the emphasis in charging for public services shift from the general public to the consumer.

* **Since 1978, measures limiting growth in the operating budget have been in effect.** In 1978, voters passed a measure capping yearly increases in the operating budget to the rate of inflation, unless overridden by a super majority of the County Council.

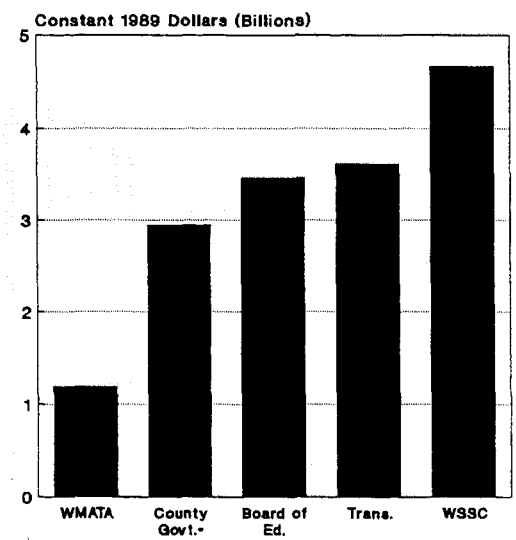
B. Capital Improvements Program (CIP)

1. Distribution and Growth

* **The CIP establishes priorities and funding schedules for public works such as roads, water supply, wastewater collection, and storm drainage.** Projects in the CIP are financed largely through the issuance of municipal bonds, which are debts that are later repaid, with interest, through taxes. In the 1980s, about two- thirds of the proceeds from the general obligation bonds issued were used to pay for the construction of roads and schools.

* **Transportation, public schools, and water and sewer service account for the majority of capital program spending since 1970.** Between 1970 and 1980, over $582 million was spent on the public school system, $544 million for general County government, $448 million for the regional transit system, and $1.4 billion for water and sewer service (in 1991 dollars). Within the general government expenditures, 33 percent went to the construction of roads, bridges, and sidewalks,

Approved Capital Expenditures Between FY 81 and FY 91 Are Highest For WSSC, Transportation and Education



* County Govt. includes typical government services such as Public Safety, Sanitation, and Health & Social Services

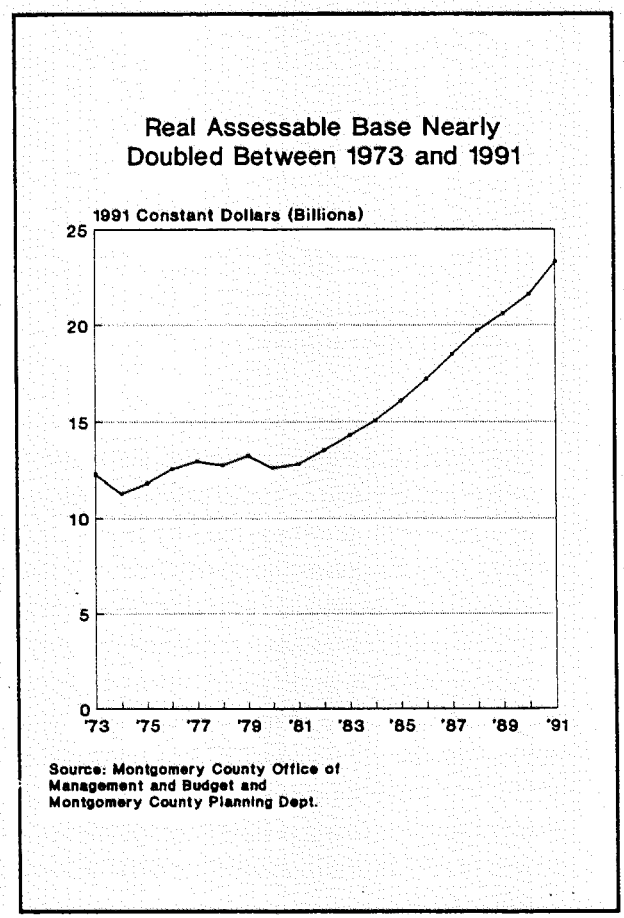
while 13 percent of the total was spent to improve public safety.

Approved CIP allocations between FY 80 and FY 92, when adjusted for inflation, total over $3 billion for County government: $1.1 billion for public schools and $2.1 billion for the Washington Suburban Sanitary Commission. Fifty-five percent of County government expenditures went for transportation, 10 percent for housing and community development, and 7.2 percent for culture and recreation during that period.

2. Revenue Sources and Assessable Base

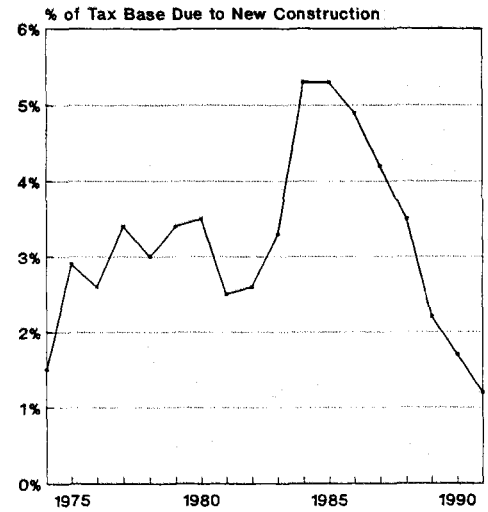
* **Montgomery County has enjoyed a AAA bond rating since 1971, meaning that the County pays the lowest possible interest rate on the money it borrows for capital projects.** Strong economic growth, combined with sound fiscal management, are largely responsible for this rating. In FY76, the County Council established several guidelines intended to help retain this rating. One was to limit to 9 percent the budget's "debt service", or the proportion of the operating budget used to pay off bond interest. Interestingly, the debt service was 11 percent of the operating budget when the County received its first AAA rating. Another guideline limits the amount of debt incurred through the issuance of bonds to 3.5 percent of the true value of all property in the County. The County has been able to operate within these guidelines since their adoption.

* **Montgomery County's real assessable tax base grew from $12.3 billion in 1973 to $23.3 billion in 1991 (in 1991 dollars) - an increase of 90 percent.** Ninety-five percent of that $11 billion increase occurred in the decade between 1981 and 1991, a period of staggering growth for Montgomery County. The share of the assessable base that comprises apartments, condominiums and homes decreased from 81 percent to 77 percent between 1973 and 1991. The base for the commercial and industrial sectors each increased by about 2 percent from 10.7 and 5.3 percent, respectively. The farm base, which now accounts for 0.4 percent of the total real assessable base, was the only class of property to decrease in total real dollar value - about 2 percent - between 1981 and 1991. The real assessable tax base represents the value of all real estate in the County upon which property taxes may be levied. Tax exempt property, such as government-owned land, is excluded from the real assessable base. By state law, the assessed value of residential property is 40 percent of its full cash value.



* **Between 1974 and 1991, new construction represented a yearly average of about 3 percent of the total real property tax base.** The annual average was about $486 million. New residential construction accounts for 78 percent of the total new construction base, and industrial and commercial construction another 21 percent. T he new construction component of the property tax base grew rapidly between 1981 and 1985, and declined almost as rapidly between 1986 and 1991.

New Construction Is a Small Proportion of the Total Real Property Tax Base



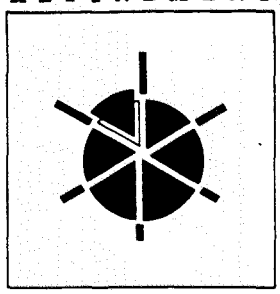
Source: Montgomery County Dept. of Finance and Montgomery County Planning Dept.

* **Residential property tax rates, set by the County, are applied to the assessed value of a property, which is determined by the State.** The County collects general property taxes for itself, 17 municipalities and 11 special service areas. While property taxes have remained roughly constant as a percentage of the operating budget, they have decreased as a percentage of median income, from 3.7 percent in FY 74 to 1.4 percent in FY 91. The total tax rate has also decreased to compensate for rising property assessments, from a high of 3.97 in FY 76 to 2.93 per $100 of assessed value in FY 92.

* **State and local law limits increases in property taxes in several ways.** Since 1978, the State has capped the revenue raised from general taxes to that raised from the previous year (excluding new construction). The law allows for the limit to be exceeded if a public hearing is first held. State law also provides an automatic tax credit against increases of more than 10 percent in the assessed value of owner-occupied residential property. A further limitation came in a 1990 County Charter amendment, when voters passed a measure which caps tax revenue from most properties to the local rate of inflation, unless overridden by the vote of seven Councilmembers.

* **Current, future, and proposed taxes on developers link development approval with the provision of funds for roads and other capital improvements.** Impact taxes, which are expected to total 1.7 percent of the proposed capital budget in FY 93, may be levied on new development to increase road capacity where it is currently insufficient to allow further development. There are currently two such areas. In addition, a County-wide construction excise tax, to be phased in beginning in 1993, will be levied for new construction or additions, with rates that vary by type and size of construction. The County Executive and Council are also considering the creation of special taxing districts, called development districts, in areas of growth such as Germantown West. Owners of land in a development district would be allowed development approval in return for an agreement to stage their development, support a transportation management program, and to pay a tax based on the amount of new development proposed. Legislation has been submitted to establish a system development charge (SDC) to offset the cost of CIP water and sewer projects required to serve new development.

General Plan
REFINEMENT



...on WEDGES and CORRIDORS

TRANSPORTATION FACTS

TRANSPORTATION FACT SHEET INTRODUCTION

The goal and objectives set forth in the circulation element of the 1969 General Plan are being examined to answer the question, "Are they still relevant today?". This fact sheet will provide some background information to help answer that question. It reviews changes in our travel behavior, travel patterns, and the supply of and demand for different means of transportation. To a lesser extent, it takes a look at the future as well.

To be sure, the dated language and changes in the way we live, work, and travel not fully anticipated 20 years ago are reason enough for the revision being undertaken. Yet, in the 1969 goal and objectives is a recognition, found in many of our recent planning documents, that the transportation system is a force that serves, as well as shapes land-use patterns. There is also the recognition that the pace of growth and development should be linked to the timing of the supply of transportation. The clear desire, expressed in the objectives, for a safe, efficient, multi-modal system that does not compromise the character of our neighborhoods and developed areas is a recurring theme of our plans. Then, as now, the task is to refine a vision that can be realized and which future generations will choose to inherit on its merits, rather than discard for its irrelevance.

Montgomery County was, and is, a prosperous jurisdiction in the shadow of the nation's capital. Its political leaders and citizens recognize the importance of personal mobility to economic well-being and a good standard of living. At the same time, they are aware of the imperatives of fiscal prudence, efficient use of land, and a good environment. The refinement of the goal and objectives that will proceed from this fact sheet will help to inform and guide those who will decide how to balance these issues.

Forces shaping the County's landscape prior to the late 1960s remain with us today. Innovations in the technology and delivery of transport, in particular the automobile and supporting highway networks, made it possible for a great number of travelers to traverse distances quickly. This loosened the hold of the central city, and helped make possible the emergence of suburbs, whose less concentrated pattern of residential and retail development was already well established at the time of the 1969 General Plan. To a degree not anticipated in 1969, employers have found Montgomery County an attractive place to locate for many of the same reasons residents have: less expensive land than in Washington, D.C., a high quality of life, and a good transportation system. The subsequent growth in suburban employment, creating travel between, as well as along, corridors poses one of many challenges to the successful realization of the vision put forth by the 1969 General Plan goal and objectives.

Officials, citizens, developers, planners, and implementing agencies will work together to design complementary land use and transportation systems as sites around the County develop and redevelop. Today, there are several locations in the County which offer alternative models of the land use-transportation relationship for the future. The "Edge City" model, whose current local prototype is the Davis Tract, is a low to moderate density, spread-out office retail development, which is most efficiently served by the automobile traveling along wide, high-capacity thoroughfares. In contrast, "suburban downtown" is a higher density employment and residential development whose focal point is a transit station and whose design brings many activities within walking distance. Local streets are narrower, slowing traffic, and buildings are set closer to the street to the benefit of pedestrians. Bethesda is a local prototype of this. The different transportation systems each of these concepts calls for should be carefully considered in the context of the wedges and corridors vision.

In 1969, this element of the General Plan was called "circulation". The word "transportation" is proposed as a replacement for several reasons. First, "circulation" refers to movement from one

point to another, usually within a certain circumscribed area, whereas the word "transportation" implies movement, but not within any boundary. Second, "transportation" refers to the means, or mode of travel, whereas "circulation" does not.

The following five sections highlight changes in travel behavior, travel patterns, trip time, means of transportation, and supply and demand.

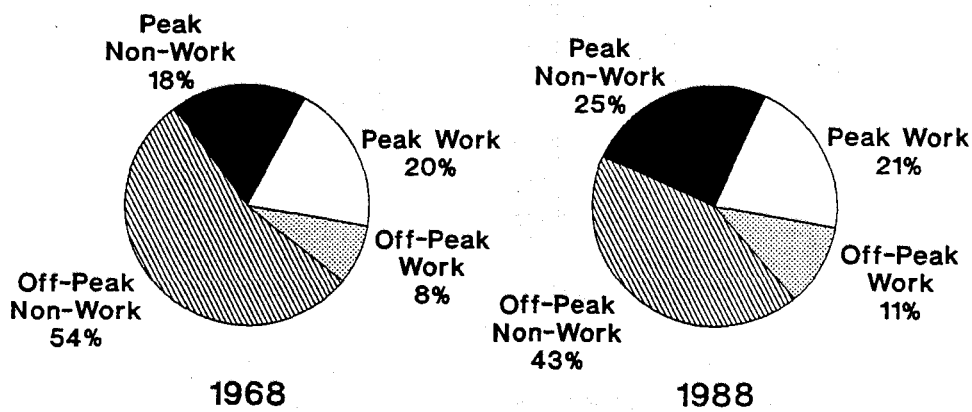
I. CHANGES IN TRAVEL BEHAVIOR

*** Growth in both population and employment and more frequent travel by existing residents resulted in more trips in 1988 than in 1968.** Overall, the total number of trips made by County residents for all purposes increased by 68 percent between 1968 and 1988. The total daily trip rate has grown from about 2.3 to 2.8 trips per person per day. Non-work trip rates increased from 1.67 to 1.95 trips per person per day, while work trips per resident worker have decreased, from 1.60 to 1.46 trips per day. Advances in telecommuting, flexible work hours, and increases in part-time work may have contributed to the decrease in the rate of work trips per worker.

*** Growth in peak period auto travel exceeds growth in non-peak travel in Montgomery County.** In 1988, 46 percent of all trips made by auto drivers and passengers were made during the AM and PM peak periods, up from 38 percent in 1968. In 1988, there was a higher proportion of non-work trips (25 percent) made during peak periods than work trips (21 percent), as compared with 1968 when work trips were more prevalent (20 percent vs. 18 percent). The peak period hours are defined as the hours between 6:00-9:00 AM and 3:30-6:30 PM.

*** A major factor influencing growth in non-work trips made during peak periods is the increase in "linked trips".** Linked trips are the

More Non-Work Auto Trips Were Made in the Peak Period Than Work Trips; Work Trips In Off-Peak Hours Increased



Source: Metro. Wash. Council of Govts. & Montgomery County Planning Department

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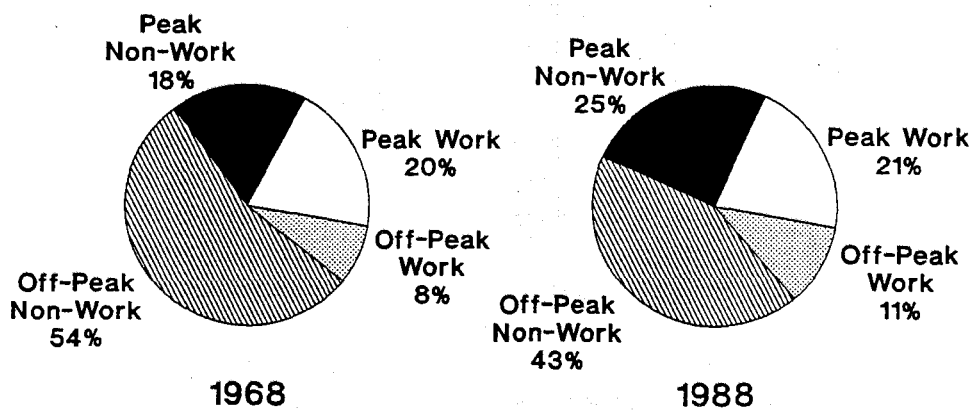


Source: Metro. Wash. Council of Govts. & Montgomery County Planning Department

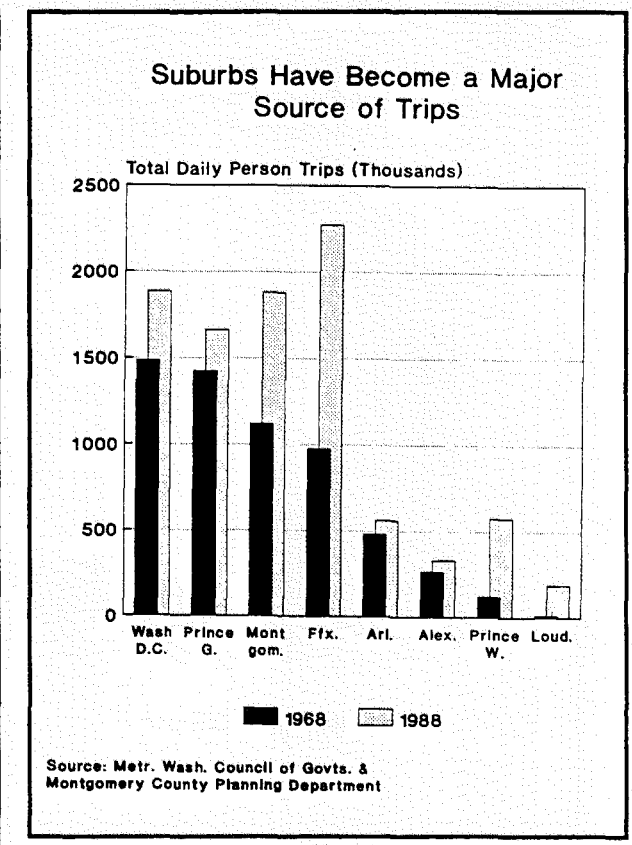
intermediate stops that are made along the way to a traveler's final destination. Typical linked trips include grocery shopping, dry cleaning, fuel stops, and pick-up or drop- off at school or day-care. The growth in both labor force participation rates for women and in two-wage-earner households have been major factors in the growth of linked trips. In the PM peak period, 36 percent of all working women made at least one linked trip in 1988, compared with 25 percent for men.

*** An increased labor force participation rate for women has created changes in travel behavior.** Between 1970 and 1990, the female labor force participation rate of Montgomery County residents grew from 45 percent to 66 percent, well above the national participation rate of 54 percent. Consequently, the proportion of work trips made by women increased 160 percent. Average commuting time for women in 1988 was 21 minutes, 6 minutes shorter than the average commute time for men.

*** The proportion of work trips made during off-peak hours increased.** Between 1968 and 1988, the proportion of work trips made during off-peak hours grew from 8 percent to 11 percent of the total trips. The proportion of work trips made in off-peak hours grew from about 30 percent to about 35 percent of daily work trips. Contributing to this increase are a growing number of commuters who depart for work after 9 AM to avoid congested roads and an increase in part-time work in the retail and service sectors.

II. CHANGES IN TRAVEL PATTERNS

*** Multiple employment, shopping, and recreational centers have developed in suburban locations throughout the Washington region. As a result, the suburbs are a major source of trips in the region.** An increased proportion of trips, particularly work trips, is made within or between suburbs. Between 1968 and 1988, the proportion of the region's work trips both originating and terminating in areas beyond the Capital Beltway throughout the region has increased from 50 percent to 62 percent, while the proportion of work



trips originating in outer suburbs and terminating inside the Beltway declined. Almost 40 percent of all work trips in the Washington region terminated in areas beyond the Beltway in 1988 compared to 23 percent in 1968. With the exception of Arlington County, the share of trips beginning and ending within the same jurisdiction has increased.

*** More County residents work here and the share of trips destined for Washington, D.C. has decreased since 1970.** Work trips beginning and ending in the County increased from 54 percent to 59 percent between 1970 and 1987. In absolute terms, trips destined for each of the other jurisdictions increased. However, work trips to the District decreased as a share of the total, from 33 to 25 percent, while the share of work trips terminating in other jurisdictions increased by 3 percent, from 14 to 17 percent.

*** A shrinking proportion of Montgomery County's work force commutes here from outside the County.** Between 1968 and 1988, the proportion of all work trips that originated in

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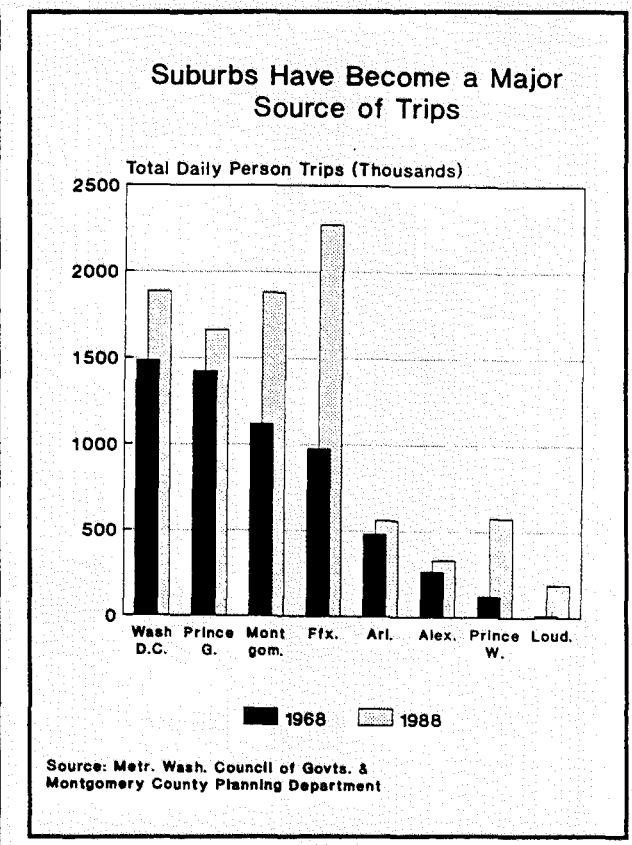

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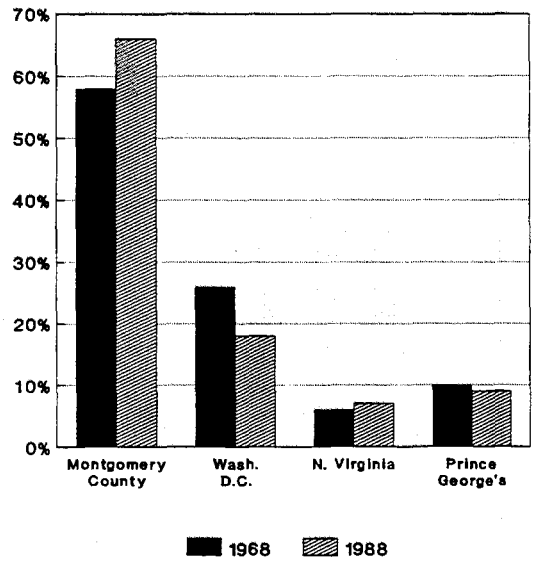
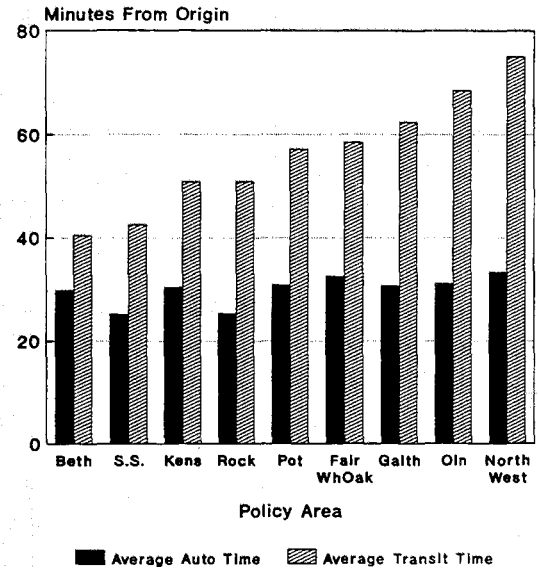
A Shrinking Proportion of Workers Commute From Outside Montgomery County



Auto Travel Generally Faster Than Transit in 1988 for AM Peak Work Trips



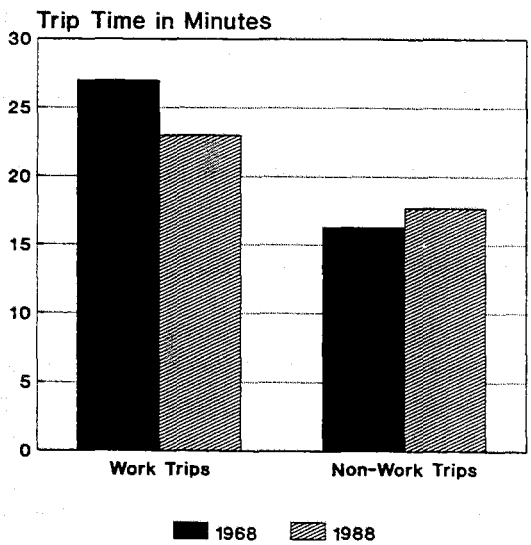
Source: Metro. Wash. Council of Govt. & Montgomery County Planning Dept.

Washington D.C. and ended in Montgomery County dropped from 26 percent to 18 percent. Similarly, the proportion of work trips from Prince George's County declined from 10 percent to 9 percent. While there was slight growth in the proportion of work trips beginning in Northern Virginia, the greatest increase in the share of work trips came from Montgomery County workers who also live here.

III. CHANGES IN TRIP TIMES

*** Workers spend less time commuting on average than when the General Plan was prepared.** Average commuting times for auto drivers have declined from 27 minutes in 1968 to 23 minutes in 1988. The average time for work trips beginning and ending in the County dropped from 20 minutes to 18, while commuting time to Washington, D.C. increased from 36 to 37 minutes. While road improvements have contributed slightly to decreased commute times, the decline also suggests that the average worker lives closer to his or her place of employment.

Montgomery County Workers Now Spend Less Time Commuting and More Time Traveling for Non-Work Activities



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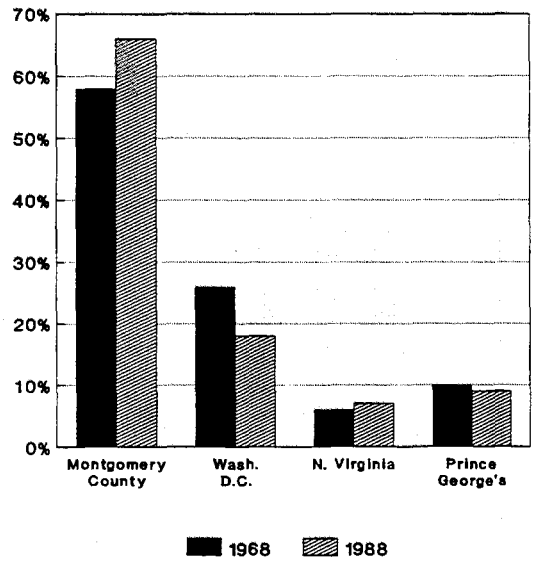
A Shrinking Proportion of Workers Commute From Outside Montgomery County



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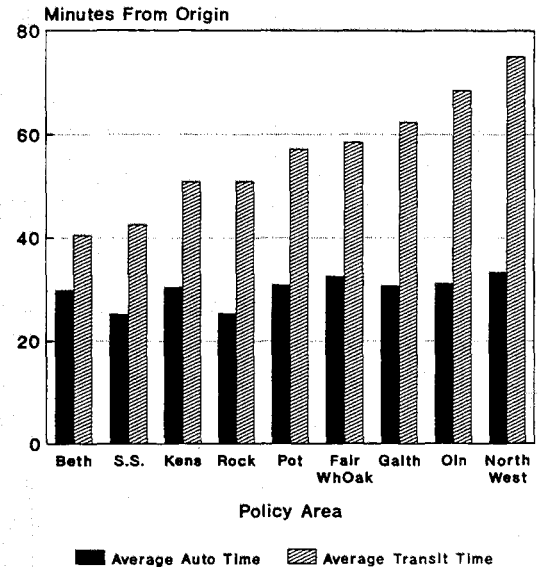

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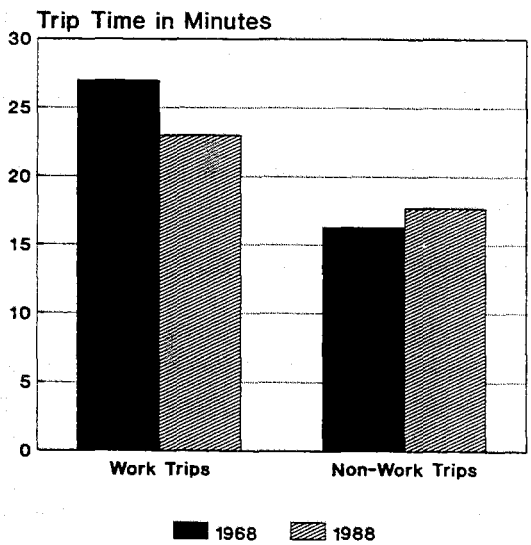


Source: Montgomery County Planning Dept. and Metro. Washington Council of Govts.

* **Non-work trip times have increased.** Average non-work trip times have increased from 16 to 18 minutes between 1968 and 1988. The increase in linked trip-making associated with work trips, such as drop-off at day-care centers or stopping at the food store, may be related to this increase.

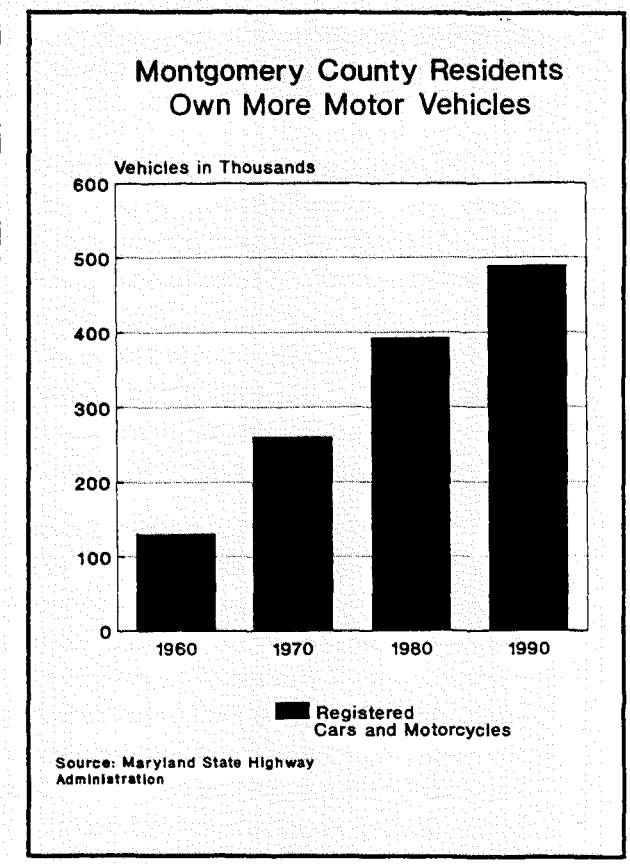
* **Over 80 percent of the County's commuters are basically satisfied with their commute.** This assessment is from the Planning Board's 1990 Travel Panel Survey, in which approximately 700 individuals were asked to keep detailed diaries of the time and place of their daily travels.

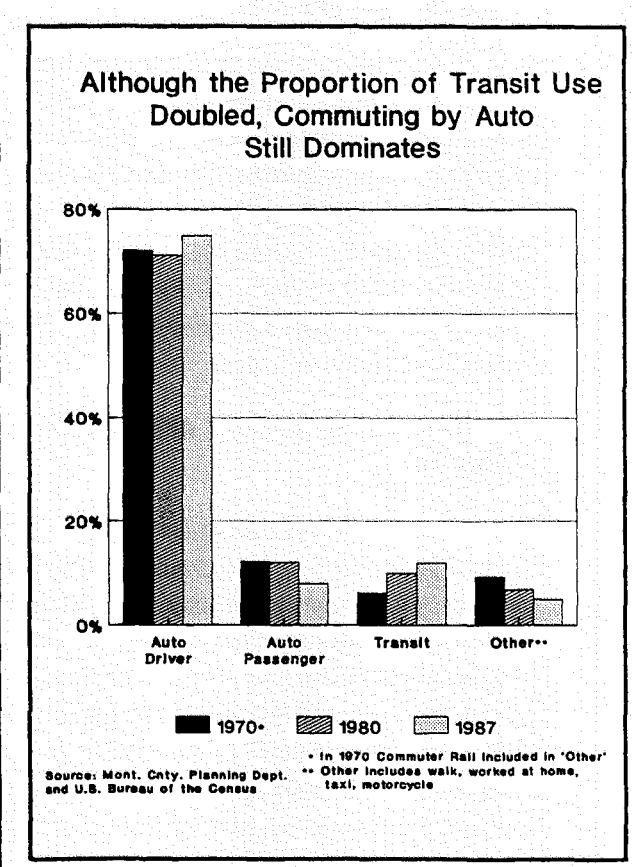
IV. CHANGES IN MEANS OF TRANSPORTATION

* **Montgomery County vehicle registration increased 88 percent between 1970 and 1990, while the population 16 and older increased only 73 percent.** The number of cars per household increased during the past two decades from 1.66 to 1.73, while the number of persons per household declined. However, Montgomery County's growth in auto ownership has been moderate compared to other Maryland counties. Within the past 20 years, Montgomery County dropped from the first to seventh ranked County in the State for cars per household.

* **Vehicle fuel consumption accounts for a significant share of energy expenditures in the County.** Vehicle fuels accounted for 45 percent of the total $1.2 billion spent on energy in Montgomery County in 1990. Automobiles alone accounted for 34 percent of total energy consumption in 1990.

* **There has been significant growth in commuting by transit since 1969. However, single-occupant vehicles remain the predominant means of commuting.** In 1969, only about 6 percent of Montgomery County resident workers commuted by transit. By 1987, this percentage had almost doubled to 12 percent. During the same time, the percentage of commuters driving alone





* **Non-work trip times have increased.** Average non-work trip times have increased from 16 to 18 minutes between 1968 and 1988. The increase in linked trip-making associated with work trips, such as drop-off at day-care centers or stopping at the food store, may be related to this increase.

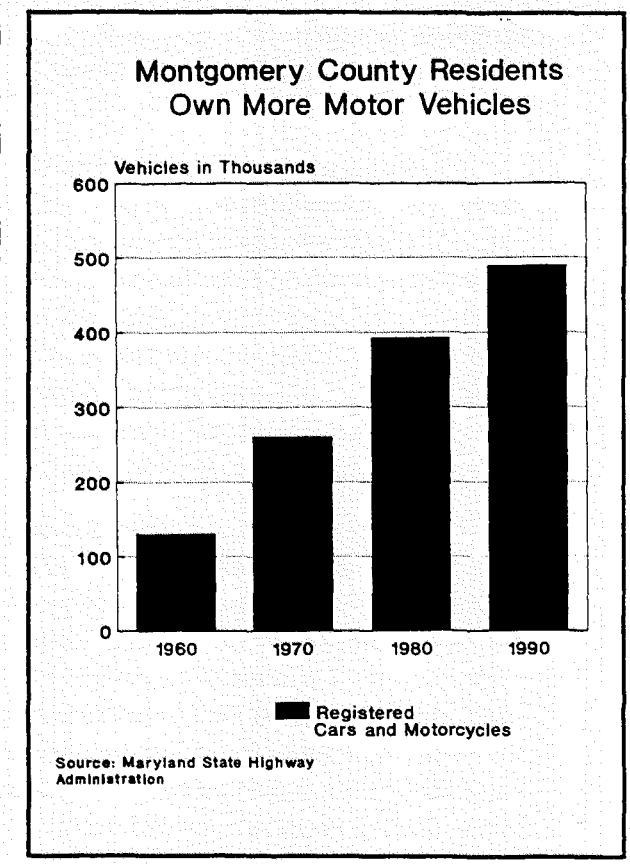
* **Over 80 percent of the County's commuters are basically satisfied with their commute.** This assessment is from the Planning Board's 1990 Travel Panel Survey, in which approximately 700 individuals were asked to keep detailed diaries of the time and place of their daily travels.

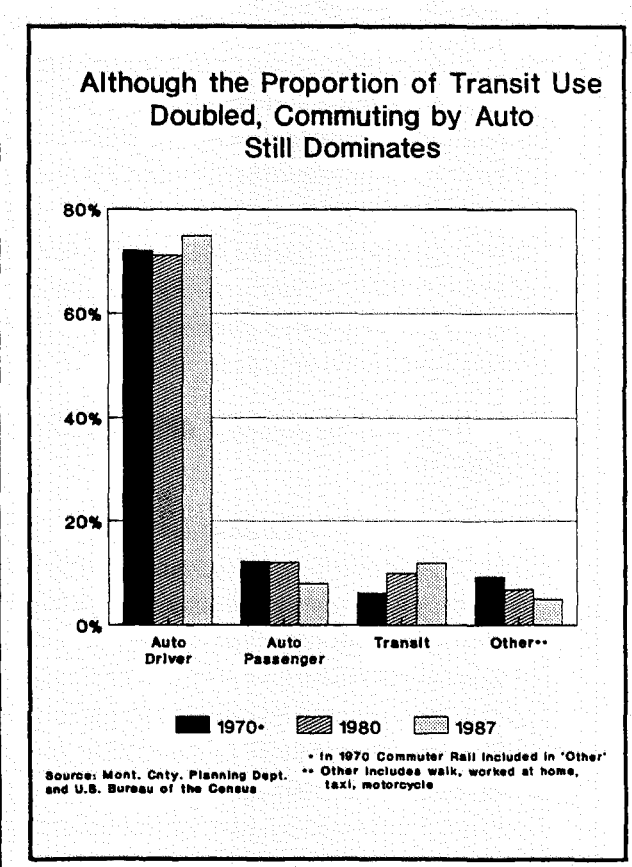
IV. CHANGES IN MEANS OF TRANSPORTATION

* **Montgomery County vehicle registration increased 88 percent between 1970 and 1990, while the population 16 and older increased only 73 percent.** The number of cars per household increased during the past two decades from 1.66 to 1.73, while the number of persons per household declined. However, Montgomery County's growth in auto ownership has been moderate compared to other Maryland counties. Within the past 20 years, Montgomery County dropped from the first to seventh ranked County in the State for cars per household.

* **Vehicle fuel consumption accounts for a significant share of energy expenditures in the County.** Vehicle fuels accounted for 45 percent of the total $1.2 billion spent on energy in Montgomery County in 1990. Automobiles alone accounted for 34 percent of total energy consumption in 1990.

* **There has been significant growth in commuting by transit since 1969. However, single-occupant vehicles remain the predominant means of commuting.** In 1969, only about 6 percent of Montgomery County resident workers commuted by transit. By 1987, this percentage had almost doubled to 12 percent. During the same time, the percentage of commuters driving alone





increased slightly from 72 percent to 75 percent. One of every six new commuters travels by transit.

* **Ridesharing has dropped dramatically in every Washington jurisdiction.** Between 1968 and 1988 the proportion of commuters who shared rides dropped from 30 percent to 16 percent in Montgomery County. Similarly the proportion of commuters who ride-share in every Washington area jurisdiction was cut roughly in half. A likely explanation for this is that some people switched from ride-sharing to transit.

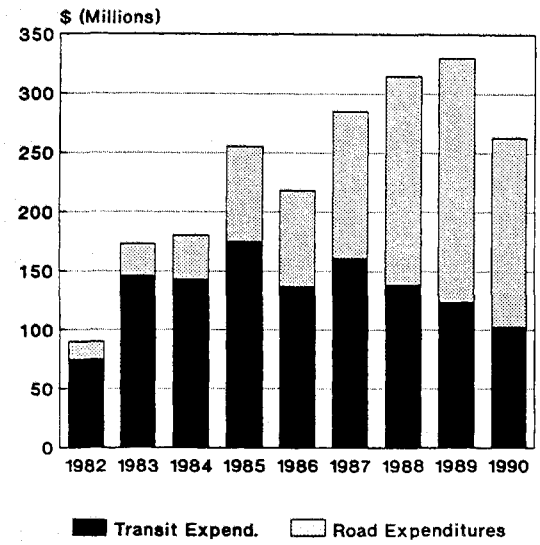
* **Transit is far better suited for commuters than for non-work travelers.** The transit mode share for all trips, both work and non-work originating in Montgomery County, has declined slightly from 5.3 percent to 4.9 percent of all trips. This reduction in total transit usage, at a time when commuter transit use has increased, suggests that transit service has not done as well in meeting the needs of non-work travelers as it has for commuters.

* **A large percentage of Montgomery County residents live and work within walking distance of a rail station or bus stop.** Seventy-five percent of respondents to the Planning Department's 1990 Travel Panel Survey reported that they could get from home to the nearest transit stop within ten minutes. An even larger number, 83 percent, noted that they work within a ten-minute walk of transit.

V. TRANSPORTATION SUPPLY AND DEMAND

Since 1970, it is estimated that over $3 billion of public funds have been spent on construction and operation of roads, transit, bike trails, and sidewalks in Montgomery County. The single highest expenditure for any one year came in 1989, when over $330 million were spent. Since 1982, approximately 57 percent of the transportation budget has been spent on developing and operating our transit system, including parking garages.

About 57% of Total Transportation Expenditures Have Been For Transit Between 1982 and 1990



Source: MDOT, WSTC Annual Financial Reports, WMATA Budget Office

A. ROADS

1) Road Supply

* **New road construction and widenings of existing roads occurred almost exclusively within the urban and suburban rings and the I-270 Corridor during the past two decades.** By 1969, a well developed system of roads had been established in the urban and suburban rings. Old U.S. 240 was upgraded to I-70S, which was subsequently designated I-270. The Capital Beltway, I-495, opened to traffic in the mid-1960s. These freeways created vital links to neighboring jurisdictions. The 1970s, a time during which expenditures on roads remained roughly constant, brought road improvements to the urban ring, especially along roads leading to the District of Columbia. In the late 1970s and early 1980s, improvements were made to provide better vehicular access to the Metrorail stations.

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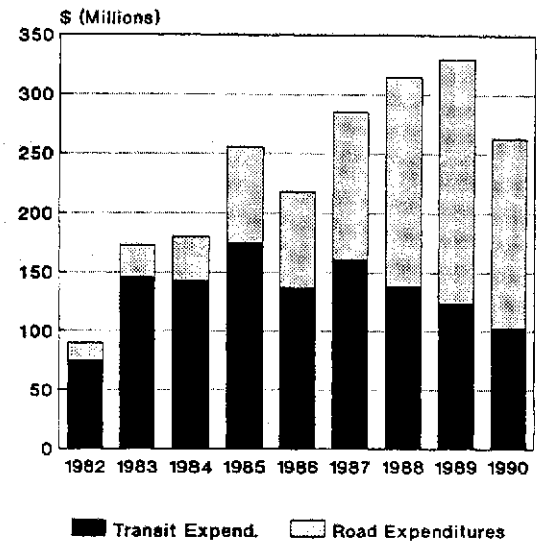

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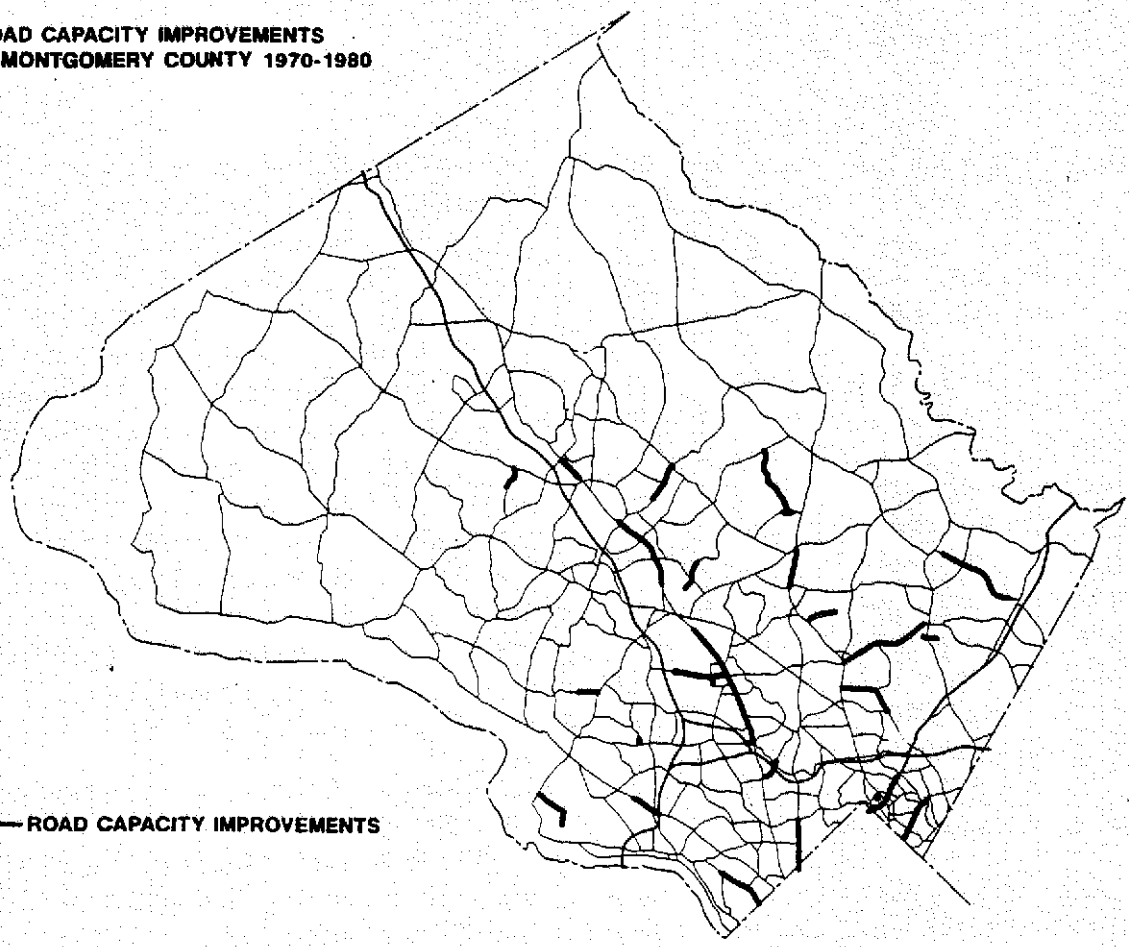
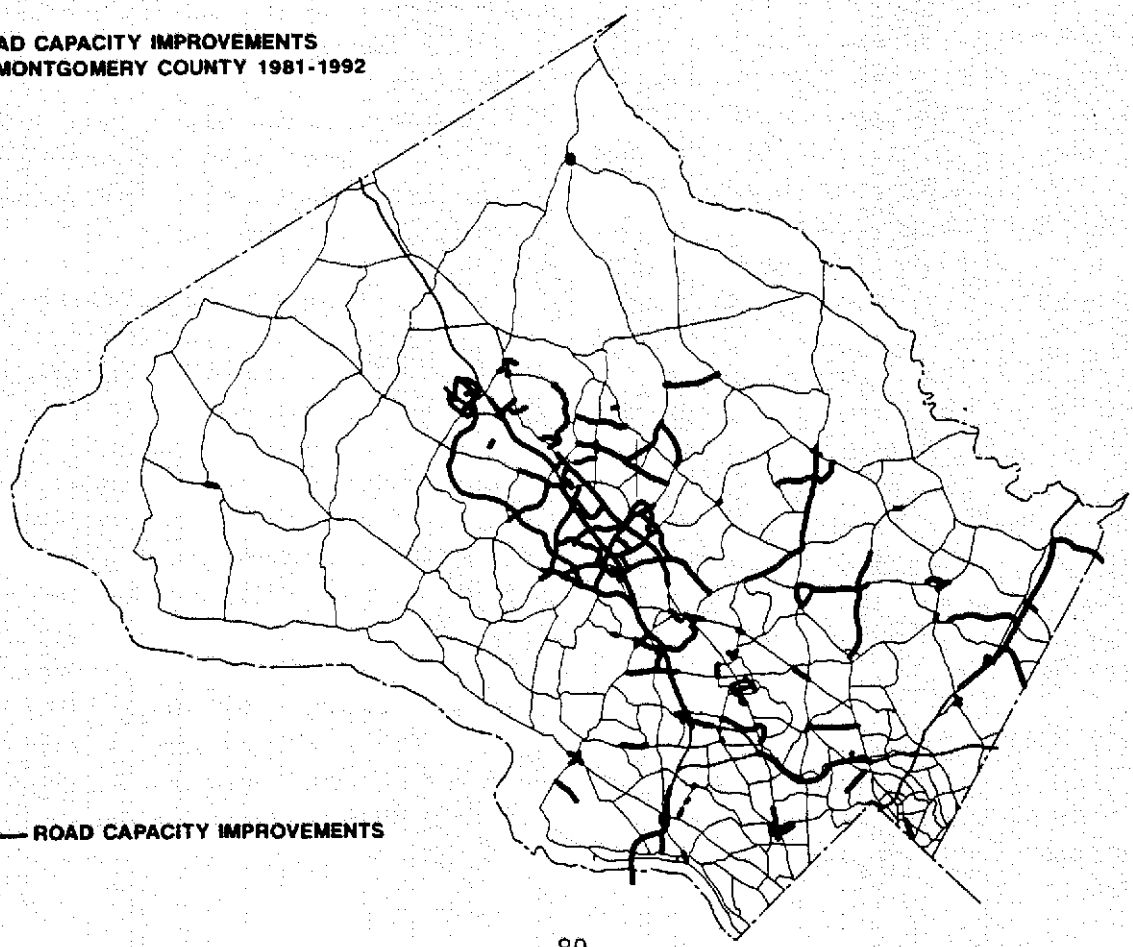
ROAD CAPACITY IMPROVEMENTS
IN MONTGOMERY COUNTY 1970-1980



— ROAD CAPACITY IMPROVEMENTS

ROAD CAPACITY IMPROVEMENTS
IN MONTGOMERY COUNTY 1981-1992



— ROAD CAPACITY IMPROVEMENTS

County. Circumferential road improvements in the urban and suburban rings and selected radial improvements in the eastern part of the suburban ring were also completed in the late 1980s. Since 1990, the rate of road improvements has slowed.

* **The traffic capacity of the County's roadway network has increased by about 10 percent since 1980.** More than half of the new capacity is associated with major highway projects such as the widening of I-270 and the opening of Great Seneca Highway. With a few notable exceptions such as Great Seneca Highway and Sam Eig Highway, capacity additions have come from the widening of existing roads. In addition, turn bays and signals have been installed at many intersections, increasing their capacity. Approximately 300 traffic signals at intersections have been added to the 400 that were in place in 1980.

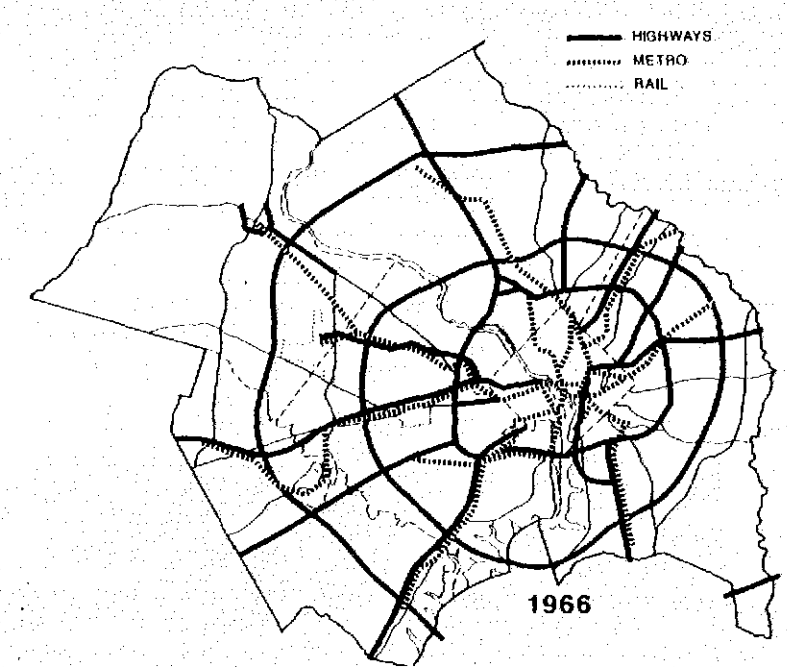
* **There are about 3,250 miles of roads in the County and about 45 square miles of right-of-way along existing roads.** This is equivalent to about 9 percent of the County's total land area. Some of these rights-of-way include land that is unpaved. Roads and streets are classified in the *Master Plan of Highways* by their function. Freeways are divided and grade-separated highways that provide the highest speed, through service, with no direct access to local land uses. They account for less than 3 percent of the total land mileage. Major highways are typically divided and provide at-grade access to local roads, yet serve a mostly through-trip purpose and account for about 9 percent of the mileage. Arterials provide more access to local commercial centers and some residences while serving through traffic. They account for about 8 percent of the County's road system. Primary, secondary, and tertiary residential streets provide circulation and access within neighborhoods and make up the bulk of the total 3,250 miles.

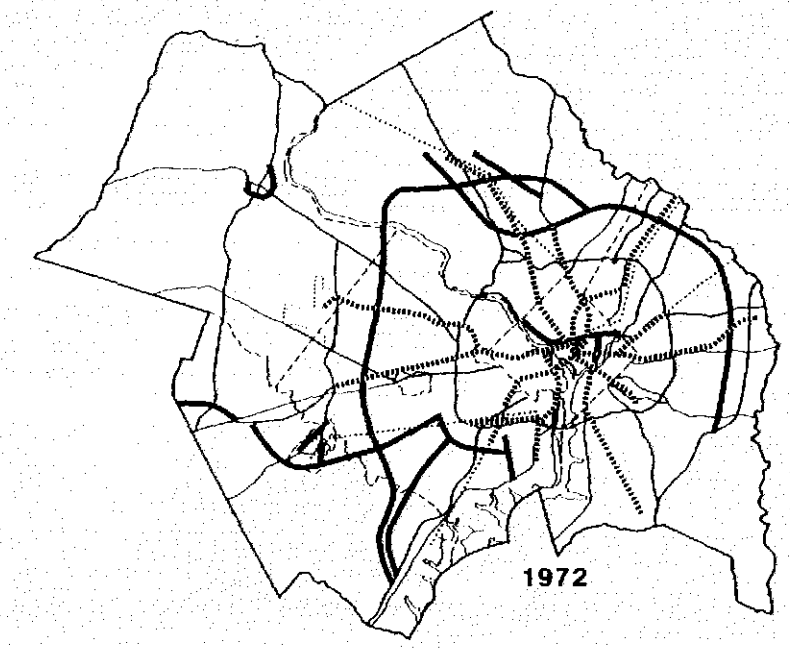
* **Developer participation has been used to fund both off-site roadway projects and streets within subdivisions.** In the 1980s, having adequate transportation capacity became synonymous with development capacity as the Adequate Public Facilities Ordinance coordinated the timing of growth with the provision of infrastructure. When public funding was not sufficient to meet the pace of proposed subdivisions, many developers began to build facilities and contribute funds to ensure the timely provision of adequate capacity. This allowed their particular development project to move forward when it fit their private interest. Since 1980, the County has completed 56 roadway projects through its developer-participation programs. To date, the private sector has contributed over $23 million in the planning and construction of these projects. There are significant developer participation commitments yet to be constructed.

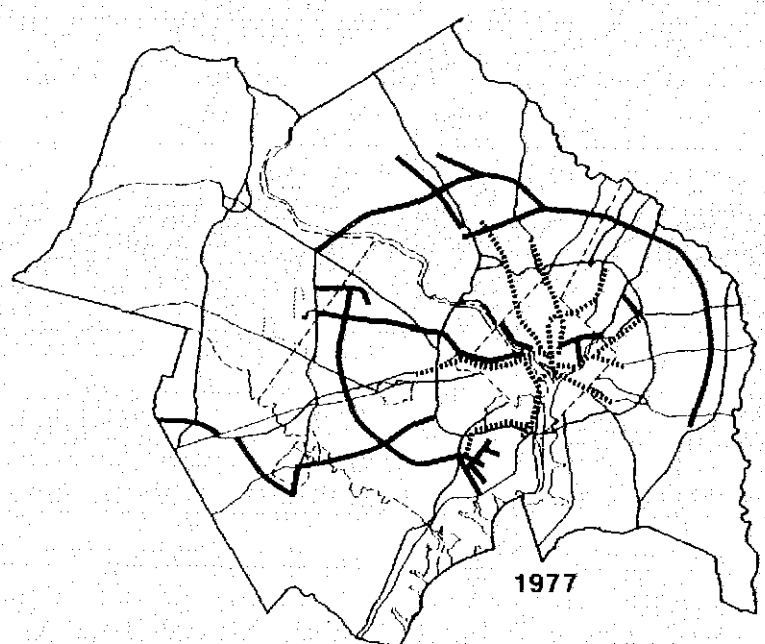
* **There are fewer new roads planned regionally today than there were in 1969.** Past experience would seem to indicate that providing "highway systems to carry the required volume," as called for in the General Plan, will continue to be weighed carefully against fiscal, environmental, and "quality of life" considerations. For example, the 1966 Washington Metropolitan Transportation Planning Board's Long-Range Transportation Plan for the region shows an extensive system of concentric freeways emanating from Washington, D.C. Subsequent updates to that plan show decreasing portions of these facilities.

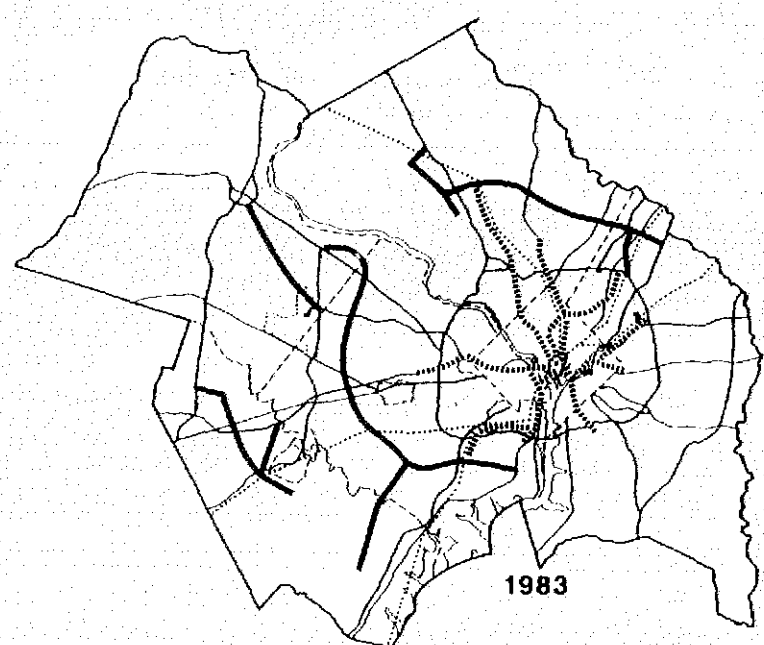
* **The County's own Master Plan of Highways has fewer high-capacity freeways planned now than 20 years ago.** A 1967 draft update for the plan, which was never adopted, shows a cross-county freeway which traversed the northern reaches of the County and passed through Clarksburg. A later version of this cross-county freeway, which traversed the wedge across the northern part of the County, was under consideration in the late 1980s as part of the Washington Bypass Study conducted by the Virginia and Maryland Departments of Transportation. The Plan also shows a parallel route east of I-270, and the North-Central Freeway, connecting Silver Spring with Howard County between U.S. 29 and Georgia Avenue (which was an adopted element

WASHINGTON METROPOLITAN COUNCIL OF GOVERNMENTS
LONG RANGE REGIONAL TRANSPORTATION PLAN 1966-1991



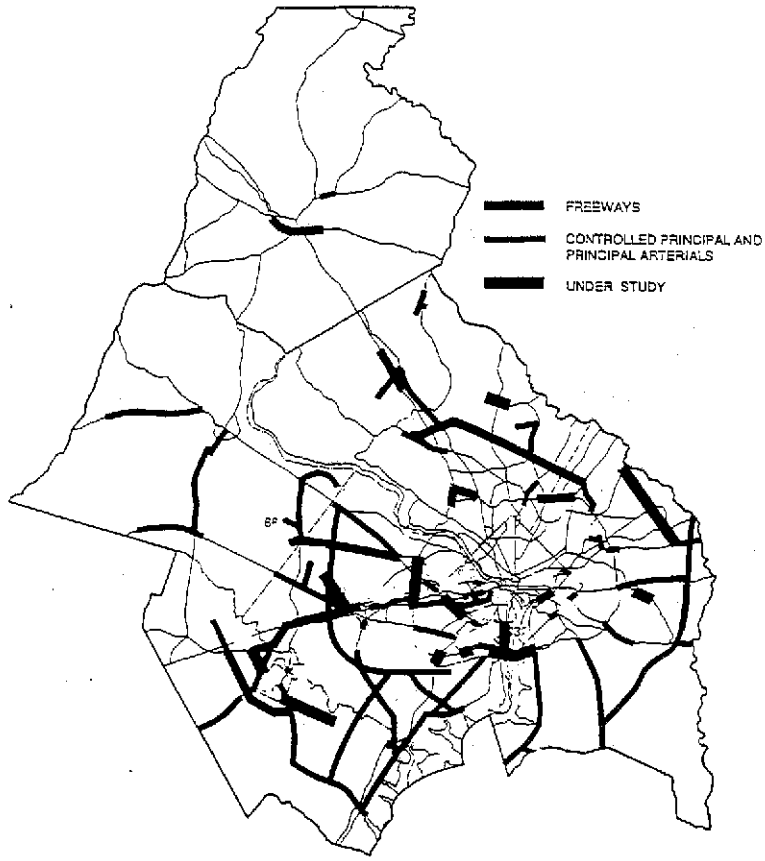






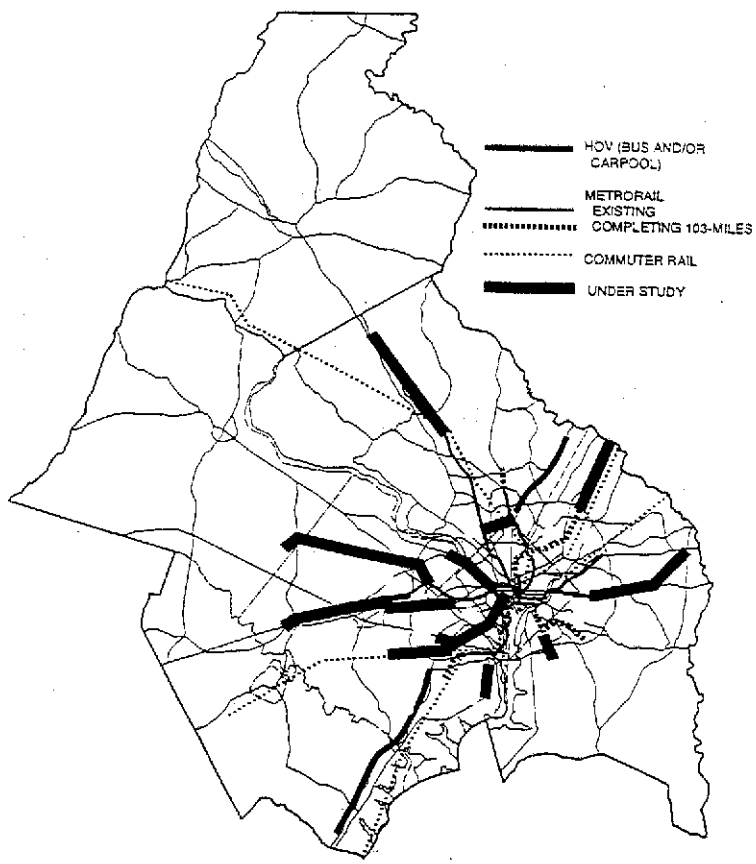
WASHINGTON METROPOLITAN COUNCIL OF GOVERNMENTS
LONG RANGE REGIONAL TRANSPORTATION PLAN 1991

(As updated by the TPB on 9/18/91)

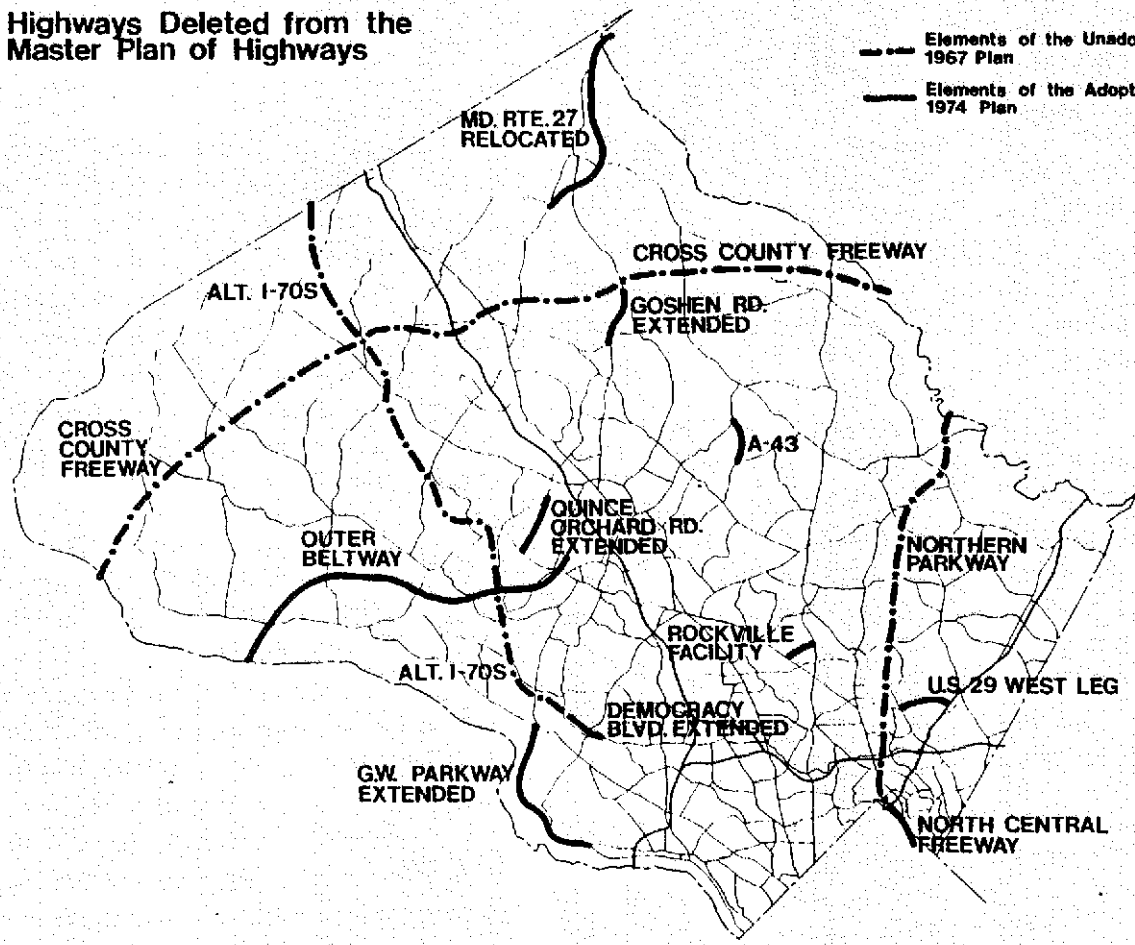


TRANSIT FACILITIES
OF THE LONG RANGE PLAN

(As updated by the TPB on 9/18/91)

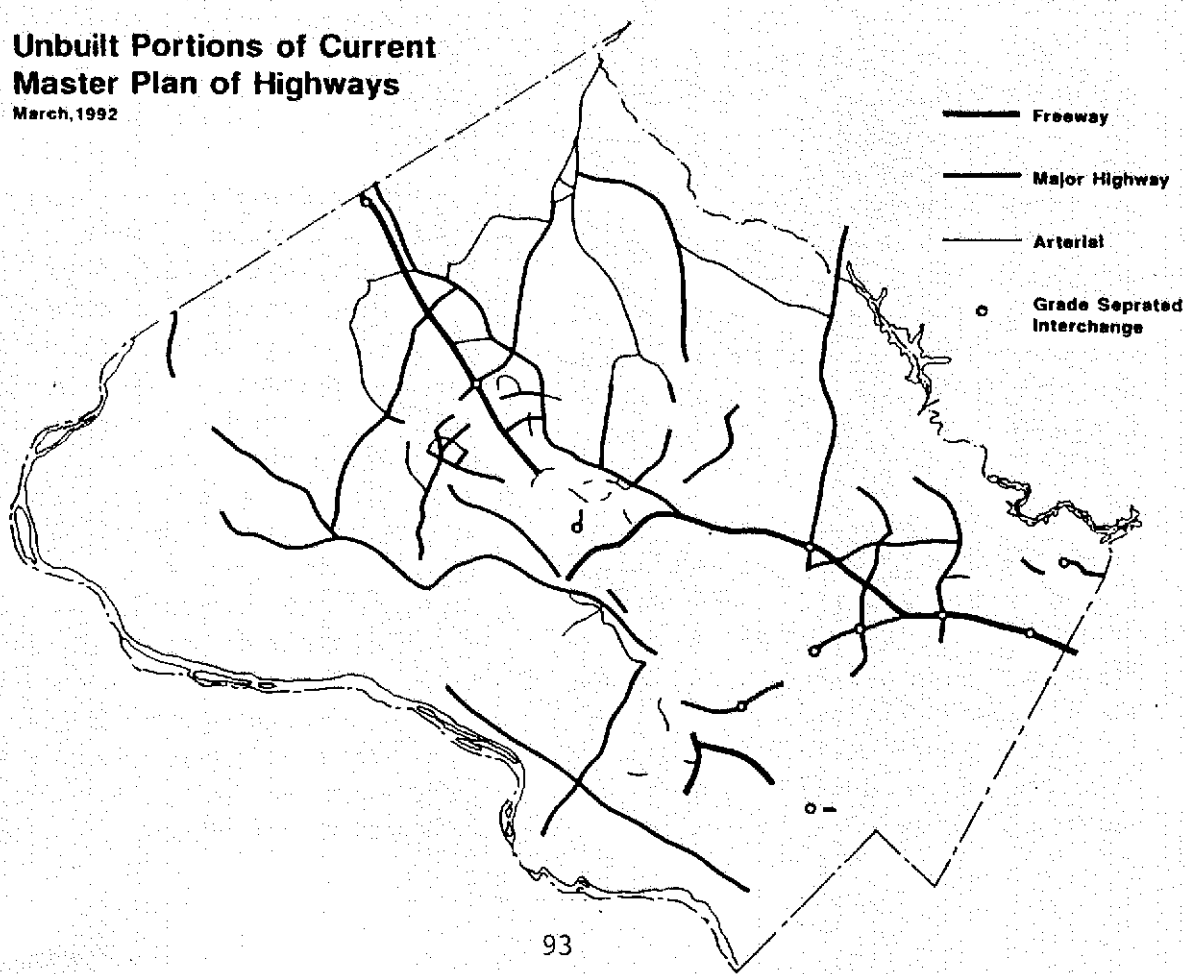


Highways Deleted from the Master Plan of Highways



Unbuilt Portions of Current Master Plan of Highways

March, 1992



of the 1955 Master Plan of Highways). Elements of the *Master Plan of Highways* and the General Plan not yet implemented include portions of the Intercounty Connector (ICC) and Midcounty Highway, as well as the widening of many major and arterial roadways in the upper half of the County.

*** Changes in design standards have resulted in major roads that tend to be wider, flatter, and straighter.** Modern standards for major roads include 12-foot lanes with a median and sidewalks separated from the road by a grassy area. In contrast to some older arterial and major roads in the urban ring, direct access from residential and commercial areas is strictly limited. In some cases, parallel access roads provide connections to separated land uses.

With the objective of introducing greater variety and flexibility in neighborhood design, standards for neighborhood streets are currently under review. One possible outgrowth of this is that neighborhoods will be better connected to transit service.

*** Neighborhood protection programs limit cut-through traffic.** Since the 1970s, traffic controls such as "No left turn" signs, traffic circles, speed bumps, and barriers have been installed in many locales throughout the urban ring where through traffic intrudes upon residential neighborhoods. These measures tend to be effective, but sometimes have the unintended effect of directing traffic into other neighborhoods. By limiting the relief alternative routes afford, these measures can also exacerbate congested conditions along arterial roads.

*** The Rural Roads Task Force has studied ways to protect rustic and scenic roads located primarily in the wedge areas.** In 1989, the County Council initiated a process directed towards preserving some of the roads in the rural and wedge areas of the County that have important scenic and historic qualities. The Rural Roads Task Force, appointed by the Council, produced a report which recommended that the County adopt a program to preserve as much as 140 miles of roads. The County Executive has prepared legislation to establish a rustic roads program that would implement many of the recommendations of the Task Force Report. If such a program is adopted, any modifications to the roads will be made only in accordance with specially established guidelines whose purpose is to retain some low volume County roads in a condition reminiscent of the County's past.

*** Environmental considerations have become a more important element of road planning, design, and construction.** Since 1969, a number of federal, state and local laws and/or regulations to improve environmental protection have been developed. Today, for each planned transportation project that is eligible to receive federal funds, an environmental impact statement spelling out the community impact, the potential for damage to the environment, and the measures proposed to mitigate them must be submitted. Under the provisions of the Clean Air Act of 1990, a transportation project must be an element of a capital program and a regional long-range plan that conforms to federal standards for air quality in order to be eligible for federal funding assistance.

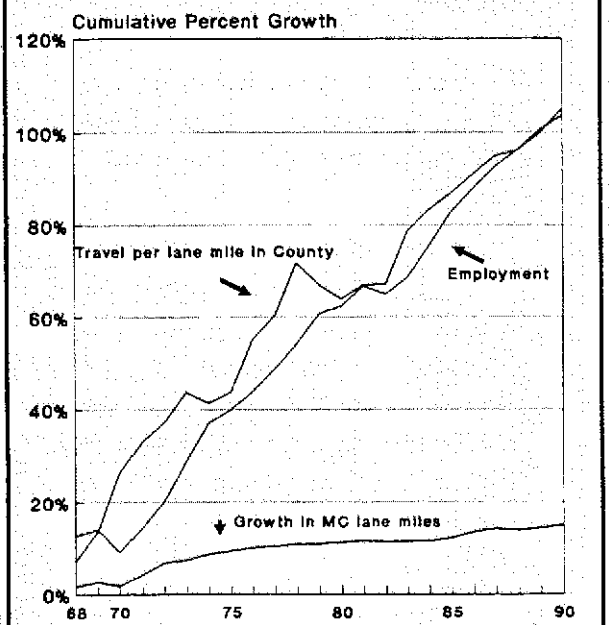
*** Recent federal transportation legislation will encourage greater regional cooperation and provide more flexibility in the use of federal funds.** The *Intermodal Surface Transportation Efficiency Act of 1991* gives more discretion to state and local governments to direct transportation funds to various roadway, transit, high occupancy vehicle, ride-sharing, bicycle, and pedestrian projects. For the first time, the federal share for most transit capital projects is increased to 80 percent, making it equal to the share for most highway projects. Maryland is expected to receive $2.8 billion over the next six years for transportation as a whole, about twice the amount made available in the past five years. Increased cooperation, coordination, and arrangements for intergovernmental sharing of transportation costs at the regional level will continue to be critical to

the successful implementation of Montgomery County's General Plan.

2) Road Demand

*** The growth of road use has risen faster than the growth in lane miles.** Vehicle miles traveled on State roads in the County increased by over 100 percent in the past twenty years, while total lane miles increased by about only 16 percent. This implies an increase in congestion has occurred. It also suggests that drivers have used available road capacity in the non-peak direction and during off-peak times of the day. Forecasts indicate that an additional doubling in vehicle miles traveled will occur over the next twenty years.

Road Use on State Roads in the County Has Grown Faster Than Supply



Source: Maryland State Highway Admin. & Montgomery County Planning Department

*** Changes in average daily traffic reflect the growing importance of suburb to suburb travel.** * In general, between 1972 and 1989, the amount of traffic crossing roadways at the Washington, D.C. line grew far less than that near other neighboring jurisdictions. Daily traffic along major streets between Montgomery County and Prince George's County doubled in many cases. Beltway traffic at the Virginia state line increased 78 percent, to 157,000 vehicles per day. Inbound traffic on US 29 near the Howard County line doubled, and tripled on I-270 north of Germantown to more than 105,000 vehicles per day.

*** Traffic congestion has increased in many areas along specific roadways and at numerous intersections in the County.** According to traffic count information, between the early 1970s and the mid-1980s, the number of congested intersections increased from 16 to 72. Area-wide congestion increased on freeways and major and arterial roads in most areas of the County. County-wide, average congestion increased 35 percent on freeways and 22 percent on major and arterial roads between 1980 and 1989, prior to the completion of the I-270 widening. Congestion grew in all areas of the County, with wedge areas registering the largest proportional increase.

*** In the late 1980s, capacity improvements allowed increased speeds on freeways and arterials in some areas.** The opening of Great Seneca Highway and the widening of I-270 in the late 1980s improved speeds on County freeways so that 20 percent of the mileage was operating at congested speeds of 30 miles an hour or less, compared to 40 percent prior to the improvement. The mid- county area registered the sharpest improvement, while in the down-county area, the percentage of road miles traveled at 30 mph or less declined from 40 percent to 30 percent. In 1990, about 7 percent of the arterial road lane miles operated at congested speeds compared with 18 percent in 1987. However, these improvements may diminish as development continues in the corridor.

*** Under current trends, traffic along existing facilities and the I-270 Corridor will experience the most traffic increase between now and 2010.** By 2010, the total number of work trips made to County jobs is expected to increase by 50

percent. Most of these new trips will begin and end in the County. In relative terms, however, commuter trips from Howard and Frederick Counties to Montgomery County are expected to increase more than those from other jurisdictions in the region. The great majority of these trips are likely to be made by automobile, accounting for some of the projected traffic increases in the I-270 Corridor.

*** A long-term imbalance between land use and transportation has been identified in county-wide transportation studies conducted since the 1969 General Plan.** A *Transportation Study for Montgomery and Prince George's Counties, Maryland* (1970) was the first transportation study completed after the 1969 General Plan. The study employed newly-developed analytic techniques in predicting that, by 1990, congestion in many areas of the County would approach that experienced in Washington, D.C. at that time. More recently, the *General Plan Assessment* (1987) and the *Comprehensive Growth Policy Study* (1989) have forecast significant increases in congestion in many areas of the County as a result of demands placed upon the future transportation system from expected local and regional growth in households and employment. Although the specific findings of these studies differ, they all touch upon the general need to modify land use patterns, influence travel behavior, and increase the supply of transportation in order to serve the full zoning potential of land in the County.

*** Transportation Demand Management (TDM) has grown in importance.** Such transportation demand management efforts, or "trip mitigation" activities as they are known in Montgomery County, are an outgrowth of the Adequate Public Facilities Ordinance. Since the early 1980s, 55 traffic mitigation agreements have been made or are pending which specify that the developer must eliminate as many trips as will be generated by a new development. Developers have been using a variety of means such as selling bus passes or starting ride-sharing programs to uphold the agreements. These agreements usually remain in effect for ten years. Such TDM programs are most successful in areas where parking management is combined with attractive alternatives to driving alone.

Flexible work schedules and telecommuting are two additional transportation demand management measures which are not widely in practice currently but may grow in importance over time. Telecommuting may be especially attractive for this County because its increasing high-tech employment is well suited for home based work with a modem and a computer.

*** The Transportation Management District (TMD) in Silver Spring expanded the transportation demand management concept to an entire area.** The first, and so far only, TMD in the County was created in Silver Spring in 1987. Its goal is to reduce single- occupant auto travel in order to accommodate new development in an area where opportunities for road capacity improvements are limited. In order to meet its 46 to 50 percent non-auto driver mode share goal, the County has offered transit subsidies, ride- share matching services, and reduced-rate car pool parking.

In 1986, the Montgomery County Department of Transportation, City of Rockville, employers, and property owners in the North Bethesda/Rockville areas established the "Transportation Action Partnership", a transportation management organization which works towards reducing travel demands in that area.

3) Parking

*** The number of public parking spaces in the County's four parking lot districts has grown 85 percent since 1970 from over 10,000 to nearly 19,000 spaces.** Four parking lot districts within Montgomery County were created during the late 1940s in areas where public parking was thought to be necessary in order to encourage compact and orderly commercial development. The four districts are: Silver Spring, Bethesda, Wheaton and Montgomery Hills. Each of the

parking districts, which maintains on-street and off-street surface and/or garage parking facilities, charges hourly and daily parking fees. The parking districts rely solely on parking fees, fines, and taxes assessed to properties that do not provide their own parking, in order to maintain and expand their operations. In the late 1980s, the fee structure in the Silver Spring district was modified to help achieve the non-auto driver goal.

*** Parking is free in most of Montgomery County and the rest of the region as well, although fees for parking are becoming more widespread.** According to a 1991 Washington Metropolitan Council of Governments study, most employers in the region provide free parking for their employees. In addition to the parking districts, where charges are pervasive, parking is charged in scattered areas of Rockville, North Bethesda, and Wheaton. In 1990, daily charges in commercial lots in Silver Spring and Bethesda were $3.50 to $4.50. Average daily commercial parking fees in Washington D.C. were $8.50, in Alexandria and Arlington $9.50, and in Prince George's County $6.00 to $10.00. More commercial and retail establishments near Metro stations are beginning to charge fees for parking.

*** The Montgomery County Zoning Ordinance specifies minimum parking requirements for various land uses including office, commercial, and industrial zones.** The minimum number of parking spaces varies from 1.6 spaces per 1,000 square feet for office nearest Metrorail to 5 spaces per 1,000 square feet at retail establishments. The requirement varies, depending on the land use and distance from Metrorail.

B. TRANSIT

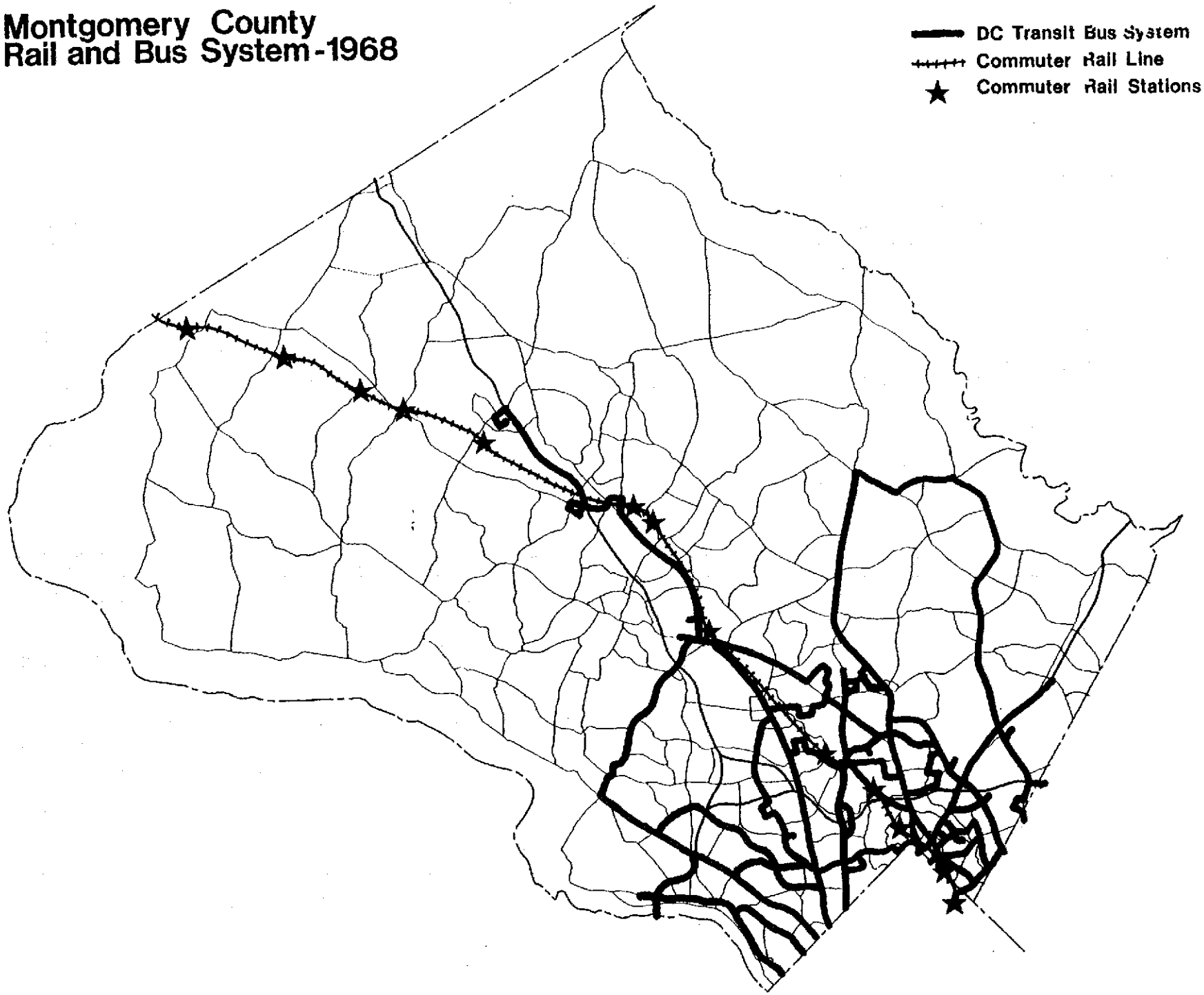
1) Transit Supply

*** Our Transit system has been greatly expanded since 1973.** Until 1972, bus service in Montgomery County was provided primarily by a private company, D.C. Transit, which operated in the urban ring connecting Washington D.C. to Gaithersburg, Olney, and White Oak. Commuter rail (MARC) served commuters from distant residential development as far as West Virginia to the down-county area and Washington, D.C. Then, as now, the system served best those traveling along radial lines towards the Washington, D.C. area. Today, the 17.4 miles and 12 stations of the Metrorail Red Line form the backbone of a much improved transit system in the County.

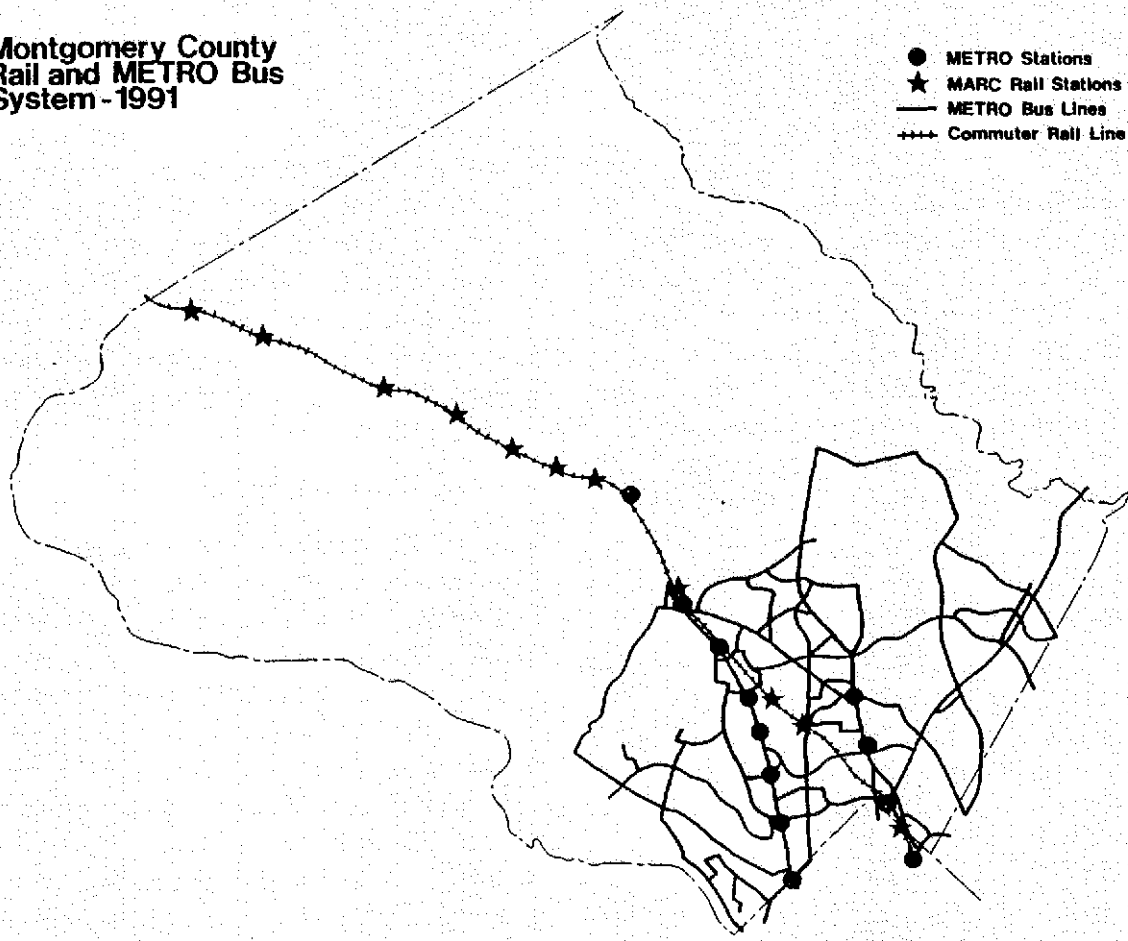
*** Bus service and automobile access have been designed to complement the rail system, providing the "ease of transfer" to it called for in the General Plan.** The County's Ride-On system, which began bus service in 1975, now operates over 70 routes with about 200 buses and concentrates service to neighborhoods in the urban ring and along the I-270 corridor, making frequent connections with Metrorail and commuter rail stations. Less frequent service is provided to the communities outside the Corridor such as Olney and Damascus. The Washington Metropolitan Area Transit Authority (WMATA) took over service from D.C. Transit in 1972 and now offers bus service in the lower half and eastern portions of the County. Metrobus makes connections with the rail system, Prince George's County, and the District of Columbia. Express bus service, complemented by over 3,500 commuter parking spaces, is available along areas not served by rail. One of the remaining private bus operators, Eyre Bus company, takes commuters from Howard County to Silver Spring on US 29, along one of the few dedicated bus lanes in the County. That service is supported by the Maryland Department of Transportation along with service to the Shady Grove Metro Station from Frederick and Hagerstown.

Automobile access to rail stations is facilitated by the provision of over 13,000 parking spaces, and numerous road improvements carried out around the time of station construction.

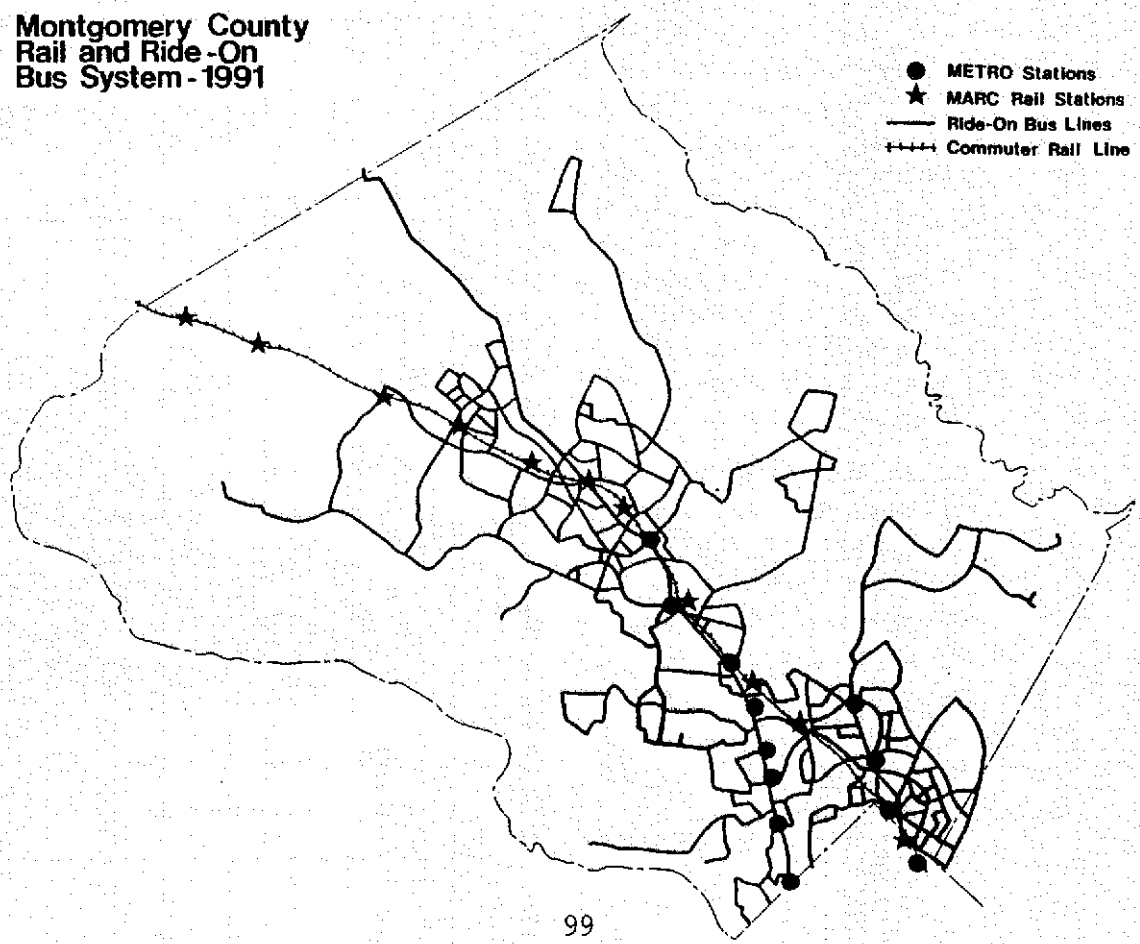
*** Expanded commuter rail service will serve a greater share of the County's demand for travel.** State-wide, commuter rail service (MARC) will benefit from an infusion of over $350 million of federal funds during the next six years, to im-


Montgomery County
Rail and Bus System-1968
DC Transit Bus System
Commuter Rail Line
Commuter Rail Stations

Montgomery County Rail and METRO Bus System - 1991



Montgomery County Rail and Ride-On Bus System - 1991



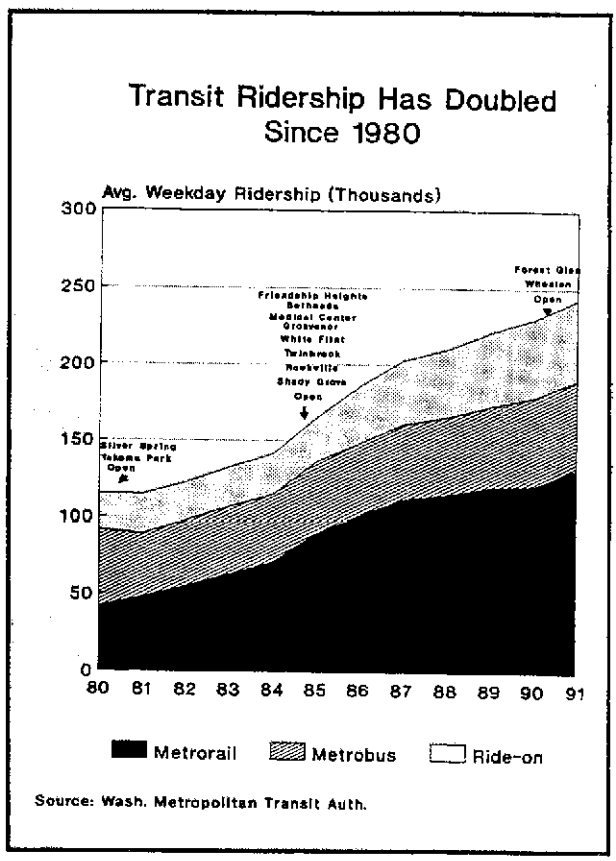
prove and expand stations, and extend service to Frederick, Maryland from Point of Rocks, West Virginia. In the longer term, there are expectations for extending service to Cumberland, Maryland, and doubling the frequency of morning and afternoon service in the County to six trains per hour from the current three trains per hour. Frequent service in the reverse direction is expected as well. These improvements are expected to attract more commuters and non- commuters traveling shorter distances to complement the long-distance commuters who now comprise the bulk of the system's riders.

*** Standards for acceptable levels of congestion in the County are influenced by the quality and quantity of transit service and access.** The County's *Adequate Public Facilities Ordinance* coordinates the timing of development with the provision of public facilities needed to serve the development. Each of the County's policy areas is categorized as being in one of six groups that are defined by their degree of transit availability and uses. Associated with each of these six groups is a standard of acceptable area-wide average congestion on the roadway network. The assignment of these standards is based upon a policy of permitting greater roadway congestion to occur in those policy areas that provide greater opportunities for the use of transit, car-pooling, walking, and biking. Thus, higher levels of roadway congestion are deemed more acceptable in Silver Spring or Bethesda/Chevy Chase than in areas such as Damascus, Cloverly and Olney, where transit availability and use is limited. The combined effect is to have an equivalent level of transportation service in each area of the County.

*** Recent studies and master plans are a prelude to the County's first Master Plan of Transitways and High Occupancy Vehicle (HOV) Facilities.** The Georgetown Branch Trolley, Corridor Cities Transit Easement, and the Grosvenor Transitway are identified in their respective master plans as logical extensions of current transit service. *The Transportation Network Studies* has identified potential transitway or HOV corridors along US 29, I-270, I-495, and the Intercounty Connector. The Master Plan of Transitways and HOV will locate and reserve rights-of-way in the same fashion as the *Master Plan of Highways* has for roads since its initial adoption in 1932. With the exception of the Georgetown Branch Trolley, these potential transitways have not been evaluated for environmental or fiscal feasibility, nor have their designs or mode of operation been determined.

2) Transit Demand

*** The number of transit passengers doubled between 1980 and 1990 in Montgomery County.** Excluding commuter rail (MARC), about 230,000 passengers used the transit system on an average weekday in 1990, double the approximately 115,000 week-day riders during 1980. The Metrorail, Metrobus, and Ride-On Systems all increased in ridership as new stations opened along the Red Line in the 1980s. Ridership on the commuter rail line has also increased to approximately 5,400 passengers a day, up from 400 a day in 1968.



*** The two busiest Metrorail stations in the County, at Silver Spring and Shady Grove, illustrate different approaches to "...serving present population and employment centers."** The Silver Spring station, one of the first to open in the County, has the most passengers boarding of any station in the County. Bus is the primary mode of access to the station at 55 percent of the Metrorail riders, followed by walk and auto, at 16 and 14 percent respectively. The station is centrally located and development around it is compact. There are three times as many households and jobs within a quarter mile of the Silver Spring station as at the Shady Grove station. Commuters using the station are able to reach about five times as many of the region's jobs within 60 minutes as at the Shady Grove Station. It is also a transfer point for many of the area's buses.

Shady Grove, growing faster than any other station, now ranks second overall in number of boardings in the County. It is accessible by transit to a small proportion of the region's households and jobs, and relatively few household and jobs are within walking distance of the station. Currently the outermost station on the Red Line, its riders come from a dispersed area, making access by automobile the most convenient alternative. I-370 was built in the right-of-way for the Intercounty Connector to provide direct access to the Shady Grove metro station. Shady Grove's 4,000 plus parking spaces, the most of any station, serves the 55 percent of Metrorail riders who drive and 20 percent who enter the station as auto passengers. Only 2 percent of Shady Grove's transit patrons walk or bike there, while the remaining 23 percent come by bus.

C. PEDESTRIANS AND BICYCLES

*** The potential role of walking and bicycling beyond "health and recreation objectives" as envisioned in the General Plan is just being recognized.** At the time of the General Plan, when there were about ten miles of County maintained bikeways, there was no explicit recognition of non-motorized modes as viable alternatives to automobile travel. Since that time, numerous bike plans have emerged, among them the County's first *Master Plan of Bikeways* in 1978 and the Park Department's *Guide to Recreational Trails* in 1990. In these documents we see the emergence of bike connections around as well as between urbanizing areas, and between park trails and developed areas.

Since 1970, approximately 156 miles of bike paths, lanes, and routes have been built in Montgomery County. A 34-mile system of hiker-biker trails has been constructed by M-NCPPC in stream valley parks around the County. Another 54 miles are located in Gaithersburg, Rockville, and State and Federal parks. The County Department of Transportation maintains 45 miles of off-road bike trails (Class I bike routes) and 33 miles of on-road signed bike lanes (Class II and III routes). Another 79 miles of bicycle trails are proposed, which would bring the total system to 245 miles.

*** Sidewalks are more often a feature of road construction and improvements than at the time of the 1969 General Plan.** The County's Road Code now requires the construction of sidewalks in developing residential subdivisions of one acre density (RE-1) or greater. Since 1974, the Road Code has required that sidewalks be provided with road improvement and construction. Public expenditures on pedestrian facilities totaled $970,000 in 1989, compared to $240,000 in 1982. While the absolute dollar amount spent on pedestrian facilities increased between 1982 and 1989, the share of total expenditures dropped from 3 percent to 1 percent. About one-quarter of the approximate 1,550 miles of County maintained roads, or 370 miles, had sidewalks along one or both sides in 1972. Today, almost half of the 1,700 miles of County maintained roads have sidewalks (840 miles). Most major roads, especially in commercial areas of the County, have sidewalks.

Despite these gains, the existence of sidewalks does not guarantee increased pedestrian

use. As roads have been widened, auto volumes have increased, creating greater crossing distances and increasing the perceived risk of injury for pedestrians at intersections. Walking is especially difficult along certain stretches of major highways such as Rockville Pike, where auto speeds and volumes combine with large building setbacks to discourage walking.

D. OTHER TRANSPORTATION

***General aviation capacity in Montgomery County has remained fairly stable.** The Montgomery County Airpark continues to provide service for private, non-commercial aircraft only. All aviation studies conducted in the County over the last 20 years have concluded that no additional general aviation or commercial airport facilities are required in the County due in part to expanded service provided in Frederick County. *The Gaithersburg Master Plan* calls for no significant physical improvements or changes, other than safety improvements, to the airpark.

ENVIRONMENTAL FACT SHEET

INTRODUCTION

The natural environment of Montgomery County, its soils, streams, rivers, wetlands, and woodlands support a variety of plants and wildlife. This environment contributes to the County's high quality of life and to its visual quality and character. As part of the Washington, D.C. metropolitan area, Montgomery County will continue to develop, but this does not have to be at the expense of the County's natural resources and environmental quality. The critical concern is how to protect the County's air, water, land, and wildlife resources while managing growth and making development more environmentally sensitive.

Since the 1969 General Plan was adopted, there have been many important environmental changes. Although there have been many success stories such as the clean-up of the Potomac River, there is much that needs to be done to protect the environment.

* Awareness and understanding of the environment have increased dramatically. Today we have a better understanding of how the environment affects human health, how human behavior affects the environment, and how the quality of air, land, and water affect each other. Although we know a great deal more, we still need to learn more, monitor conditions more to increase our understanding of these complex issues, and be more environmentally sensitive in our actions.

* The environmental context in which we make land use decisions also has changed and will continue to change in the future. The early 1970s were landmark years for federal environmental legislation, which prompted both the state and local government to take additional actions to protect and clean-up the environment. The 1970 Clean Air Act, the 1970 National Environmental Policy Act, the 1973 Clean Water Act, and the 1973 Endangered Species Act are part of the federal environmental protection framework. In 1970, the country celebrated its first Earth Day and the Environmental Protection Agency was created. More recently, the Montreal Protocol required the phasing out of chlorofluorocarbons world-wide by 1999 and the Clean Air Act was amended to include the control of sulfur dioxide and nitrogen oxides into the air.

* Environmental issues are given greater weight today when land use planning decisions are made in Montgomery County than they were when the General Plan was approved. Today master plans, subdivision review, zoning cases, special exceptions and site plan review consider many environmental issues such as soil quality, wetlands locations, stormwater management, tree preservation, and building orientation.

* Many of the environmental challenges facing the County are of a regional nature, and require coordinated and complementary solutions by all contributing jurisdictions. Jurisdictions in the state and region need to work together more than we did in the past to meet these challenges.

This fact sheet provides background information on the environment in Montgomery County. It also discusses how basic services such as drinking water, sewage and solid waste disposal have been handled.

1. GEOLOGY AND SOILS

*** Montgomery County is comprised of three geologic areas, the Piedmont Plateau, Triassic Lowland, and the Coastal Plain, all of which extend beyond the County boundaries.** As shown on the map, most of Montgomery County is on the Piedmont Plateau. The plateau is the remains of an ancient mountain range and contains bedrock ranging from soft slate to hard granite and gneiss. On the surface, the plateau is characterized by rolling hills and numerous streams.

The second largest geologic area, the Triassic Lowland, underlies the western part of the County and contains soft sedimentary rocks such as sandstone and red shale. A small portion of the County along the Prince George's County line lies on the Coastal Plain, which contains sand, gravel,

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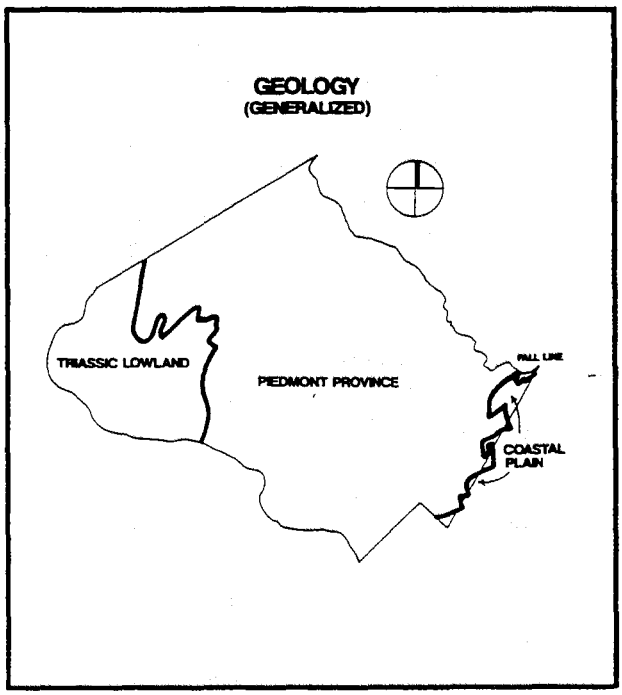
and clay that was deposited by erosion of the Piedmont Plateau and ancient sea beds.



Generally the soils in the Piedmont Plateau and Coastal Plain are suitable for urban development, due to their good drainage, low erodibility, and general stability. The corridor cities and urban ring are in these areas. The northwestern area of the Piedmont Plateau in Montgomery County and the Triassic Lowland generally include large areas of soils that have moderate or severe limitations for urban development, such as poor drainage, high water tables, shallow soils, and high erodibility.

Generally, the areas around streams are the most constrained for development due to the presence of steep slopes and highly erodible and wet soils. Slopes in excess of 25 percent grade are problematic for development.

Some rock groups in the County contain radium, which, when exposed to air, becomes radon gas. The County modified the building code in 1990 to reduce the health hazard of radon in new single-family homes by requiring builders to construct homes so that passive radon venting systems can be installed, should the owner decide to install them later.

*** The northwestern portion of the County was designated by the U.S. Environmental Protection Agency as part of the Piedmont Sole Source Aquifer.** A sole source aquifer designation indicates that there is only one underground source of potable drinking water. This designation requires that federally funded projects include an analysis of impacts on the aquifer.

*** Montgomery County has several land areas underlain with commercially usable mineral resources.**The Coastal Plain sediments on the Montgomery-Prince George's border are rich with sand, gravel, and clay deposits. Building and flagging stone also is retrievable from extensive outcroppings of the Sykesville formation in the eastern part of Montgomery's Piedmont. The Triassic Lowland and Piedmont areas have extensive deposits of diabase, serpentinite, and sandstone. Most of these deposits are used for construction materials.

There are currently four quarries operating on 371 acres in North Potomac, Bethesda, and Rockville. The largest quarry, Travilah Quarry, produced about 4 million tons of crushed stone on a 330-acre site in 1989. Three other small quarries produce building stone, some of which has been used on the grounds of the White House and the National Cathedral. Several former quarry sites are located in Dickerson and in Seneca, where one quarry produced sandstone used to build many locks on the C&O Canal and the Smithsonian Institution's castle.

The regulation of quarry operations addresses noise, dust, health and redevelopment concerns in many ways. Trucks at the Travilah Quarry now are washed before leaving the quarry to reduce the amount of dust that leaves the quarry. Roads just outside the quarry are swept and washed daily. An earthern berm surrounds the quarry site to reduce noise. Asbestos fibers in the Travilah Quarry tested in 1989 were found to meet U.S. Environmental Protection Agency guidelines. In the future, any diabase removed from the Boyds Planning area must be

transported only by rail to mitigate noise and dust.

Mineral resource deposits in Montgomery County can be protected from pre-emptive development by the County's Mineral Resources Recovery (MRR) Zone. The MRR Zone is viewed as an interim zone that is replaced upon depletion of the area's mineral resources. The zone can cover commercially valuable crushed stone, building stone, and sand and gravel deposits only and does not include metallic minerals or fossil fuels. This zone establishes regulations and performance standards for the extraction, processing, use, and transport of mineral resources to protect the surrounding environment from noise, vibrations, and dust.

The designation of an MRR Zone is contingent upon the developer's submission of a plan for the reclamation, regrading, and ultimate reuse of all lands once the minerals are depleted. For example, owners of the Travilah Quarry have proposed filling the quarry with water for use as a lake surrounded by housing and commercial establishments after quarrying is completed. No action has been taken to implement this proposal to date since the quarry has about 25 more years of useful life.

2. CLIMATE

*** Local temperatures have been steadily rising for more than a century.** Both average annual temperatures and record highs in Washington, D.C. have risen every decade since the National Weather Service started keeping records in 1871. 1990 and 1991 were the hottest years on record for Washington, D.C., Baltimore- Washington International Airport, and the State of Maryland. This rise is partly due to local factors, such as moving the official thermometer in 1941 from downtown Washington to a warmer spot at National Airport and the greater amount of heat retaining concrete and asphalt in the area, which creates a "heat island" effect. Nationwide, the 1991 average temperature was only slightly below 1990's record high, reinforcing some climatologists' contention that the burning of fossil fuels may be causing global warming.

3. DRAINAGE BASINS

Montgomery County has 25 drainage basins, flowing into four rivers. The County is bordered by two parallel rivers, the Potomac and the Patuxent. Most of the County drains into the Potomac and its major tributaries including Rock Creek, Cabin John Creek, and Great Seneca Creek. A strip along the Howard County line, northeast of Route 198 and New Hampshire Avenue, drains into the Patuxent River. Eastern Montgomery County south of Olney and east of Georgia Avenue drains into the Anacostia River through the Northwest Branch and Paint Branch. Portions of the county north of Comus Road and MD 121 (east of I-270) drain toward Monocacy River via Bennett and Little Bennett creeks. The above-mentioned roads generally follow ridge lines, the same routes as Indian paths that followed ridge lines because they were flat and dry.

The County adopted functional master plans for two major drainage basins, Rock Creek, in 1980, and Seneca Creek and Muddy Branch, in 1977. These functional plans for conservation and management cover such subjects as managing stormwater and flooding, erosion and sedimentation, controlling sources of water pollution, and improving lake water quality, and include related policy recommendations. Where an area master plan covers part of a functional plan watershed, the master plan usually acknowledges and reinforces the functional plan's recommendations. Most master plans look at various environmental factors, including environmental impacts within drainage basins, at varying levels of comprehensiveness.

One factor considered when analyzing environmental impacts is the amount and location of impervious areas. The amount of impervious area affects water quality, erosion, and stormwater management. Some studies indicate that impervious levels above 12 to 15 percent adversely affect

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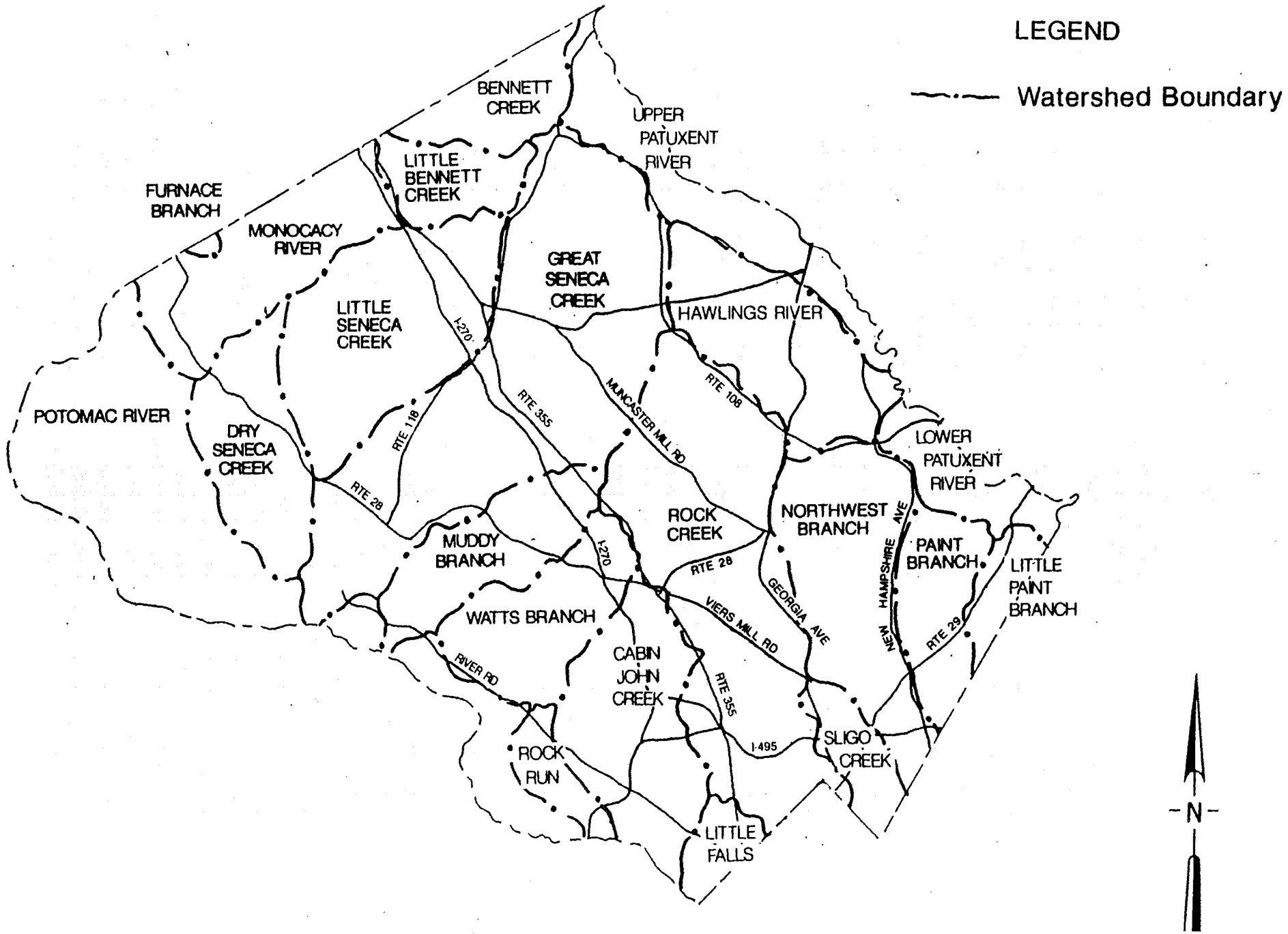

aquatic habitat and sensitive aquatic species such as brown trout by reducing the base flow and increasing the temperature levels in stream systems.

DRAINAGE BASINS IN MONTGOMERY COUNTY, MARYLAND

Basin	Area (Square Mile)
Bennett Creek	10
Little Bennett Creek*	18
Broad Run	14
Cabin John Creek	25
Fahrney Branch	1
Furnace Branch*	1
Haights Branch	3
Hawlings River	28
Horsepen Branch	7
Little Branch	6
Little Falls Branch	5
Little Monocacy River	18
Minnehaha Branch	1
Muddy Branch	19
Northwest Branch	30
Paint Branch	15
Patuxent River	27
Potomac River	34
Rock Creek	61
Rock Run	5
Scott Branch	2
Seneca Creek Basin*	29
Dry Seneca Creek	19
Great Seneca Creek	62
Little Seneca Creek	39
Sligo Creek	9
Watts Branch	22

* *Areas that drain directly into this river or stream*

4. SURFACE WATER

Montgomery County's rivers, lakes and streams provide drinking water, recreational opportunities, and wildlife habitat, and are an important link in the ecosystem. Most of this surface water comes from naturally occurring run-off from rain and snow. All of the lakes in the County are man-made. The larger lakes were built for flood and sediment control and water supply. As is the practice elsewhere, some County waters also are used to receive treated sewage, excess stormwater run-off, and unauthorized disposal of solid and liquid wastes. Ultimately, all Montgomery County waterways flow into the Chesapeake Bay.

Increased sensitivity to the quality of the Bay and other waterways led to the passage of federal, state, and local regulations aimed at improving water quality.

*** The water quality in the Potomac River, which forms the western boundary of the County, has improved dramatically since 1970.** Stringent controls required by federal, state, County, and local regulations on point source and non-point source pollution in tributary streams have helped to improve the Potomac's water quality. The Potomac's clean up served as a national model.

*** Montgomery County development guidelines, approved in 1983, have provided increasingly strict stream valley buffers to protect Use I, III and IV streams.** Montgomery County contains three of four use classes designated by the State. These are: Use I (suitable for human contact, fish and plant growth); Use III (capable of supporting naturally-reproducing trout populations); and Use IV (capable of supporting stocked adult trout for fishing). There is no Use II (shellfish harvesting) water in the County. The State may change the use class of a stream where the water quality has improved. Seneca Creek, below Little Seneca Lake, was recently upgraded to a Use III stream.

Montgomery County's guidelines require stream buffers that range from 100 to 200 feet on each side of a stream, depending on the state use classification and adjacent slopes. These buffers exceed the state recommended 50 foot buffers. In the Patuxent Primary Management Area, the Planning Board also applies guidelines for the location of development within one-half mile of the Patuxent and Hawlings rivers.

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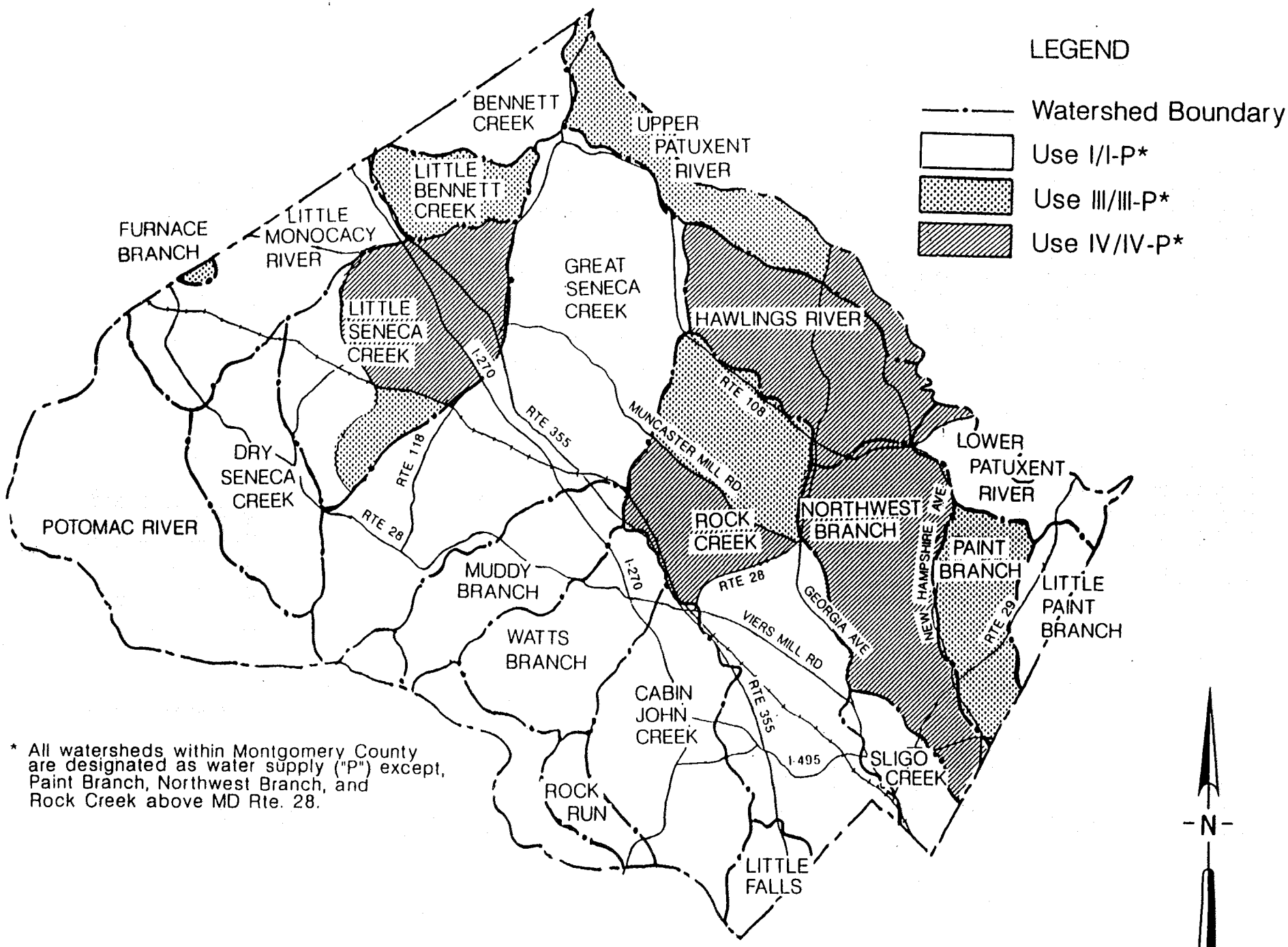
Montgomery County's guidelines require stream buffers that range from 100 to 200 feet on each side of a stream, depending on the state use classification and adjacent slopes. These buffers exceed the state recommended 50 foot buffers. In the Patuxent Primary Management Area, the Planning Board also applies guidelines for the location of development within one-half mile of the Patuxent and Hawlings rivers.

STATE WATER CLASS USES FOR MONTGOMERY COUNTY STREAMS



* All watersheds within Montgomery County are designated as water supply ("P") except, Paint Branch, Northwest Branch, and Rock Creek above MD Rte. 28.

Source: Montgomery County Planning Department Environmental Planning Division (Nov. 1991)

*** Water quality continues to need improvement.** Although point sources of pollution such as direct stream discharge of raw sewage have been curtailed significantly, non-point source pollution, such as untreated stormwater runoff from parking lots, is more difficult to control and continues to be a significant problem. The County discontinued its water quality monitoring program in 1980. The lack of County-wide information precludes a full historical assessment of water quality and limits the ability to quantify future impacts through computer modeling and statistical analysis. However, information from special studies is available for limited areas of the County including Watts Branch, Seneca Creek and Paint Branch. Although water quality has improved in the Potomac River; it has declined in other waterways.

*** Maryland, Virginia, Pennsylvania, Washington, D.C., the U.S. Environmental Protection Agency, and the Chesapeake Bay Commission signed the 1987 Chesapeake Bay Agreement to provide comprehensive guidance for minimizing the negative impacts of land activities in the Chesapeake Bay drainage area.** The agreement provides specific goals for improving the Bay such as a 40 percent reduction in nutrient pollution by the year 2000.

5. WETLANDS

The important role of wetlands as natural filters in maintaining water quality is acknowledged at the federal, state, and local levels. It is recognized that loss of wetlands means decreased water quality protection, flood control, and wildlife habitat. Wetlands also are vulnerable to off-site, indirect impacts such as hydrologic alterations and pollution.

*** Regulations regarding the definition of, and allowable impacts to wetlands continue to evolve.** Wetlands are defined by the Planning Board's guidelines for Environmental Management of Development in Montgomery County, Maryland as "an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation." The federal definition of wetlands is currently under review.

Information on the location of major wetland areas in the County is available through Maryland Department of Natural Resources maps. The Montgomery County Planning Department requires more accurate delineations of wetlands by a developer's engineer during the development review process. This detailed delineation is also required by federal and state agencies as part of their permit review processes.

*** Several levels of government regulate the impacts of development and construction activities on wetlands.** The intent of the various County, state, and federal regulations and guidelines is to first, avoid impacts; second, minimize and mitigate impacts; and third, replace wetlands lost through development. The creation of functional and sustainable replacement wetlands is both land intensive and expensive. The impacts of wetland avoidance and mitigation play a critical role in the development of public facilities and private projects.

*** The Maryland Department of Natural Resources has identified twelve areas in Montgomery County as non-tidal wetlands of special state concern.** These include the Germantown Bog, Canal Bottomland, and McKee-Beshers West Swamp and are identified on the map. Excavation, filling, or other modification within a buffer of 100 feet of these wetland areas needs state permits. In contrast, disturbance of other non-tidal wetlands requires permits within only a 25-foot buffer. Both cases require water quality certification by the Maryland Department of the Environment as required by the Clean Water Act.

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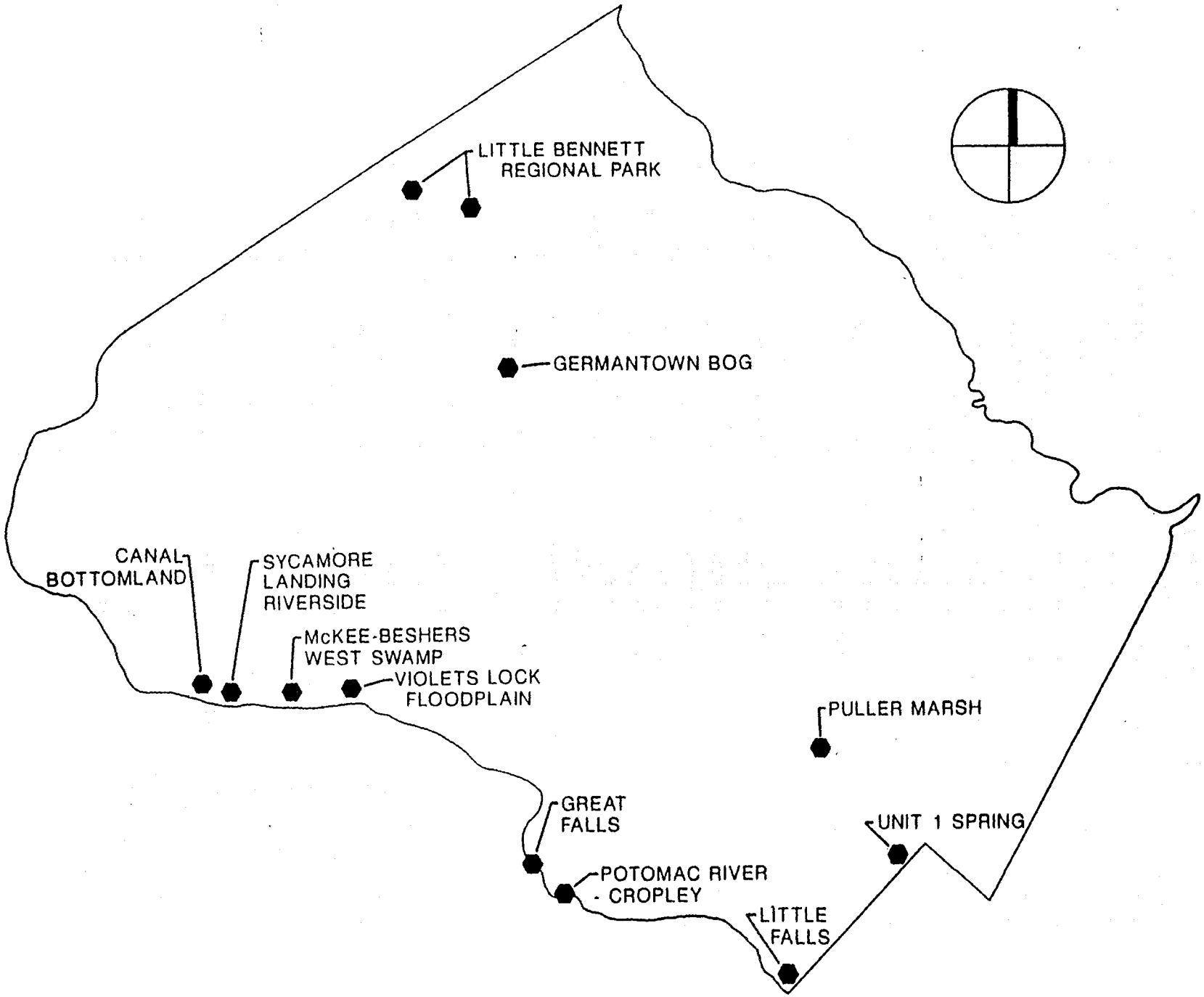

SOURCE: MD. DEPARTMENT OF NATURAL RESOURCES.

6. FLOOD PROTECTION

Protecting lives and private and public property is the basis for regulations that limit or prohibit development activities in floodplains. The 100-year ultimate floodplain is based on the area that would be flooded by a storm that has the statistical probability of occurring once every 100 years. Since it is only a statistical probability, it is possible that a 100-year storm could occur more than once in a 100-year period and even more than once in the same year. Periodically, a storm such as hurricane Agnes in 1972 reminds us of how much development has occurred in areas subject to flooding. During Agnes, parts of the metropolitan area experienced a 100-year or greater flood. Local conditions in a 100-year flood can be worse than expected if a floodway becomes blocked by debris. It should be noted that the floodplain calculation is based on run-off from estimates of fully developed land use recommended in the land use plan rather than existing conditions. The magnitude of a 100-year flood is such that it requires avoiding development in vulnerable areas and the provision of large-scale retention facilities such as Lake Frank and Lake Needwood. By comparison, stormwater management facilities typically are designed to handle a 2-year storm.

*** Various sections of the Montgomery County Code restrict the construction of homes, other structures, and the disturbance (grading, clearing) of 100-year ultimate floodplains.** Prior to 1974, the 50-year floodplain was the standard. Construction activities in 100-year floodplains also require a state waterway construction permit when disturbance of a floodplain is unavoidable. This is designed to limit the obstruction of floodways which could result in increased flooding. A County program to reduce the potential damage to private homes has purchased approximately two dozen homes located in floodplains.

*** Construction of residences and many other structures is not permitted within an area that may be flooded in the case of a dam break.** The area that is regulated is referred to as a "danger reach."

7. STORMWATER MANAGEMENT AND SEDIMENT CONTROL

Stormwater management (SWM) refers to a variety of active and passive techniques provided at the time of development or later in previously or developed areas to reduce the amount of water, sediment, and pollutants entering the stream system. These measures are designed to reduce the peak flow of streams to limit erosion and flooding and to complement normal flood protection.

*** Discharges into waters and wetlands require permits from the U.S. Army Corps of Engineers, the Maryland Department of the Environment (MDE), and the Maryland Department of Natural Resources (DNR).** Permits are issued based on compliance with the Federal Water Pollution Control Act (Clean Water Act) and state statutes.

*** The Montgomery County Department of Environmental Protection regulates stormwater management, erosion, and sediment control.** With the exception of low density agricultural and residential zones (RDT, Rural, RE-2, and, in some cases, RC), development is required to treat and store stormwater run-off. This provides flood protection, minimizes streambank erosion, removes pollutants, minimizes sedimentation of waterways, and, in some cases, recharges the groundwater supply.

*** State and County regulations identify infiltration as the preferred stormwater management (SWM) technique, where it is feasible.** Infiltration allows stormwater run-off to be detained in an area so that it can percolate into the soil to recharge while filtering pollutants entering the groundwater supply. Infiltration helps to minimize peak stream flows and related erosion while maintaining an adequate base flow by recharging the groundwater supply. SWM techniques, in order of preference, are: infiltration,

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flow attenuation by use of open vegetated areas and swales, retention (wet ponds) and detention (dry ponds) or combinations of these. Poor drainage characteristics in some parts of the County limit the use of standard infiltration techniques. An applicant must prove that the preferred techniques are not feasible in order to receive approval for the less preferred methods.

8. FLORA AND FAUNA

Habitat for native flora and fauna is lost when vacant land and forest cover are converted to other land uses. The deterioration of available habitat and the decline in diversity of native plant and animal communities also are caused by forest fragmentation, the invasion of non-native, more aggressive species, and the application of herbicides and pesticides.

*** Montgomery County is home to a number of plant and animal species listed as endangered by the Federal Government, as well as several species being considered for listing.** The Maryland Natural Heritage Program listed 267 plants and 76 animals in the state as rare, endangered, or threatened in 1987. Of the 267 plant species listed, over 100 species are believed to be found in Montgomery County. The County is thought to have the highest concentration of endangered and rare plant species on the northeast coast, due largely to the diverse habitat in the Potomac River floodplain and the Great Falls Natural Heritage Area. Natural Heritage Areas, designated by the State of Maryland, are composed of plant or animal communities that are considered to be among the best statewide examples of their type, with at least one species that is endangered, threatened, or in need of conservation.

In addition to those two places, Montgomery County has a large variety of habitats that house rare and endangered species: rock outcroppings, steep rocky slopes, bogs and other wet areas, fertile stream valleys, meadows, and fields. Chain Bridge flats, on the Potomac River, is the only known site of the Mossy-Cup Oak in the County. A very rare Maryland species, the Crested Dwarf Iris, grows in Gaithersburg.

Four species of birds that have been found in the County are among the species in the greatest danger of disappearing from the state's or nation's wild breeding stock. They are the Bald Eagle, Short-eared Owl, Loggerhead Shrike, and Bachman's Sparrow.

9. TREES

Trees produce the oxygen we breathe, absorb stormwater, moderate our climate, and provide a home for plants and animals. They also are viewed as an amenity that helps create a sense of community. However, they often are cleared so that a property might be used more profitably. In growing recognition of their aesthetic and environmental worth, the County has begun to take steps to preserve and replenish its woodlands.

*** Montgomery County has the least amount of forest cover among counties comprising the Washington, D.C., MSA.** The County has undergone two periods of deforestation. Agricultural clearing in the early 20th century reduced tree cover to 22 percent of the total land area. After a period of tree regeneration lasting until the mid-1960s, during which the tree cover increased to 32 percent, the County was further urbanized, which reduced the amount of forested land to between 16 and 22 percent, depending on whether estimates of urban tree cover are included. Between 1965 and 1985, the County lost commercially valuable timber at a rate that was the highest among the Washington region's major jurisdictions. Declining tree cover and the fragmentation of the remaining forest areas into smaller tracts has been blamed for the decline of certain animal species which depend on the existence of "deep woods."

*** There has been a concerted effort to plant trees.** About 250,000 trees have been planted along the County's streets with public funding, while an additional 200,000 to 300,000 have been planted by private individuals or groups, within

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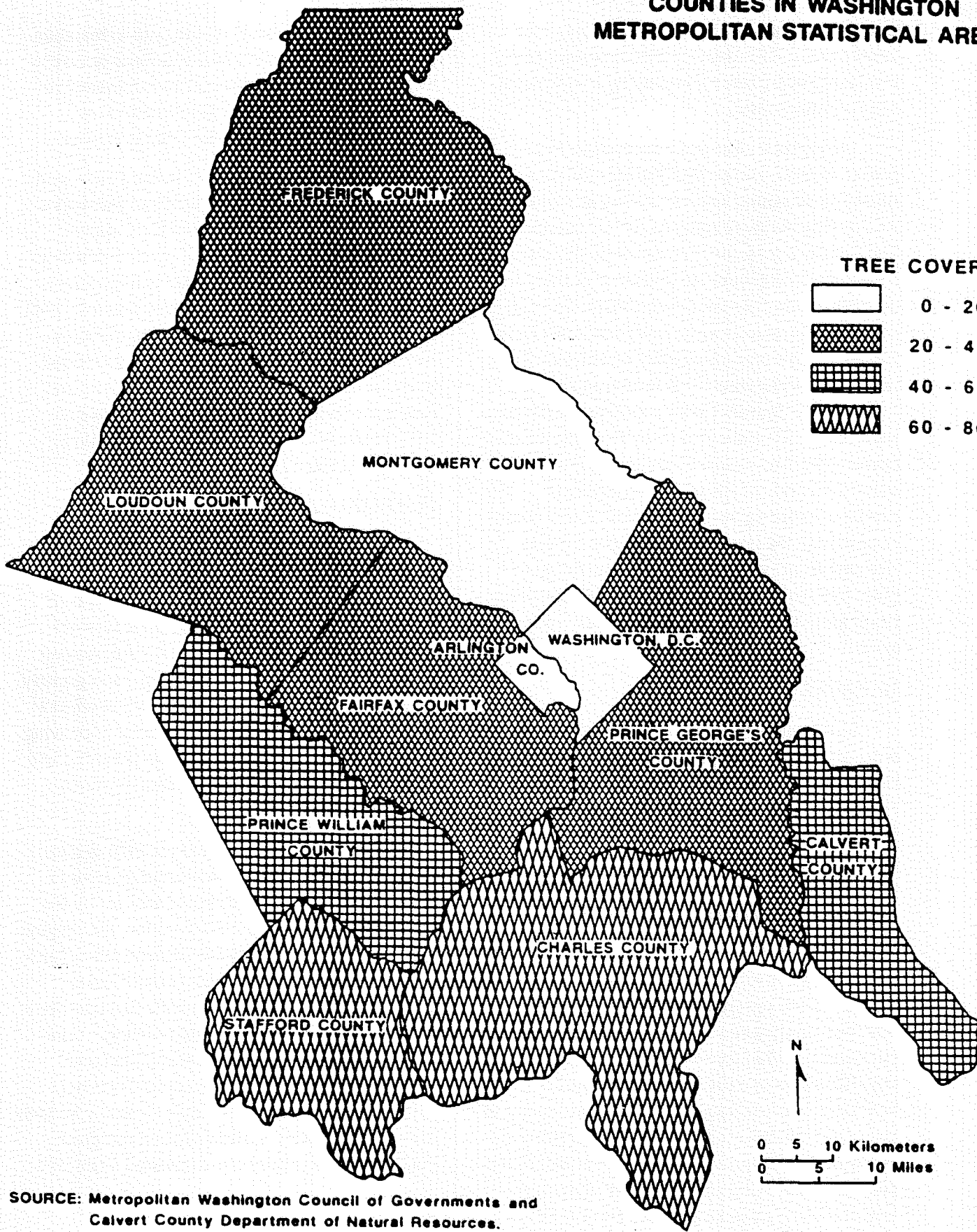
AVERAGE FOREST COVER FOR WASHINGTON, D.C. AND COUNTIES IN WASHINGTON METROPOLITAN STATISTICAL AREA*



SOURCE: Metropolitan Washington Council of Governments and Calvert County Department of Natural Resources.

*Does not include scattered tree cover in urban areas.

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10. PARKS

Montgomery County's extensive park system combines conservation areas with areas primarily intended for recreation. The parks' ability to restore and conserve nature depends on how the parks are used, and on the air and water that flow to them from beyond their boundaries. The County will continue to be challenged to balance the need for conservation and recreation areas in the County's parks.

*** About 70 square miles of the County's total area of 495 square miles are devoted to parkland and open space.** Sixty percent of this parkland is owned by the County, and is spread over 320 parks, ranging in size from the 3,500-acre Little Bennett Regional Park in Clarksburg to the 1/10-acre Philadelphia Park in downtown Silver Spring. A primary purpose of over half of the parkland in the County is to protect stream valleys and watersheds from urban run-off, flooding, sedimentation, and erosion, and to maintain a habitat for wildlife in areas of limited or no disturbance. In addition to these environmental resource functions, the park system provides recreational opportunities for County residents.

*** Park acquisition began in the 1930's, and peaked in the 1960's.** Early parkland purchases, made possible by the passage of the Capper-Crampton Act of 1930, focused on stream valley acquisition in the urban ring along Sligo Creek, Rock Creek, and Cabin John Creek. Between 1940 and 1960, Montgomery County's population increased 300 percent, and the County responded by quadrupling the amount of its parkland and open space holdings, which reached a total of 16,000 acres by 1970. About 11,300 acres have been added since 1970.

11. AIR QUALITY

As scientific understanding of the threat posed to the environment and public health by airborne pollutants has increased, so have calls for cleaner air. The most significant federal response to date is the 1990 Clean Air Act Amendments. As a result of this legislation, Montgomery County will participate in a region-wide effort to plan for and attain ambitious goals for improving air quality. Regional transportation planning will be one of the functions of government most affected by the legislation.

*** For almost every year since 1970, regional levels of ozone and carbon monoxide have exceeded federal air quality standards set by the 1970 Clean Air Act.** The Washington, D.C. region is one of 16 areas nationwide categorized as "serious non-attainment" areas for ozone. Ozone forms part of a family of chemicals that contribute to what is generally referred to as smog. Ozone levels exceed the 0.12 parts per million (ppm) standard by 15 to 33 percent, typically on hot, muggy summer days. The region is also a "moderate non-attainment" area for carbon monoxide (CO), although levels have decreased since 1973.

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*** About 70 square miles of the County's total area of 495 square miles are devoted to parkland and open space.** Sixty percent of this parkland is owned by the County, and is spread over 320 parks, ranging in size from the 3,500-acre Little Bennett Regional Park in Clarksburg to the 1/10-acre Philadelphia Park in downtown Silver Spring. A primary purpose of over half of the parkland in the County is to protect stream valleys and watersheds from urban run-off, flooding, sedimentation, and erosion, and to maintain a habitat for wildlife in areas of limited or no disturbance. In addition to these environmental resource functions, the park system provides recreational opportunities for County residents.

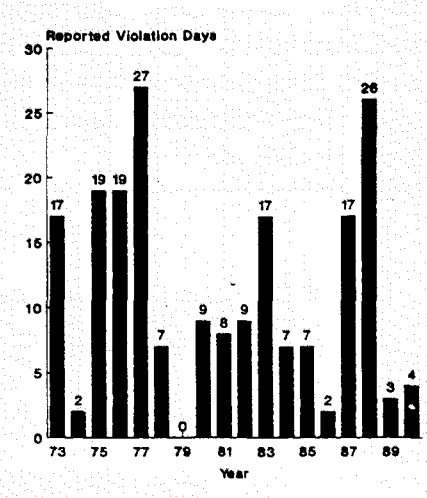
*** Park acquisition began in the 1930's, and peaked in the 1960's.** Early parkland purchases, made possible by the passage of the Capper-Crampton Act of 1930, focused on stream valley acquisition in the urban ring along Sligo Creek, Rock Creek, and Cabin John Creek. Between 1940 and 1960, Montgomery County's population increased 300 percent, and the County responded by quadrupling the amount of its parkland and open space holdings, which reached a total of 16,000 acres by 1970. About 11,300 acres have been added since 1970.

11. AIR QUALITY

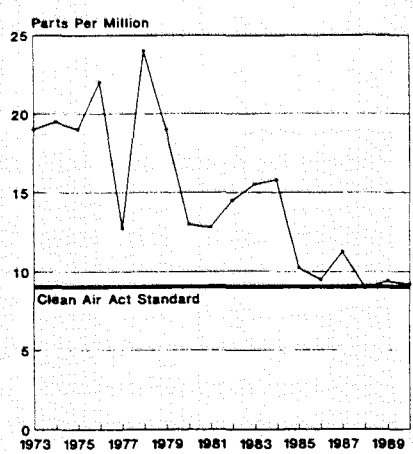
As scientific understanding of the threat posed to the environment and public health by airborne pollutants has increased, so have calls for cleaner air. The most significant federal response to date is the 1990 Clean Air Act Amendments. As a result of this legislation, Montgomery County will participate in a region-wide effort to plan for and attain ambitious goals for improving air quality. Regional transportation planning will be one of the functions of government most affected by the legislation.

*** For almost every year since 1970, regional levels of ozone and carbon monoxide have exceeded federal air quality standards set by the 1970 Clean Air Act.** The Washington, D.C. region is one of 16 areas nationwide categorized as "serious non-attainment" areas for ozone. Ozone forms part of a family of chemicals that contribute to what is generally referred to as smog. Ozone levels exceed the 0.12 parts per million (ppm) standard by 15 to 33 percent, typically on hot, muggy summer days. The region is also a "moderate non-attainment" area for carbon monoxide (CO), although levels have decreased since 1973.

Number of Days in Washington, D.C. MSA Reported Exceeding the Federal Ozone Standard

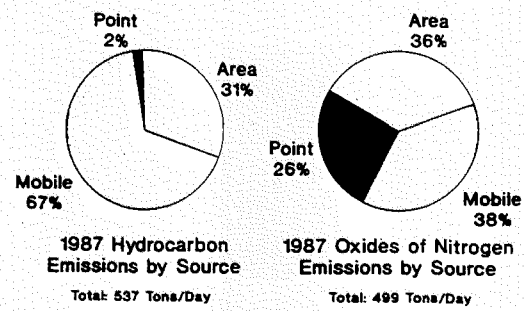


Carbon Monoxide Levels For the Washington Metropolitan Area Have Decreased



*** Mobile sources are major contributors to ozone and carbon monoxide pollution in the Washington Metropolitan Area.** Motor vehicles account for an estimated 68 percent of the hydrocarbon and 38 percent of the oxides of nitrogen pollution. Hydrocarbons and oxides of nitrogen are two key indicators of ozone formation. Motor vehicles also are responsible for 85 percent of the area's carbon monoxide emissions. Large factories (point sources) and sources too small to measure, such as dry cleaners, bakeries, wood stoves, and paints and solvents (area sources) account for the balance of the region's ozone and carbon monoxide production. The County contributes roughly 18 percent of the area's total of these pollutants.

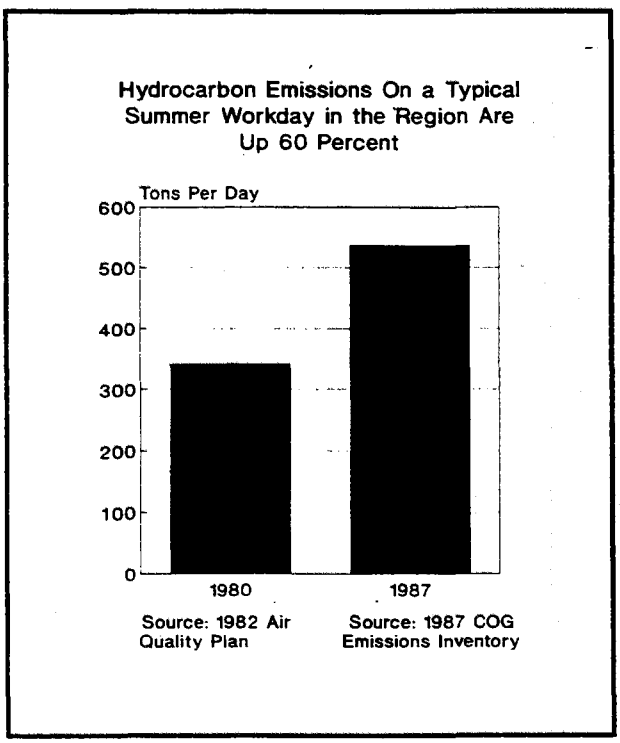
Mobile Sources Contribute Significantly to Key Indicators of Ozone Pollution in the Washington Area



*** The effects of air pollution extend to our waterways.** Airborne oxides of nitrogen account for approximately 30 percent of the nitrogen deposition in the Chesapeake Bay, which stimulates growth of algae and removes oxygen from the water.

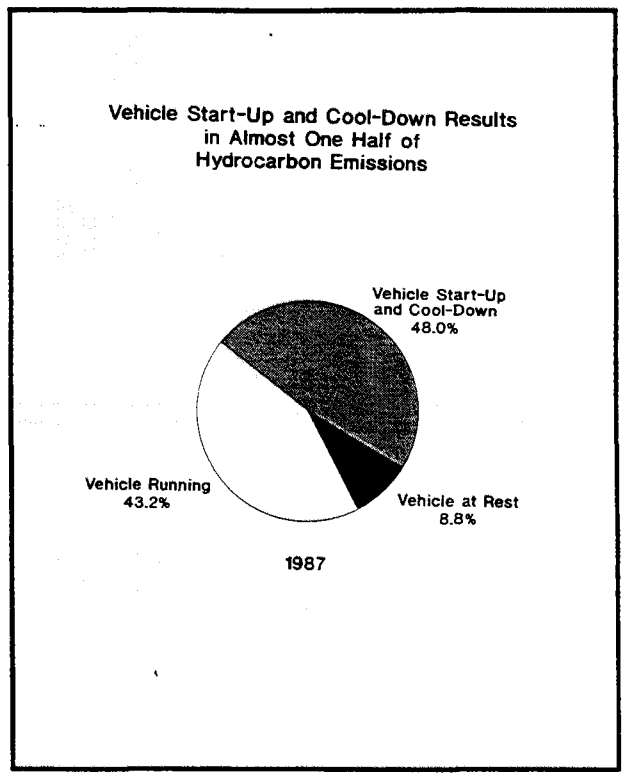
*** Hydrocarbon emissions are estimated to have increased, due largely to mobile sources.** The Metropolitan Washington Council of Governments estimates that hydrocarbon emissions had increased by almost 60 percent to about 540 tons

per day by 1987 over the 1980 level of approximately 340 tons. This is largely attributable to factors such as region-wide increases in auto ownership, auto use, and traffic congestion. In urban areas, roughly 50 percent of the pollution emitted by automobiles occurs at the time of engine start-up (cold start) or shut-down (hot soak), or while the automobile sits unused (diurnal). Non-work trips and trips made during off-peak hours now contribute more air pollution in the region than do peak period work trips.



*** The Washington Metropolitan Area meets standards for four other atmospheric pollutants regulated by the Clean Air Act.** These are lead, particulate matter, sulfur dioxide, (which is a component of acid rain) and oxides of nitrogen. Levels of both lead and carbon monoxide have decreased since passage of the 1970 Clean Air Act. The banning of lead from gasoline, a reduction in emissions from large industrial and utility plants, and the relative absence of heavy industry in the region account, in large measure, for these decreases.

*** The Clean Air Act Amendments of 1990 require that areas of "serious non-attainment" such as the Washington, D.C. region achieve ozone standards by 1999 and carbon monoxide standards by 1996.** By 1996, ozone pollution must be reduced by 15 percent, and then three percent each year thereafter until attainment is reached. Maryland is required to report on emissions every three years and issue an implementation plan which will describe, in detail, how the goals will be achieved.



Should the region fail to achieve its goals, the federal government will impose more stringent standards on the Washington, D.C. region. This may lead to specific measures to influence land use planning, travel behavior, and energy use region-wide. An area failing to comply with the regulations ultimately may lose its share of federal funds for highway and other projects unless those projects can be shown to help meet air quality standards.

*** Regional strategies to reduce ozone and carbon monoxide are expected to concentrate on mobile sources of pollution. An array of strategies is expected, from the use of new technologies to changes in transport and land use**

policies. Possible measures to meet the goal for mobile sources of carbon monoxide and ozone may include: the introduction of California standards for new vehicle emissions, more stringent vehicle inspection programs, gasoline pump vapor recovery nozzles, and reformulated gasoline. Policies to increase transit service, carpooling, nonmotorized means of travel, and to decrease auto travel may be included in the strategy. New roadway and transit projects will be evaluated as part of a system that must demonstrate reduced vehicle emissions. These requirements will foster an increased regional emphasis on land use and transportation planning, and their relationship to air quality.

* **Emissions from point sources of pollution must be reduced as well.** Measures to reduce emissions from point sources of ozone and carbon monoxide include changes to the chemical composition of polluting solvents and paints, and the introduction of pollution control devices on small stationary sources such as bakeries.

12. DRINKING WATER

The Washington Suburban Sanitary Commission (WSSC) provides much of the County's drinking water. The city of Rockville and the town of Poolesville have separate water supply systems. Residents in low-density residential areas and the agricultural reserve are served by private wells.

Regional cooperation is essential to ensure that the water supply obtained from the Potomac and Patuxent Rivers is safe and adequate. Since all drinking water must be reliably treated and distributed, the WSSC must construct facilities in conjunction with development and maintain the entire treatment and distribution system.

Current sources of raw drinking water and the capacity to store, treat, and distribute it are limited. Therefore, at some point in time, new sources or changes in current usage patterns will be necessary to serve long-term regional population growth. The maintenance and improvement of surface water quality serves to increase the potential supply while reducing treatment costs.

* **The State requires all counties to adopt Comprehensive Ten-Year Water and Sewerage Plans.** Montgomery County's Comprehensive 10-Year Water and Sewerage Systems Plan is a functional plan that guides the extension of public water and sewer service to implement approved and adopted master plans. The plan designates six categories (1-6) for water (W) and sewer (S) service. A designation of W-1/S-1 indicates that a property is connected to or abuts community or WSSC water and sewer systems. A designation of W-6/S-6 indicates that water and sewer service is not planned. The County Council adopts and amends the Plan and delegates power to the Montgomery County Department of Environmental Protection (MCDEP) to administer the Plan and to approve category change requests under certain conditions, with consent of other reviewing agencies.

* **The WSSC provides nearly 170 million gallons of potable water per day (MGD) to Montgomery and Prince George's counties.** The WSSC has two water filtration plants: one on the Potomac River and one on the Patuxent River. The water quality at both plants consistently exceeds all EPA requirements. The operation of the WSSC water facilities is coordinated under regional agreements within the Washington Metropolitan Area.

* **The WSSC estimates that additional water supply may be needed by 2015.** As the demand for water approaches the level at which the Potomac and Patuxent Rivers can supply raw water, new technologies will be required to develop regional solutions for alternative sources for this limited resource. Conservation of water is and should remain a major component of managing the region's water supply. Currently, conservation measures are as unobtrusive as changes in the plumbing code to require low flow fixtures and as active as individuals modifying their water usage patterns.

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*** The WSSC estimates that additional water treatment capacity will be needed by 2005.** Also, on-going maintenance, repair and construction will continue in various areas of the County.

*** The Safe Drinking Water Act (SDWA) regulates the amount of microbiological matter and 18 metals, including lead, that may be present in drinking water.** Water utilities, such as WSSC, are now required to ensure that lead levels at the tap are below certain levels. Previously, utilities only were regulated on the utility-owned portion of the water system, not for the individual, privately-owned pipes that connect a residence to the water main. Overall, the lead content in the WSSC system complies with the new standards. There are some portions of the system where lead components on private property will need to be replaced. Regulations regarding a utility's responsibility to replace private components have not been finalized.

13. SEWERAGE SYSTEM

Handling and treating human wastes is an essential component of public health protection. The WSSC sewerage system has been designed and constructed to minimize health risks due to faulty septic systems and outdated methods of dumping untreated sewage directly into a stream system.

Sewage treatment produces sludge, which historically was disposed by landfilling methods. The WSSC also provides for the beneficial use of treated sludge through composting and agricultural land application.

Like the water system, the sewerage system must be planned and constructed in conjunction with development. Much of the County's sewage is treated at the Blue Plains Wastewater Treatment Plant or WSSC-operated plants. The town of Poolesville is served by its own plant, while low-density residential and agricultural areas are served by private septic systems. The safe operation of all types of sewage disposal techniques is essential in protecting the public health and in maintaining the quality of the County's waterways.

*** The WSSC operates two wastewater treatment plants (WWTP's) in the County, with an additional facility planned.** The Seneca and Damascus WWTP's can process approximately six million gallons per day (MGD). Both plants provide secondary and advanced treatment. Secondary treatment removes solid particles by sedimentation (sludge) and skimming (scum) and organic components through microbiological activity. Advanced treatment removes nutrients such as nitrogen and phosphorous and additional suspended solids, beyond secondary treatment.

A proposed advanced WWTP on Rock Run near Avenel in Potomac will have a capacity of 20 MGD. In addition, approximately 169 MGD of the 370-MGD ultimate capacity of the Blue Plains WWTP is allocated to the WSSC. It is anticipated that by 2010 or 2015, the Blue Plains service area will need an additional 20 MGD of capacity, even with the construction of the Rock Run WWTP. Based on the 1983 bi-county Sewage Treatment Agreement, the Rock Run WWTP is the next scheduled increment in capacity for the Blue Plains service area.

*** The WSSC, along with agencies of Montgomery and Prince George's counties, has begun to prepare the WSSC's Strategic Sewerage Plan.** The objectives of this study are to determine the long-term (40 year) wastewater treatment and transmission needs within the Washington Suburban Sanitary District, to develop alternatives to meet these needs and to identify staging strategies.

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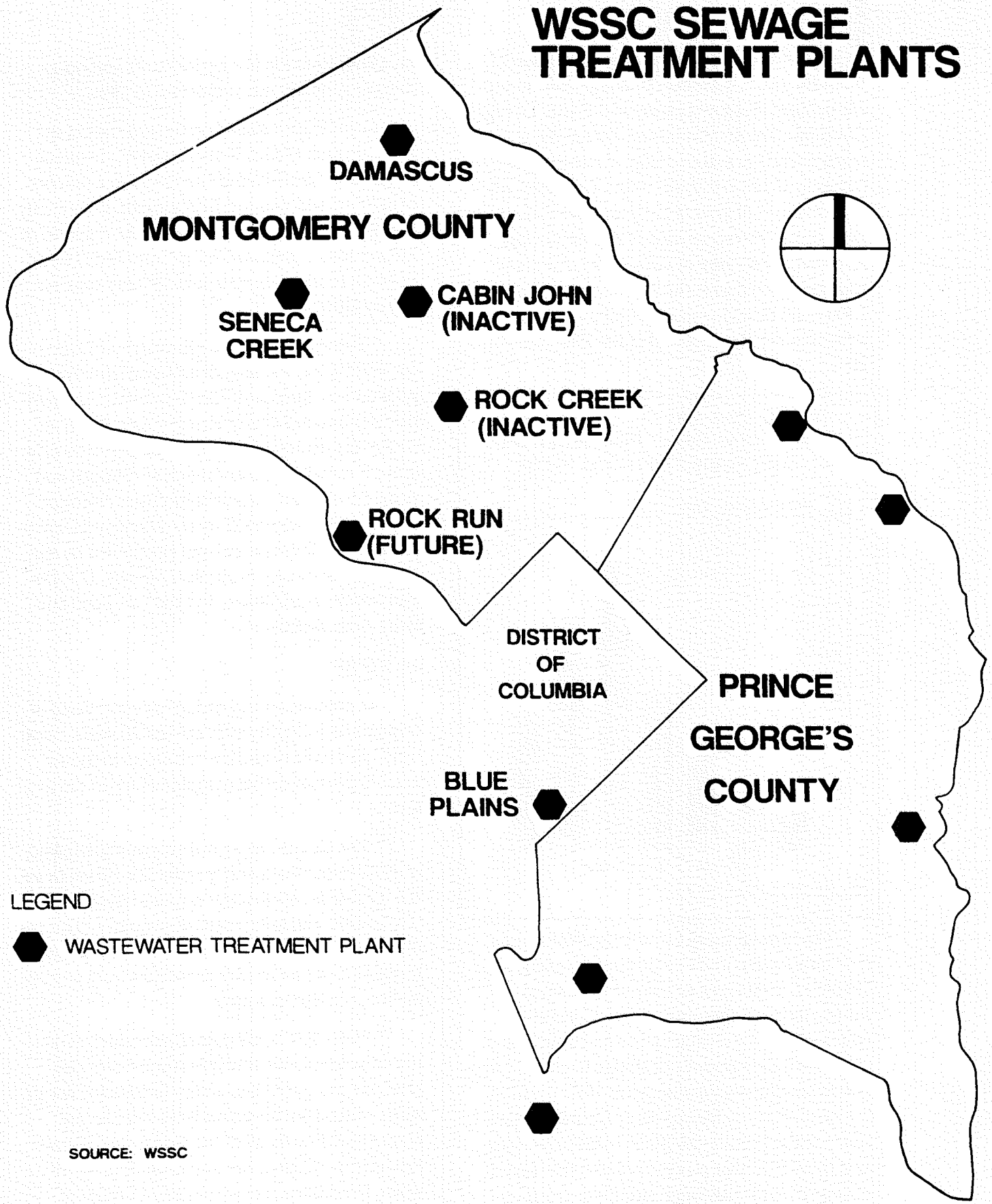
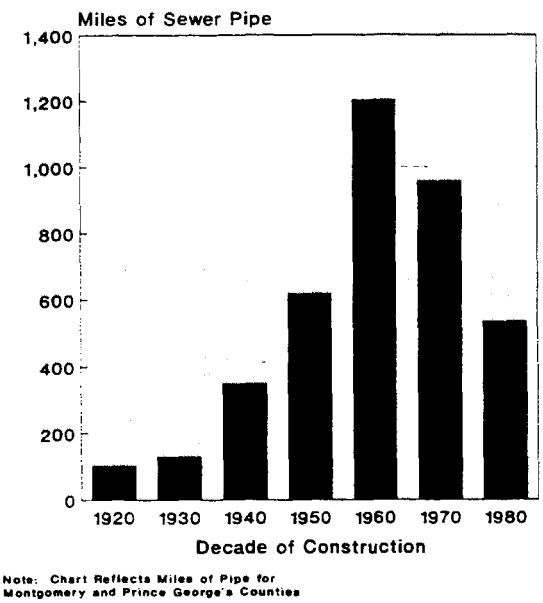
WSSC SEWAGE TREATMENT PLANTS



SOURCE: WSSC

*** The WSSC operates over 4,000 miles of mainline sewer pipe and 50 wastewater pumping stations in Montgomery and Prince George's Counties.** The gravity sewers within the wastewater collection system range in size from six inches to 102 inches in diameter. The WSSC allocates millions of dollars per year toward the maintenance and reconstruction of the wastewater transmission system, of which a large portion was constructed over the last 40 years. About 1,500 miles of mainline sewer pipe have been constructed since the approval of the 1969 General Plan.

WSSC Operates Over 4,000 Miles of Mainline Sewer Pipe; Most Was Built in the 1960s and 1970s



Note: Chart Reflects Miles of Pipe for Montgomery and Prince George's Counties

*** In Montgomery County the WSSC uses land application and composting to treat sludge.** The WSSC converts a portion of the treated sludge, through composting, into ComPRO, which is sold commercially as a soil conditioner. Over one billion pounds of sludge have been composted since operations began in 1978. ComPRO is produced at the Montgomery County Regional Composting Facility (MCRCF) in Fairland, operated by WSSC. This process reduces the need to dispose of sludge through landfilling, incineration, land injection (for agriculture), and ocean dumping, which was prohibited in 1988.

ComPRO is utilized on the grounds of the White House, Mount Vernon, and the National Arboretum. The MCRCF has received a number of national and regional EPA awards. Overall, the WSSC is currently responsible for the disposal of 130 dry tons per day of sludge from Blue Plains and will produce an estimated 200 dry tons per day by 2030.

*** The sludge from the Seneca and Damascus WWTP's is dewatered and available for application on farmland.** On the average, the two plants produce 2.44 dry tons per day. Applying sludge to farmland improves crop production because it contains nutrients such as nitrogen and phosphorous and improves moisture retention. Application is regulated by the Maryland Department of the Environment and sanctioned by the U.S. Environmental Protection Agency, U.S. Department of Agriculture, and the U.S. Food and Drug Administration.

14. NOISE

As population and traffic have increased in Montgomery County over the last 20 years, noise levels also have risen. Several efforts to reduce noise impacts have been implemented at the local level.

*** The County noise ordinance, established in 1975, states that every person is entitled to ambient noise levels that are not detrimental to life, health, and enjoyment of property.** This ordinance established maximum permissible sound levels allowed on nearby properties from any operation, activity, or source.

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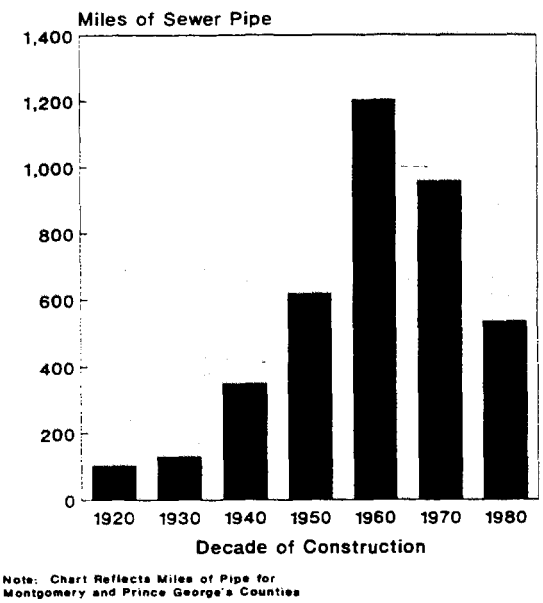

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Federal regulations prohibit local jurisdictions from controlling motor vehicle noise at the source. Land use planning, which designates land uses that are less affected by noise is used to reduce the cumulative impacts of vehicle noise on people. Since 1980 transportation noise has been considered in making land use decisions in master plans and during the review of development plans.

*** Noise impacts from other transportation noise sources such as the Montgomery County Airpark, rotorcraft operations and Metrorail have been partially reduced in some areas by the implementation of noise mitigation measures and noise compatible land uses in affected areas.**

*** Development review guidelines have been developed for maximum noise levels around the County.** The levels range from 65 decibels Ldn (the level of normal speech) in urbanized areas to 45 decibels Ldn in less developed areas. Ldn is the Day-Night sound level that represents the average sound level for a 24-hour period with a 10 dBA weighting for nighttime noise to account for increased sensitivity at night. The guidelines are used to determine which newly developing areas might need noise mitigation. One proven mitigation technique is to locate one row of buildings so that it acts as a noise barrier for the rest of the subdivision. In addition, the Department of Environmental Protection enforces a noise ordinance to regulate noise generated on private property.

15. SOLID WASTE

Montgomery County handles and regulates the collection and disposal of solid waste. As do many other jurisdictions, this County generates more trash than can be handled in its landfills. The alternatives to landfills are also problematic. Simply throwing away less ("source reduction") conflicts with a lifestyle predicated upon convenience. Current economic realities and policies favor the use of products made from raw material over recycled material. Incineration has met with stiff local opposition based on a variety of concerns such as environmental and community impacts, and cost. Recycling is increasingly being relied upon to reduce the quantity of solid waste that needs to be disposed.

*** Over a ton of solid waste was generated for every man, woman, and child in Montgomery County in fiscal year 1991.** The estimated 757,000 tons generated represents an average annual increase of 7.2 percent since 1985, when 528,000 tons were generated. This 1991 figure represents a decrease of 18,000 tons from the previous year and is attributed to decreased economic activity. The most recent waste stream projections for the year 2005 indicate that between 850,00 and 950,000 tons of trash will have to be managed each year. These forecasts are based on expected increases in population and commercial activity, as well as increases in the amount of waste each County resident and worker generates.

*** The County is making progress towards achieving its 1995 goal to recycle 35 percent of its waste.** In its second year of operation, between 14 and 17 percent of the waste stream was recycled through a County-wide program of curbside pick-up in low-to-moderate density residential areas, provision of drop-off centers, and recycling of waste by private firms. The County has set a recycling goal of 40 percent by the turn of the century. To help meet that goal, the County will require that all yard waste be recycled, and will expand the mandatory program to include apartment buildings and commercial areas.

*** The County has invested in state-of-the-art facilities to convert waste into useful products.** The Materials Recovery Facility (MRF), located at Shady Grove, separates, cleans, and packages 200 tons of commingled glass, aluminum, plastic, and bimetal containers and 280 tons of newspapers each day. At the Dickerson Com-

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posting facility over 21,000 tons of woodwaste, grass and leaves are received and recycled in 1991. One issue for future consideration is the degree to which the County will support recycling by making industrial land available for the construction of reprocessing facilities.

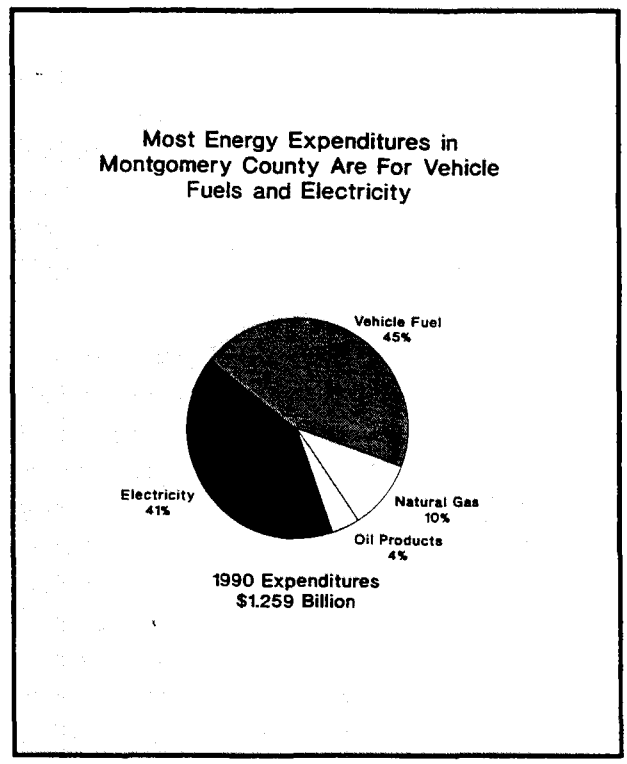
*** The County's solid waste management plan calls for the construction of a Resource Recovery Facility (RRF), increased recycling, and construction of at least one new landfill.** The RRF, a waste-to-electricity plant proposed for a site in Dickerson, is designed to burn up to 1,800 tons a day of waste, which, it is estimated, will account for 58 percent of the waste stream by 1995. The balance will be recycled or sent to one of the new landfills to be located either in Dickerson or Boyds. Critics of this proposal claim that the RRF will undermine recycling efforts and create environmental hazards, such as air pollution and toxic ash, in the County's wedge areas.

While the incinerator issue awaits resolution by an adjudicatory hearing, a 10-million-cubic-yard capacity expansion of the Oaks Landfill recently has begun and will extend the landfill's useful life another 7 to 10 years. One of the recurring controversies associated with solid waste disposal is the siting of new facilities due to concerns about environmental and community impacts.

16. ENERGY

County residents and businesses have come to expect inexpensive and reliable supplies of energy to sustain the standard of living and economic growth we benefit from. For the future, the County is looking to increased conservation and efficiency as one means of meeting energy demand that will rise with growth and development. There are several reasons for this strategy. First, there is no assurance that energy will remain cheap and abundant in the future. Second, most of the money spent on energy leaves the area, whereas conservation efforts might stimulate the local economy. Third, reducing energy demand through conservation will further efforts to improve regional air quality.

*** Energy expenditures in Montgomery County increased about 182 percent between 1976 and 1990.** Increases in the cost of energy, especially for electricity and vehicle fuels, account for much of this change. During this same period, energy consumption rose 45 percent. Based on 1990 data, roughly 45 percent of energy expenditures were spent on vehicle fuels, 41 percent on electricity, 10 percent on natural gas and 4 percent on oil products.



*** The County plans to increase efficiency through a variety of means.** The 1990 Montgomery County Energy Plan seeks to amend building codes, educational programs and renewable energy projects such as solar energy and co-generation that are supportive of energy conservation. It also seeks to encourage land use patterns that offer alternatives modes of transportation to the single-occupant auto and shorter trip lengths.

17. DEVELOPMENT GUIDELINES

The planning process involves the balancing of a number of competing goals and objectives. When these competing interests are examined in the evaluation of an individual development pro-

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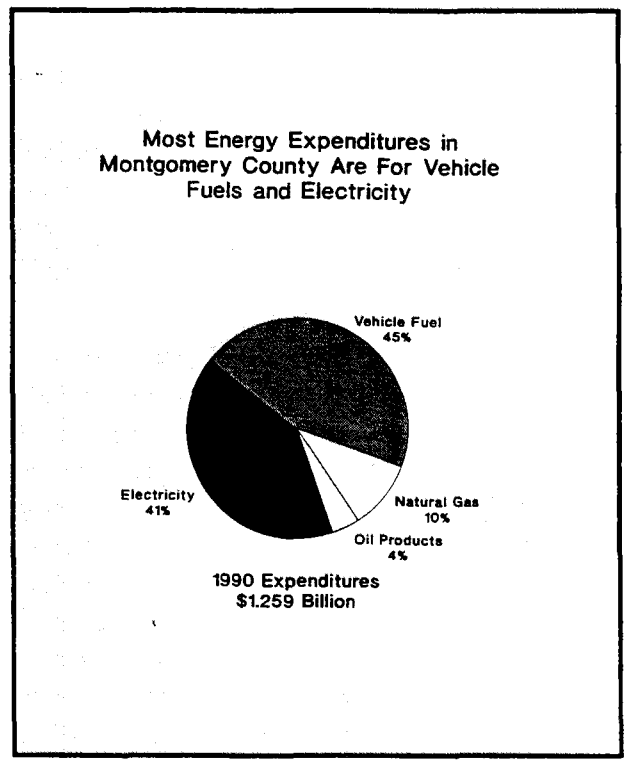

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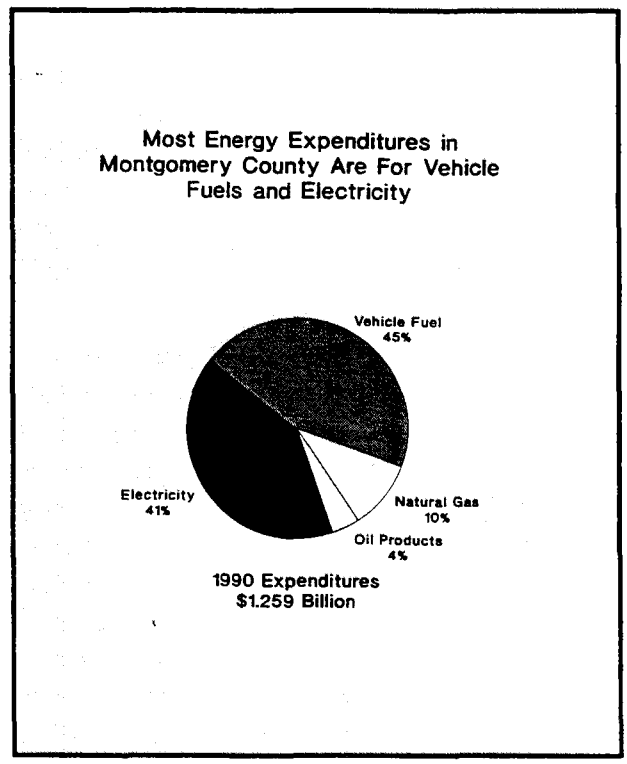

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The planning process involves the balancing of a number of competing goals and objectives. When these competing interests are examined in the evaluation of an individual development pro-

posal, the conflicts become readily apparent. Many of the more commonly applied guidelines that can be used in the Planning Department's review have been combined into a single volume for reference by staff, developers, and the Planning Board.

*** The Planning Board has consolidated guidelines to identify and protect natural resources during the development process.** The guidelines focus on the protection and preservation of: stream valleys, wetlands, floodplains, forests, threatened and endangered species, unsuitable land, and on the avoidance of areas that could be flooded in the event of a dam break. These guidelines, originally published in 1983, were updated in 1991.

*** The collective effect of the Planning Board's development guidelines is consistent with the intent of the state's "Chesapeake Bay Watershed Development Policies and Guidelines."** The State guidelines give general guidance while the County's development guidelines (Environmental Management of Development in Montgomery County, Maryland) quantify or provide more specific guidance relevant to the Planning Board's role in the development process.

*** The Planning Board may require developers to provide an Environmental Impact Analysis when proposing construction in areas identified as environmentally sensitive or requiring special protection.** This analysis is used to inventory and analyze natural features, assess the impacts of development, and identify appropriate mitigation measures. The Planning Board also may require binding development agreements to ensure adherence to the conditions of approval relating to environmental protection.

*** Conservation easements, dedication of parkland, and dedication of open space are used in part to ensure the protection of sensitive environmental features.** In addition, much of this land provides recreation and relief from urbanization.

COMMUNITY IDENTITY AND DESIGN FACT SHEET

INTRODUCTION

Community identity is the collection of attributes that make a community unique, make it "home," and separate it from other places. Physical, social, ethnic, political, geographic, economic, and other characteristics contribute to our perceptions about communities. The process of community design can help create neighborhood identity.

Although community identity and design was not a specific goal of the 1964 or 1969 Plans, these concepts were included throughout the text of both Plans. More specifically, the 1969 General Plan stated, "each community should have an identity, which can be created by imaginative design." Since 1969 the role of design review at the master plan, zoning, and subdivision levels has increased significantly.

This fact sheet will address the concepts of community identity and design in four sections: 1) who we are, 2) where we gather and interact, 3) how we govern ourselves, and 4) how we design communities.

The creation of communities occurs at several levels. At the County level, the General Plan envisioned Montgomery County as part of the Washington Metropolitan Area in which Washington served as the center of regional activity with wedges and corridors radiating outward. On a slightly smaller scale, the General Plan envisioned the wedges and corridors concept as a system to organize groups of communities. The communities in a wedge were intended to be different in scale and mix of uses from those in the corridor, and those in the corridor were intended to be different from those in the urban/suburban ring. Within these larger communities there are also smaller neighborhood communities. The functions and interrelationships of these communities will vary and often overlap. It is these functions and interrelationships which influence the way that a community is perceived, both by its residents and others.

Government activities can influence the function and interrelationships of communities, but in many ways, the government's ability to achieve community identity is limited. Government can affect some aspects of this goal but it can not be achieved solely by government action. The government can do such things as provide space for civic activities and some programming but can not demand attendance.

One aspect of community identity controlled by government is the place name used by the United States Postal Service. While addresses are seemingly insignificant, residents express confusion over why there are 16 zip codes that use Silver Spring as the place name, with areas ranging from the County's borders with Washington D.C. and Prince George's County to Howard County, Since a number of these zip codes also have individual post offices, the confusion is even greater and makes it harder to know where to find a business listed in the yellow pages or for individuals to explain where they live.

Community identity starts with an idea in the minds of citizens and is realized by attitudes and actions which bond people with their neighbors near and far. Ultimately, community identity only flourishes with each citizen's personal commitment.

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It is easy to have a feeling of belonging somewhere, a "sense of place," when the majority of one's daily activities happen in a single town or village. In Montgomery County, though, a family's and individual's activities usually happen in several different places. Just naming where you live can be a challenge for some County residents. The need to fortify this sense of place and community identity is the focus of the Community Identity and Design Section of the General Plan refinement. In addition there is a growing perception that good design is essential to creating strong communities.

Montgomery County has undergone a major transformation in the last two decades, changing from a bedroom community of Washington, D.C., to a major employment center. Our orientation has changed from downtown Washington to our own urban ring and corridor areas. We now look for our identity within Montgomery County. In addition, the composition of our families, households, workforce, and lifestyles have changed dramatically. Many feel that these changes and the pace of change have resulted in a loss of community identity, both here in Montgomery County and throughout the United States.

As part of the *Comprehensive Growth Policy Study*, the predecessor to this General Plan Refinement, the Montgomery County Planning Department hosted a public workshop. Workshop participants were asked to name other suburban places in the United States that seem to have a better quality of life than Montgomery County. The places named were all similar in that they all were perceived to have a strong sense of community or a "village" atmosphere. When the groups listed the attributes that they would most like to bring to Montgomery County, there also were a lot of similarities. Two attributes were mentioned most: sense of community with a "village" atmosphere, and an efficient transportation system that allows access by non-car methods.

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THE ROLE OF THE GENERAL PLAN

One of the challenges of the General Plan is to provide guidance for creating community identity. The General Plan, by being general, will not provide a specific prescription for each individual community. However, this fact sheet lists some of the attributes that are important in creating a community identity.

Local area master plans, long term operating and capital budgets, and individual subdivision and zoning actions provide more specific guidance, on adjusting these various elements to establish community identity and design. While government can influence location, layout, and some functional aspects, it is the community itself that determines its identity and how it functions. The General Plan's role is to provide guidance to foster an environment in which individuals can get a sense of pride in their community.

I. WHO WE ARE

The demographic characteristics of Montgomery County residents have changed dramatically during the last twenty years. In short, the changes in household composition, number of

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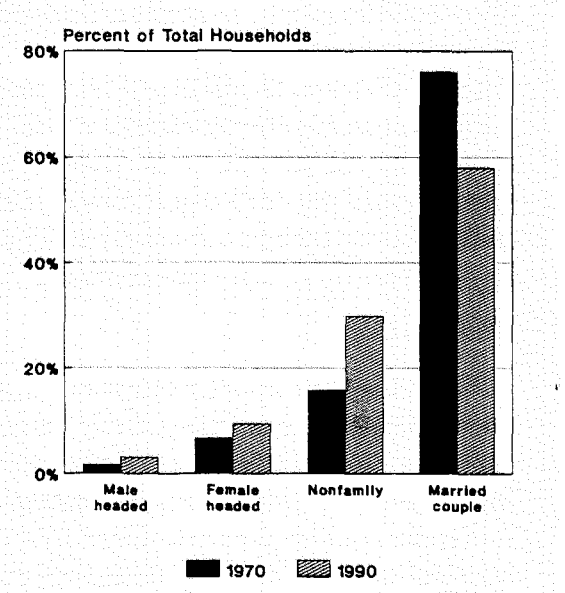
two-wage earner families, single parent families, and how often residents move, when combined with the distances between areas where we gather and interact, have made it more difficult to establish and maintain a sense of community. This section will discuss some of these changes and how they affect our collective and individual sense of community identity.

* **The percentage of family households in Montgomery County was relatively stable between 1980 and 1990.** In 1990, approximately 70 percent of all households were families. However, the percentage of family households did decrease from 85 percent to 73 percent between 1970 and 1980. The percentage of families headed by single parents grew from 3 percent in 1970 to 14 percent in 1990. This was accompanied by an increase in nonfamily households as well as the number of individuals who live alone. Some of the short-term characteristics of these changes are an increase in latch-key kids, day care, greater demand for housing for single adults, and neighborhoods that are relatively deserted during the weekdays.

In addition, the number of divorces in Montgomery County increased from 872 in 1970 to 2,238 in 1988. The impact of the declining dominance of the two-parent family, in concert with the number of two-wage earner households, leaves people with less time to achieve a sense of community.

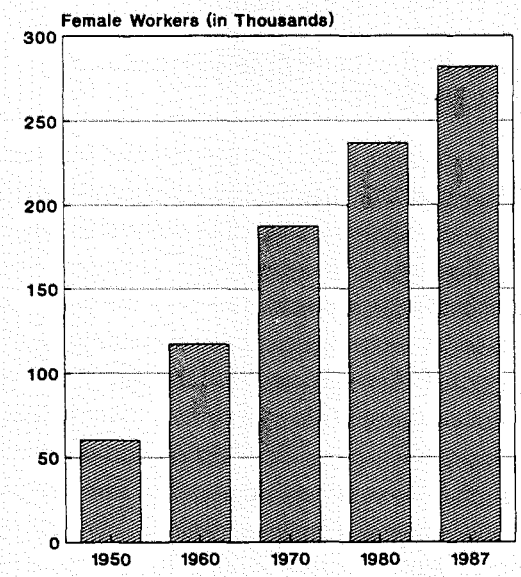
* **The percentage of women in the workforce has doubled, from 32 percent in 1950 to 66 percent in 1990.** By 1987, almost one-half of the married couple households had two workers. In addition, several lifestyle changes have evolved. Among the changes are a) rapid increase in the total number of workers, b) decrease in the birth rate in the early 1970s while women deferred childbearing in the early stages of their careers, c) rapid increase in the birth rate during the 1980s when women began having children at later ages, d) increase in the numbers of latch-key children, e) difficulty in two-income families living in loca-

Family Remains the Dominant Household Type in Montgomery County



Source: U.S. Bureau of the Census

The Number of Women Working in the County Has Grown



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tions that are convenient for both jobs, f) a decrease in volunteerism, and g) an increase in day care providers. The need for day care service is particularly evident. Currently, there are 283 licensed group child care facilities and 1,500 licensed home day care providers. An additional but unknown number of day care providers are unlicensed.

For families with two workers, as well as single parent families, the amount of time available for volunteer activities is reduced by the time spent on work, children, chauffeuring, housework, and social activities. Furthermore, neighborhoods no longer benefit from the sense of community that results from the interaction of family members at home during the day.

* **The median Montgomery County household in 1987 had occupied their current house for 5 years, down from 6.1 years in 1974.** According to Montgomery County Census Update Surveys, residents in single family houses tend to move less often then those in multi-family units (7 years versus 3 years in 1987). Homeowners also move less often than renters (8 years versus 2 years in 1987). The mobility of Montgomery County residents can make the establishment of community ties difficult.

II. WHERE WE GATHER AND INTERACT

Not only do the residents and workers of Montgomery County have different lifestyles than twenty years ago, but the places where we gather and interact have also changed. As discussed in the previous section, the way that Montgomery County residents live has changed. These changes have created the need for new services and limit the residents' ability to participate in community activities. This section describes some of the places where residents gather and interact and how these influence community identity. (The governmental actions that affect the pattern of private development and the location of public facilities will be discussed in Section III.)

The number of demands on an individual's or a family's time have long appeared to be endless but today they are increasingly dispersed. Typically, this hectic pace is characterized by a large number of activities spread over long distances. A family with school-aged children can easily find their evenings and weekends filled with shuttling children between practices, libraries, and friends. Families and individuals also combine home life with meetings, shopping and social activities, and work. Large numbers of activities, combined with personal mobility, result in residents using a wide range of "centers," both in location and type. This dispersed lifestyle often makes it difficult to establish a sense of community. This section discusses some of the centers of activities and organizations that influence our community life.

COUNTY GOVERNMENT CENTERS

* **County government centers are the sites of a wide array of community service functions.** Montgomery County operates five government centers to concentrate government services in different parts of the County. The government centers are located in Silver Spring (2), Bethesda-Chevy Chase, Wheaton, and Germantown. Services vary by location and include satellite locations for the Health Department, Addiction, Victim/Mental Health Services Department, community psychiatric services, legal services, and social services. The community oriented services provided at government centers causes them to become community activity centers for different groups in the community.

SCHOOLS

* **Schools are the sites of a wide array of community service functions.** They are not only places for children to learn, but also to get to know their neighbors and to participate in clubs and sports, and for parents to attend PTA meetings and back-to- school nights. Eighty percent of County elementary schools have on-site day care providers, there are special after-school programs for latch-key children in grades 3-8, County and

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THE ROLE OF THE GENERAL PLAN

One of the challenges of the General Plan is to provide guidance for creating community identity. The General Plan, by being general, will not provide a specific prescription for each individual community. However, this fact sheet lists some of the attributes that are important in creating a community identity.

Local area master plans, long term operating and capital budgets, and individual subdivision and zoning actions provide more specific guidance, on adjusting these various elements to establish community identity and design. While government can influence location, layout, and some functional aspects, it is the community itself that determines its identity and how it functions. The General Plan's role is to provide guidance to foster an environment in which individuals can get a sense of pride in their community.

I. WHO WE ARE

The demographic characteristics of Montgomery County residents have changed dramatically during the last twenty years. In short, the changes in household composition, number of

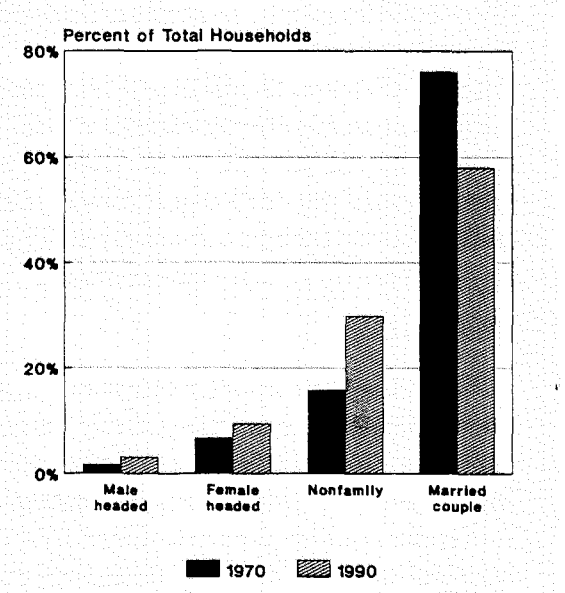
two-wage earner families, single parent families, and how often residents move, when combined with the distances between areas where we gather and interact, have made it more difficult to establish and maintain a sense of community. This section will discuss some of these changes and how they affect our collective and individual sense of community identity.

* **The percentage of family households in Montgomery County was relatively stable between 1980 and 1990.** In 1990, approximately 70 percent of all households were families. However, the percentage of family households did decrease from 85 percent to 73 percent between 1970 and 1980. The percentage of families headed by single parents grew from 3 percent in 1970 to 14 percent in 1990. This was accompanied by an increase in nonfamily households as well as the number of individuals who live alone. Some of the short-term characteristics of these changes are an increase in latch-key kids, day care, greater demand for housing for single adults, and neighborhoods that are relatively deserted during the weekdays.

In addition, the number of divorces in Montgomery County increased from 872 in 1970 to 2,238 in 1988. The impact of the declining dominance of the two-parent family, in concert with the number of two-wage earner households, leaves people with less time to achieve a sense of community.

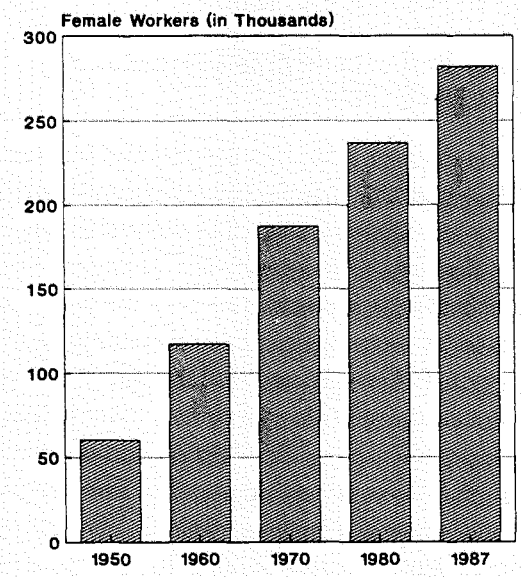
* **The percentage of women in the workforce has doubled, from 32 percent in 1950 to 66 percent in 1990.** By 1987, almost one-half of the married couple households had two workers. In addition, several lifestyle changes have evolved. Among the changes are a) rapid increase in the total number of workers, b) decrease in the birth rate in the early 1970s while women deferred childbearing in the early stages of their careers, c) rapid increase in the birth rate during the 1980s when women began having children at later ages, d) increase in the numbers of latch-key children, e) difficulty in two-income families living in loca-

Family Remains the Dominant Household Type in Montgomery County



Source: U.S. Bureau of the Census

The Number of Women Working in the County Has Grown



Source: U.S. Bureau of the Census

tions that are convenient for both jobs, f) a decrease in volunteerism, and g) an increase in day care providers. The need for day care service is particularly evident. Currently, there are 283 licensed group child care facilities and 1,500 licensed home day care providers. An additional but unknown number of day care providers are unlicensed.

For families with two workers, as well as single parent families, the amount of time available for volunteer activities is reduced by the time spent on work, children, chauffeuring, housework, and social activities. Furthermore, neighborhoods no longer benefit from the sense of community that results from the interaction of family members at home during the day.

* **The median Montgomery County household in 1987 had occupied their current house for 5 years, down from 6.1 years in 1974.** According to Montgomery County Census Update Surveys, residents in single family houses tend to move less often then those in multi-family units (7 years versus 3 years in 1987). Homeowners also move less often than renters (8 years versus 2 years in 1987). The mobility of Montgomery County residents can make the establishment of community ties difficult.

II. WHERE WE GATHER AND INTERACT

Not only do the residents and workers of Montgomery County have different lifestyles than twenty years ago, but the places where we gather and interact have also changed. As discussed in the previous section, the way that Montgomery County residents live has changed. These changes have created the need for new services and limit the residents' ability to participate in community activities. This section describes some of the places where residents gather and interact and how these influence community identity. (The governmental actions that affect the pattern of private development and the location of public facilities will be discussed in Section III.)

The number of demands on an individual's or a family's time have long appeared to be endless but today they are increasingly dispersed. Typically, this hectic pace is characterized by a large number of activities spread over long distances. A family with school-aged children can easily find their evenings and weekends filled with shuttling children between practices, libraries, and friends. Families and individuals also combine home life with meetings, shopping and social activities, and work. Large numbers of activities, combined with personal mobility, result in residents using a wide range of "centers," both in location and type. This dispersed lifestyle often makes it difficult to establish a sense of community. This section discusses some of the centers of activities and organizations that influence our community life.

COUNTY GOVERNMENT CENTERS

* **County government centers are the sites of a wide array of community service functions.** Montgomery County operates five government centers to concentrate government services in different parts of the County. The government centers are located in Silver Spring (2), Bethesda-Chevy Chase, Wheaton, and Germantown. Services vary by location and include satellite locations for the Health Department, Addiction, Victim/Mental Health Services Department, community psychiatric services, legal services, and social services. The community oriented services provided at government centers causes them to become community activity centers for different groups in the community.

SCHOOLS

* **Schools are the sites of a wide array of community service functions.** They are not only places for children to learn, but also to get to know their neighbors and to participate in clubs and sports, and for parents to attend PTA meetings and back-to- school nights. Eighty percent of County elementary schools have on-site day care providers, there are special after-school programs for latch-key children in grades 3-8, County and

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city recreation departments hold many of their classes in schools after hours, private ethnic and cultural schools rent entire school buildings on weekends, and religious organizations also rent space to hold services in school cafeterias and auditoriums.

The YMCA, government, and colleges also hold classes in schools, and youth organizations like Scouts, Campfire Girls, and 4-H clubs use schools for meetings and activities. Other activities are community meetings and events, and ballfields and gyms for use by individual groups and leagues. Schools are also used for informal recreation: strolling across the grounds, swinging on the playground equipment, playing basketball on the courts, and riding bikes around the parking lot.

When all of these activities are combined on one site, a school can serve as an important community focal point for a number of different groups in the community, thereby providing an element of community identity. Schools also can serve as landmarks within communities.

Elementary schools were often used as organizing elements for neighborhoods. The 1969 Plan encouraged the County to "design schools to function as neighborhood and community multiuse centers, serving the community's social, cultural, vocational and recreational as well as educational needs."

The use of larger elementary schools of about 640 students in recent years as compared with 450 students in 1970, combined with fewer children per family, requires more households per school and makes it more difficult to develop and maintain a sense of community focused around an elementary school. However, larger schools allow for a wider variety of activities, both during and after school; in essence, providing a focal point for several communities.

Montgomery County Public Schools statistics show that there are approximately 30 entries and withdrawals annually for every 100 students in the school system. This mobility is due mostly to families moving during the school year and can make the establishment of close ties difficult for both students and parents.

* **The County has 63 closed schools, some of which have been reopened and some are now being used for community-oriented services.** Countywide school enrollments declined in parts of the 70's and 80's. This decline resulted in school closures and redistricting. The controversies associated with the closing of a school indicate their value to the community. The controversies surrounding school redistricting actions are another example of the level of attachment that communities have with schools. Perceived educational implications are, of course, part of the source of these controversies.

One high school is now used as a "holding" school, a temporary home for the students and staff of another school that is being modernized. Another high school is in use as a middle school. Five of the elementary and middle/intermediate/junior high schools are also holding schools. The school board is using other closed schools as administrative offices, a special education center, an alternative education center, and a special learning center.

The most common use of closed schools is private schools. About a dozen former elementary schools are now private schools. The next most common use is for day care services. Often a day care center shares a school building with other users, such as County government offices or the Parks Department. Other tenants of former schools include centers for the handicapped, senior centers, recreation centers, Boys' and Girls' Clubs, the YMCA, the Jewish Community Foundation, and a County health center. Two closed schools have been converted into housing, one for single- parent families and one for the elderly. The reuse of schools can maintain open space and recreation areas and provide increased community services.

LIBRARIES

* **Montgomery County operates 20 public libraries with an annual circulation of 7.8 million volumes in FY 91.** In addition to the traditional book lending functions, library buildings serve as community centers through combined uses, such as the senior center in Damascus, parkland in Silver Spring, and the Upcounty Government Center in Germantown. In addition, libraries rent meeting space and distribute government documents such as tax forms, bus schedules, and draft master plans. The County's Commission on the Future considered libraries as being suited to serve as magnet centers. Magnet centers were defined as centrally located facilities that offer a variety of social, educational, and recreational services. County libraries currently offer many of these services.

The Noyes Library in Kensington is jointly funded by the County and private groups. This cooperation is an example of how a community can improve community facilities to better serve their needs.

PLACES OF WORSHIP

* **Montgomery County is home to over 240 places of worship.** In addition, some religious groups rent space in schools and other buildings for services. Many places of worship also provide day care, education, and social services. Places of worship often serve as physical landmarks and centers of activity for their members and others within the community. Religious groups have expressed concern over the difficulty of acquiring land in newly developing areas.

PARKS AND RECREATION CENTERS

* **Montgomery County contains 28,000 acres of parkland, which serve a variety of purposes including community-oriented activities.** The Montgomery County Department of Parks and municipal parks departments provide athletic fields, community/recreation centers, and picnic areas for groups to use. Four conference and social centers are used for events like trade shows, exhibitions, meetings and workshops, weddings, and parties. The Department of Parks and the Recreation Department also sponsor activities like historic tours, the annual Harvest Festival and Spring Festival, and arts and crafts shows.

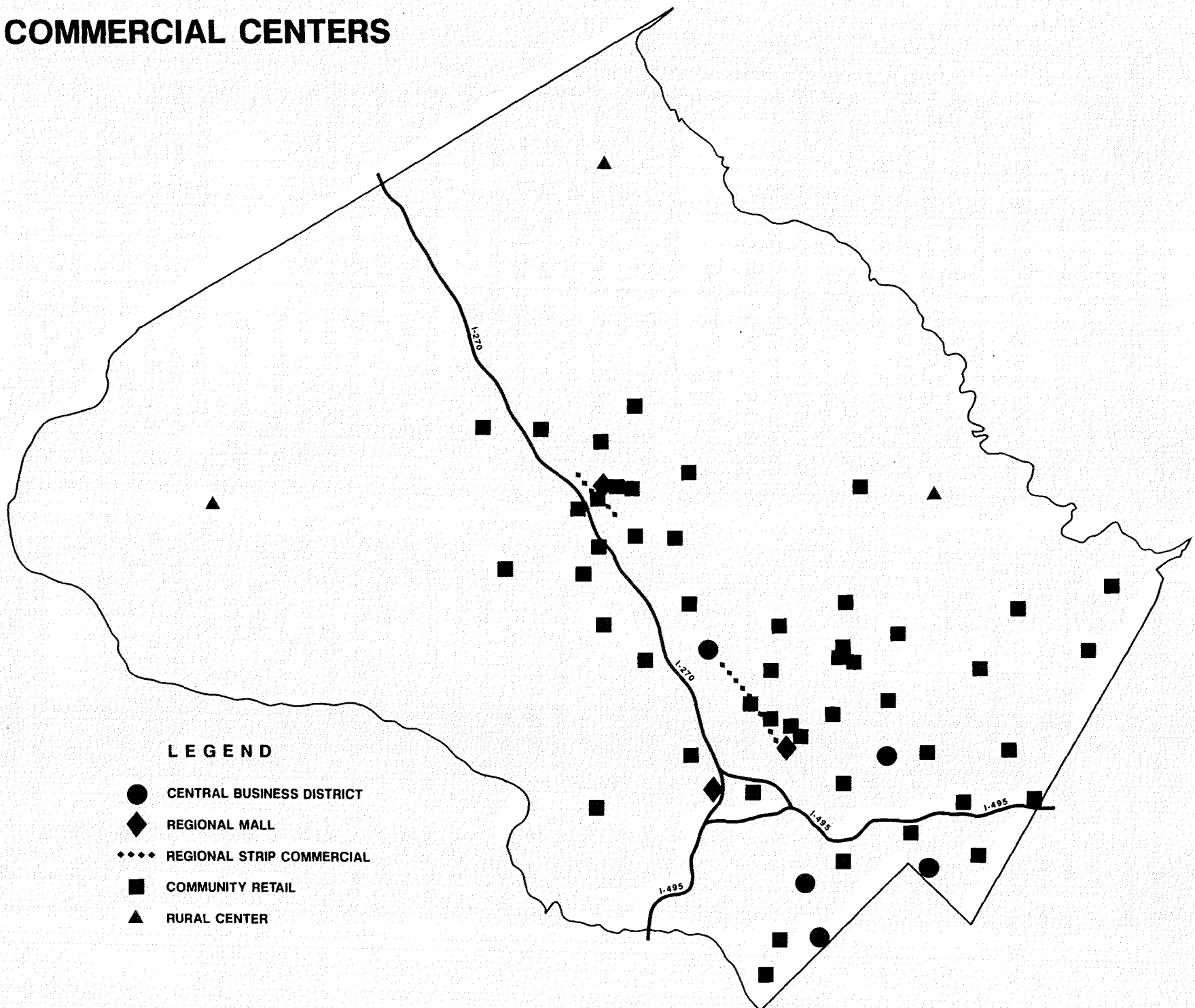
The Montgomery County Department of Recreation operates 38 community and recreational buildings that provide indoor and outdoor recreation and education opportunities. These include swimming pools, senior centers, and a theater and provide a wide array of passive and active activities for all age groups and skill levels. A variety of local and urban parks and playgrounds serve as places for individuals, families, and groups to gather, interact, and enjoy themselves. Parks, open space, community and recreation centers can serve as landmarks, and provide another element which fosters community identity and definition.

SHOPPING CENTERS

* **In many areas, the local shopping center or regional mall serves as a center of community activity.** Historically, the local marketplace has often been one of the places that friends and neighbors "run into each other." This was particularly true in older areas that were served by "mom-and-pop" grocery stores. Because each store served a small area, you were likely to know many of the people that you saw, including the owners and employees of the store. Repeated encounters like these foster a sense of community.

Recent years have seen the development of larger and larger supermarkets, often in excess of 60,000 square feet of floor area. Along with the increase in the size of the store have come an increase in the number of residents in the market area, a larger geographic market area, and more employees. Although you may run into friends and neighbors, the end result is that most of the people you see when you are shopping are strangers. One of the major contradictions in the community center functions of shopping centers is

COMMERCIAL CENTERS



that while they bring a large number of people together, there is little social interaction.

The locations of major existing community retail centers, regional shopping areas, and malls are shown in the following map. Community retail centers were defined as a grocery store and other retail stores that total around 50,000 square feet. Rural centers are clusters of retail uses, including a major grocery store that serve the surrounding rural area.

Regional malls often serve as activity centers on a much larger scale than community retail centers. In many areas, regional malls have become the primary gathering points for residents. Also, the street life of old downtowns is often transferred into regional malls. Regional malls also may host community oriented activities. In a sense, regional malls often serve some of the functions of a town square, although on private property and enclosed, as well as informal gathering places for teen-agers and elderly.

* **The County's commercial revitalization program seeks to improve existing shopping centers that have traditionally served as community retail centers.** The revitalization program covers various suburban shopping centers as well as Central Business Districts (CBD's). These improvements usually consist of streetscaping and improvements to business operations, including facade renovations. The program is designed to encourage private reinvestment in commercial properties. The revitalization of these centers is an important element of the public and private efforts towards the maintenance of existing retail centers. In addition, revitalization follows the General Plan's guidance to improve the appearance of the County. The following shopping centers are included in the program: Long Branch, Flower Avenue, and Dale Drive in Silver Spring; Colonial Center in Wheaton; and Damascus Center. Silver Spring and Wheaton are the two CBD's included in the program.

The County's revitalization program for Wheaton consists of streetscaping and building facade improvements along all major streets. The County's program for Silver Spring CBD consists primarily of streetscaping and putting utilities underground along Georgia Avenue and Colesville Road and some facade improvements.

III. HOW WE GOVERN OURSELVES

Montgomery County residents are represented by levels of government and government-like organizations. These levels of government include federal, State and County, but can also include city, town, special taxing districts, and homeowners associations. Our sense of community identity can be affected by governmental actions. This section discusses some of the levels of government and private organizations that contribute to community identity.

COUNTY GOVERNMENT

* **Montgomery County government serves a diverse area of 500 square miles with an equally diverse 757,000 residents.** The County has a larger population than 6 states. The various agencies of County government provide services such as schools, police, fire, recreation, Ride-On bus service, housing assistance, libraries, and social services. Planning is provided by the Maryland-National Capital Park and Planning Commission.

The County centralizes administration and some services while locating other services throughout the County such as schools, libraries, fire stations, and County Government Centers. These local facilities often serve as activity centers and contribute to community identity at the neighborhood level.

MUNICIPALITIES

* **Living in a municipality can give residents a feeling of belonging to a recognizable place.** Montgomery County has 17 municipalities: Rockville, Gaithersburg, Takoma Park, Poolesville, Chevy Chase, Chevy Chase Section Three, Kensington, Somerset, Garrett Park, Martin's Addition, Chevy Chase Village, Chevy Chase Section Five, Washington Grove, Laytons-

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ville, Glen Echo, Barnesville, and Brookeville, listed in order of 1990 population. Most of these are historical and functional centers.

Each municipality is governed by elected officials with varying amounts of independence from the County. Rockville and Gaithersburg offer a wide range of services including planning and zoning, police departments, recreation and parks departments, trash collection, and other services. Other municipalities have more limited services. Municipalities have the authority to tax their residents and businesses. These taxes are in addition to regular County taxes.

Municipalities are one type of identifiable community, but as they grow in area, they can lose some of the closeness that they had when they were smaller. In addition, some growth, especially through annexation, can conflict with adopted County master plans.

URBAN DISTRICTS

*** Montgomery County utilizes urban districts to maintain and improve the character and appearance of the County's Central Business Districts (CBD's).** The County's urban districts include the Bethesda, Silver Spring, and Wheaton CBD's. They were created in 1986 to maintain and enhance our urban centers. The County Council created these districts to 1) increase maintenance of streetscape and amenities, 2) provide additional public amenities such as landscaping, seating, and bus shelters, 3) promote the commercial and residential interests of the CBD's, and 4) program community activities. The 1964 Plan emphasized the importance of maintaining developed areas in the County.

HOMEOWNERS' ASSOCIATIONS

*** Homeowners' associations regulate a subdivision's or development's appearance, foster community interaction, and give residents some control over their communities.** The main functions of homeowners' associations are to 1) maintain and manage commonly-owned areas and facilities, such as open space and recreational equipment, and 2) regulate changes to individual units and to the subdivision or complex as a whole to protect its appearance and character. They influence changes in a subdivision's appearance by regulating such elements as house colors, signs, vehicle parking, building additions, TV antennas, and storage sheds. Some HOAs also enhance a sense of community through giving residents a say in how their community is run, information dissemination such as newsletters, and social events like picnics and pool parties.

There are approximately 400 homeowners' associations (HOAs) registered with the County's Commission on Common Ownership Communities, covering almost 62,000 dwelling units (22 percent of all dwelling units in the County). The subdivisions with HOAs range from a 10-unit townhouse development to an 800-unit high-rise condominium to a 1,500-unit single-family and townhouse development.

The 1964 General Plan recommended cluster development to promote "variety in development and flexibility in urban design." In addition, the Plan noted that cluster development can be more efficiently served by public facilities and an increase in open space. HOA's are often necessary in cluster subdivisions to maintain common open space.

CIVIC ASSOCIATIONS

*** Civic associations provide residents with opportunities to work together to improve their neighborhoods.** There are nearly 500 civic associations registered with M-NCPPC. Some of them cover individual subdivisions or neighborhoods, some are umbrella organizations covering several neighborhoods, and some civic associations are county-wide. Many associations are vigilant watchdogs, alert for new development in their areas. Citizen's associations are notified of master plans, subdivisions, and special exceptions in their areas. The associations often follow a development proposal throughout the development process, presenting their opinions and views.

Some of the associations also work on master plans and other projects.

The participation of citizen groups, clubs, and business associations was encouraged by the 1969 Plan. In addition to civic associations, there are business groups such as the Chambers of Commerce, the I-270 Employer's Group, and the North Bethesda Transportation Action Partnership. These groups and others participate in the development review process and in civic affairs in a variety of ways.

PRIVATE ORGANIZATIONS

* **A wide variety of social, religious, charitable, and recreational clubs are available to County residents.** These groups serve as a way of gathering with people of similar interests. Many of these clubs work towards improving their community and helping others. In addition, there are a number of businesses specializing in recreation, health, and social activities.

IV. HOW WE DESIGN COMMUNITIES

As discussed in the three previous sections, the way County residents live together where residents gather and interact, and how we govern ourselves affect our community identity. The County's influence on these changes ranges from none (for example, on family mobility) to extensive (on schools and shopping locations). This section focuses on the influence that the planning and development processes have on the function and appearance of communities.

The 1964 *General Plan* stated that "Economy, convenience, and pleasant surroundings are the key concepts of the Plan," where economy "... arises from the compact form of development, easily reached by public services." In addition, the 1969 *General Plan* stated that "each community should have an identity, which can be created by imaginative design."

The pattern of development during the last two decades has been influenced by the 1964 and 1969 *General Plans*. The 1969 Plan recommended that the County "incorporate urban design considerations into all aspects of the planning and development process." Since then, revisions to master plans and to the development process and regulations have instituted major changes in an effort not only to improve the quality and compatibility of development, but to guide the design of communities and neighborhoods in a manner that instills a sense of community and identity.

MASTER PLANS

* **Master plans play an important role in establishing the pattern of public and private development, which can foster a greater sense of community identity.** Master plans have increased the amount of design guidance since 1969. Master plans adopted in the late 60's and early 70's focused on land use, zoning, and roads. Master plans have now evolved to include several levels of design guidance as well as an increased emphasis on mixed uses and transit accessibility. The design guidance ranges from townscape to streetscape and often focuses on areas of significant planned activity. These include the Shady Grove Life Sciences Center and the Germantown Streetscape Study, as well as pending amendments for the Germantown Town Center and the Clarksburg Town Center.

DEVELOPMENT REGULATIONS

The 1964 and 1969 *Plans* both recognized that the existing development process needed improvement to achieve the vision of the wedges and corridors concept. Current efforts by the County to re-shape the development process illustrate that these processes are constantly being adapted to achieve the County's goals and objectives.

The development review process generally begins with master plan recommended zoning and land use. The zoning designation, in addition to the subdivision regulations, determines development standards such as the minimum lot size, building setbacks, and street and open space locations. Individual development proposals also

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may go through site plan review to ensure compatibility with surrounding development. A number of other processes and regulations are designed to improve community identity and the appearance of the County.

ZONING

*** Today, the Montgomery County Zoning Ordinance lists 67 zones, 2-1/2 times as many as in 1970.** In 1970, when the *Updated General Plan* was adopted, there were 13 residential, 5 commercial, 3 industrial, 2 CBD, 3 planned unit development, and 2 transit station development zones. The total was 28 zones, almost twice as many as in 1954. Today, there are 67 zones. The number of residential zones has nearly doubled and now includes Transferable Development Rights (TDR) receiving areas and several new townhouse zones. There are about twice as many commercial zones, industrial zones, CBD zones, and planned unit development zones. Completely new categories since 1970 are mineral resource recovery and residential mixed use development. A rural zone was introduced in 1973 and two agricultural zones in 1980 to help preserve agriculture and rural open space.

*** Much of the County has developed using zones that separated houses from activities such as stores, offices, and factories.** This pattern was intended to protect residents from harmful effects of some land uses. The businesses in Montgomery County are relatively clean and quiet and there is less need for separation of land uses based on public health concerns.

The 1964 Plan recognized the need for additional zoning classifications to achieve the Plan's vision. Many of the newer zones allow large parcels of land to be developed with a mix of land uses to foster a sense of community, consistent with the 1964 and 1969 *Plans'* guidance.

SPECIAL EXCEPTIONS

*** The special exception process is used to control uses that are normally not permitted in a zoning district.** Common examples include day care centers and home occupations in residential zones and automobile filling stations and community swimming pools in commercial zones. The special exception process is designed to ensure that certain uses will be consistent with the General Plan and local master plans and will be in harmony with the general character of the neighborhood with regards to design, scale and bulk of proposed structure, and traffic and parking conditions.

SITE PLAN REVIEW

*** Montgomery County uses site plan review to control compatibility, safety, efficiency, and attractiveness, but not architecture, building materials and colors.** Montgomery County began requiring site plans for proposed development in some zoning categories in 1967. Site plans are detailed layouts that show building locations, landscaping, parking areas, and lighting plans. Since 1967, the number of site plans each year has ranged from 15 to 175, with an average of 65. The 1969 Plan encouraged the County to promote varied site plan designs that create spaciousness, interest, and beauty. Since then, the County has amended many of the zones to require site plan review, increased green space and open space, which can result in more pleasing developments.

RECREATION GUIDELINES

*** The 1969 Plan recommended that parks and recreation should be integrated with development areas.** The Montgomery County Planning Board began using *Guidelines for Recreational Amenities in Residential Development* in 1991 to determine whether the private recreational facilities in proposed subdivisions are adequate. These recreational facilities are in addition to the public park system.

PROJECT PLAN REVIEW

*** Montgomery County uses project plan review in 11 zoning classifications under optional method of development procedures to increase the public and private amenities in certain areas of the County.** A project plan is a detailed plan

for a proposed development that allows the Planning Board to evaluate whether the plan is compatible with the surrounding area. The Planning Board is authorized to approve buildings that are bigger than would normally be allowed in exchange for developer provided amenities. These amenities are a means to assist the formation of a community identity such as public parks, plazas, arcades, art, street furniture, museums, art galleries, community rooms, and child or elderly day care.

A project plan is required in order to determine whether the proposed amenities and other design features will create an environment capable of accommodating additional density allowed by the optional method of development.

Land zoned to allow the optional method of development procedure is only located in Silver Spring, Bethesda, Friendship Heights, Wheaton, and along the I-270 corridor. Over 60 optional method of development projects have been reviewed by the Planning Board since 1975. In the Silver Spring Central Business District (CBD) alone, almost 3 million square feet of non-residential floor space and 964 residential units have been completed, or are near completion, under optional method of development procedures.

MANDATORY REFERRALS

*** The Montgomery County Planning Board reviews and comments on proposed public projects and public projects on private property through the mandatory referral process.** The mandatory referral process allows the Planning Board to review and comment on development proposals from other public agencies. These development proposals include public roads, parking garages, Federal projects, and schools.

The mandatory referral process provides an opportunity to improve the compatibility of public projects with the surrounding areas and to minimize environmental impacts. These projects are exempt from zoning and subdivision review. The agency proposing the project may, at its discretion, choose to accept or ignore the recommendations of the Planning Board.

STREET TREES

*** The County will begin in July 1992 to require that new roads include trees within the right-of-way.** The aesthetic reasons for planting trees along roads are clear. Trees also shade the streets, which can serve to cool the road surface, which in turn helps to moderate the temperature of stormwater run-off, which is beneficial for water quality in streams. Landscaping along roads was recommended by the 1969 Plan to improve the motorist's view and to provide for the safety of pedestrians through separation from roadways.

BILLBOARD AND SIGN CONTROLS

*** There are about 50 billboards in the County, despite County regulations prohibiting them.** In 1968, all billboards were banned in the county but existing ones were given an amortization (phase-out) period until 1972. In 1986, there were still about 60 billboards; new County legislation was passed prohibiting them. A court case that had been pending since 1972 between the County Council and one of the major billboard owners was settled recently by an agreement that permitted the billboard owners to keep their current billboards and to move them to different locations.

The County sign ordinance considers large signs such as billboards to be inappropriate in Montgomery County because they are not compatible with the planned character of the county, they cause sign clutter and visual discord, and they obscure views. The 1969 Plan recommended "controls for improving visual 'eyesores'" as part of an objective to "remove unattractive elements from roadside developments."

*** The County regulates the size, location, height, and construction of all signs placed for public viewing.** The intent of the sign ordinance is to protect the public safety and morals, protect property values, preserve and strengthen the am-

bience and character of the various communities, and to satisfy urban design objectives as reflected in approved and adopted master or sector plans. An important feature of the regulations is the restriction of advertising to the business or services offered the premises on which the sign is located. All signs within one commercial complex should be coordinated with the architecture in such a manner that the overall appearance is harmonious in color, form, and proportion.

HISTORIC PRESERVATION

The County's link with the past is reflected by a wide variety of historical sites and artifacts including buildings and places associated with historic events, buildings of architectural merit, archaeological sites, and street and place names, as well as development patterns. The 1969 Plan acknowledged that historic preservation is important as a means to maintain and build upon the collective identity of the County. Historic buildings and districts help create a sense of identity, historical continuity, and civic pride, and provide a visual reminder that others have been before and others will come after us.

* **The *1976 Locational Atlas of Historic Sites* identified approximately 1,000 potential historic properties in the County.** The Atlas serves as an inventory of potential historic properties. Property owners whose sites are listed in the Atlas may make changes more readily than owners of sites designated in the Master Plan for Preservation and are not required to apply for an Historic Area Work Permit.

* **Montgomery County created a historic preservation program in 1979.** The County adopted *Preservation of Historic Resources* (Chapter 24-A of the County Code) and the *Master Plan for Historic Preservation*, and created the Historic Preservation Commission (HPC) in 1979 to encourage and monitor the preservation of County historic sites and districts.

* **The *Montgomery County Master Plan for Historic Preservation* currently includes 15 districts and 234 individual sites outside districts.** Each of the districts and sites has been found to be of architectural or historical merit.

Among the designated historic sites in the County are: the C&O Canal National Historic Park, Uncle Tom's Cabin, Clara Barton House, Kensington Historic District, Bethesda Meeting House, Sandy Spring Meeting House, Strathmore Hall (Corby Estate), Perry Store, Clifton, Bonfield's Garage, and National Park Seminary. These sites are all of local importance, while some are of national importance.

* **Modifications to sites in the *Master Plan for Historic Preservation* require an Historic Area Work Permit (HAWP) that is approved by the Historic Preservation Commission.** This permit is required for moving, demolishing, or substantially altering the exterior of a building, constructing new structures, and removing landscaping or other features which contribute to the environmental setting of the historic site or district. Despite these protections, a number of historic sites have been lost to fire during or after the designation process. Other sites were lost before County protection.

ART IN PUBLIC PLACES

* **Montgomery County allocates 0.25 percent of the estimated cost of all public construction projects to art in public places.** Approximately 500 permanent pieces of art have been put in public places since the Art in Public Places program began in 1984. Another 450 pieces of portable art travel to different locations. The total investment to date is $2.5 million dollars. Originally, 1 percent of the construction cost was allocated to art. That was reduced to 0.5 percent in 1989, and further cut to 0.25 percent in 1990. A current proposal would halt all funding for new art until 1994.

While the 1969 Plan did not specify public funding for art, the aim of art in public places is consistent with the guidelines to locate artworks in pedestrian areas and to improve the appear-

ance of the County. Public art can help identify, as well as provide beauty and interest to an area.

NEIGHBORHOOD STUDY

* **The Montgomery County Planning Department is evaluating methods of improving pedestrian and transit accessibility in existing and planned areas.** The upcoming Transit and Pedestrian Oriented Neighborhoods Study will identify techniques to improve the livability of neighborhoods through increasing pedestrian circulation as well as providing better access to transit services. The study will recommend principles for the revision of planning and development practices in the County.

Many of the recommendations of the upcoming study follow and build upon the guidance of the 1969 Plan, including its recommendations to "design activity centers in corridor cities to integrate residential areas with commercial, cultural, and employment facilities as well as transit stations and urban parks."

CONCLUSION

The development of identifiable communities that feel like "home" through good design was an aim of the 1969 General Plan. This continues to be a challenge, especially in light of the social changes that have occurred since the Plan's adoption, and those that have yet to occur.

REGIONALISM FACT SHEET

I. INTRODUCTION

Regional aspects of planning and governance have been and will continue to be key challenges for Montgomery County's future. In 1961, when the original ...*On Wedges and Corridors* General Plan was being prepared, President Kennedy addressed this issue in a message to Congress:

> Bold programs in individual jurisdictions are no longer enough. Increasingly, community development must be a cooperative venture through the common goals of the metropolitan region as a whole.

At the kick-off symposium on the General Plan Refinement held in October 1991, an issue that seemed to be on a lot of people's minds was that many of the problems facing Montgomery County appear to be regional in nature. Regionalism was chosen as one of the new goals to add to the General Plan. This fact sheet explores the idea of regionalism as it relates to Montgomery County and this General Plan Refinement.

This fact sheet first introduces the concept of regionalism, then discusses Montgomery County's regional role. The final section examines issues that need regional approaches and past and present approaches to resolve those issues.

What do County residents mean when they think of a problem as being a regional problem? In many respects, we believe that it is a recognition that a particular concern facing a jurisdiction is greater than that jurisdiction's power to directly deal with. Most County residents have little interest in whether there is an entity that can address the concern or how such an entity should go about accomplishing that task. Yet, we also believe there seems to be an understanding and expectation by County residents that there should be a means for Montgomery County to participate in addressing such regional concerns. In any discussion of regionalism, there are various institutional and government issues on subjects such as geographic coverage, roles, responsibilities, and authority. One dilemma of regionalism is that these subjects are of little interest to the average citizen, yet they are important to be mindful of due to legal and political concerns that can help or hinder the development and implementation of solutions to the issues and of the General Plan.

II. THE CONCEPT OF REGIONALISM

*** Montgomery County is part of many regions that change over time.** The geographic coverage of each region varies, based on its focus. In some cases, the boundaries of a region reflect political boundaries and in other cases, natural boundaries. The variety of regions and their overlapping boundaries affects regional cooperation. For example, there are different regions for statistical and environmental purposes. The U.S. Census Bureau defines the Washington Metropolitan Statistical Area (MSA) as the region comprised of Washington, D.C. and the surrounding counties from which workers commute. This type of region changes over time as workers live farther away from the central city. After the 1980 census, the Washington MSA was expanded to include Frederick, Charles, and Calvert Counties in Maryland and Stafford County in Virginia.

It appears that the metropolitan region, of which Montgomery County is a part, is about to be changed as a result of the 1990 Census which is expected to show that the Washington and Baltimore MSAs now overlap. It is expected that the two adjacent metropolitan areas will be consolidated into a Combined Metropolitan Statistical Area (CMSA) later in 1992. The Washington-Baltimore CMSA, with about 6.3 million residents, will be the fourth largest metropolitan area in terms of population behind Los Angeles, New York, and Chicago.

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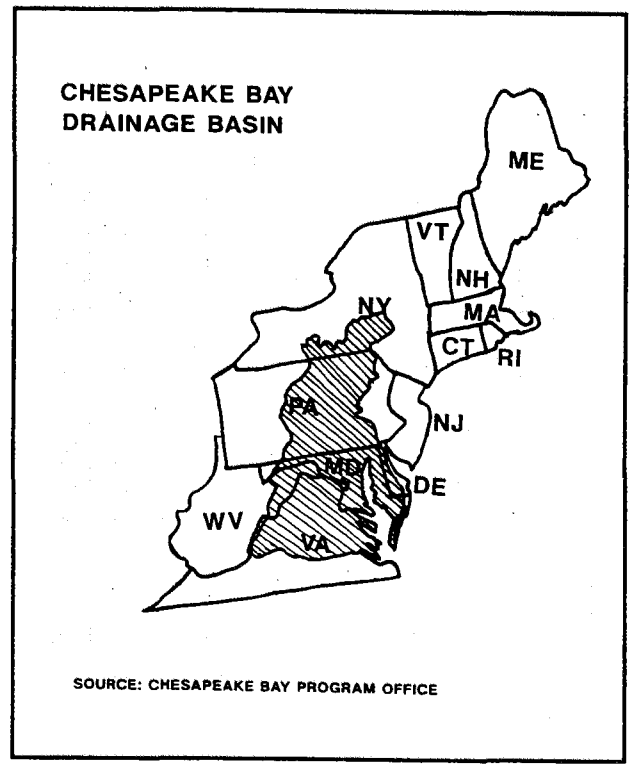
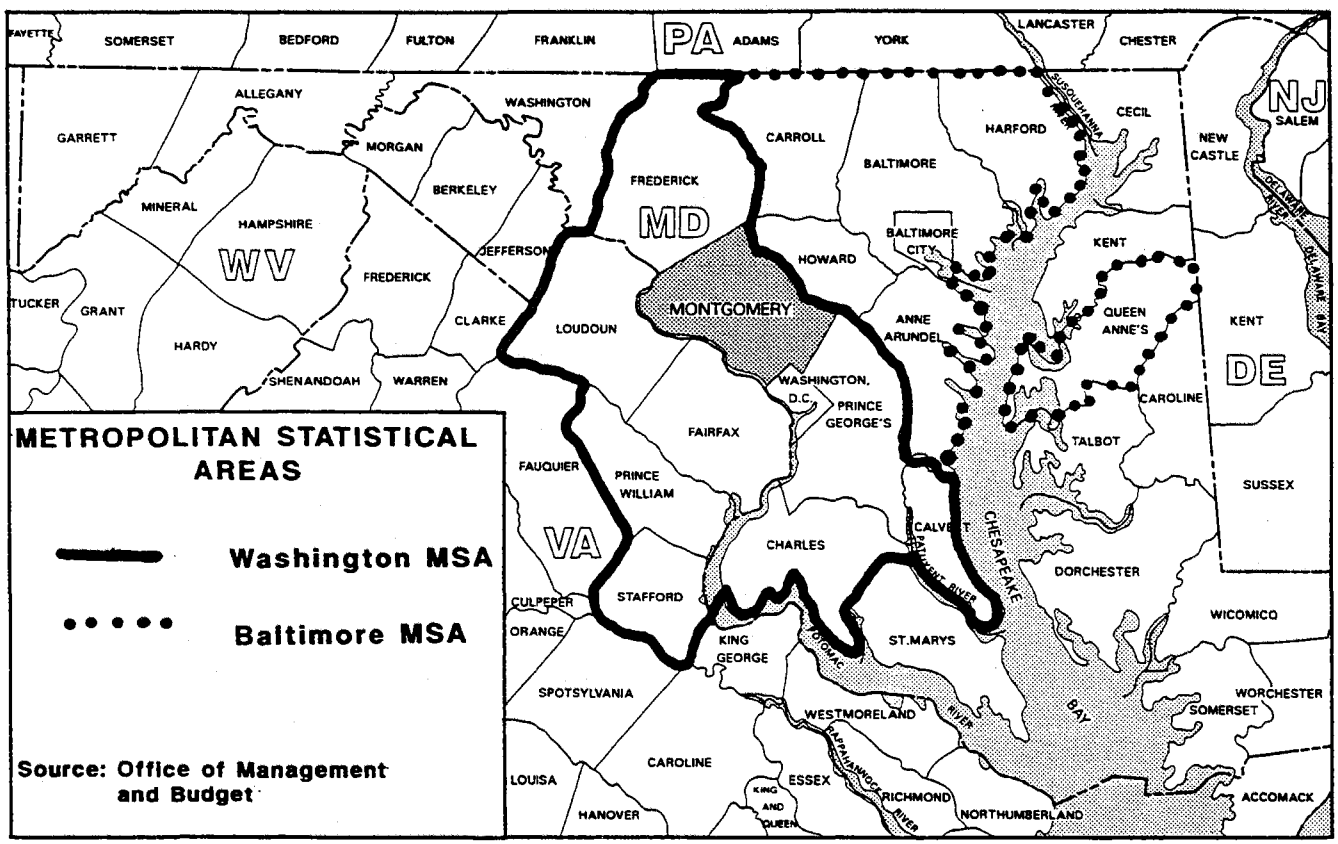
Another type of region that includes Montgomery County is the Chesapeake Bay drainage

basin, which extends from North Carolina in the south to New York in the north, and from West Virginia in the west to Delaware in the east.

*** Cooperation and coordination among governmental agencies and the private sector are central components of the regionalism concept.** When a region is comprised of dozens of counties, many cities, several states, and the District of Columbia, coordination is essential, but difficult. The need for regional approaches to regional problems can conflict with the self determination of affected jurisdictions. Sometimes facilities in one jurisdiction serve neighboring jurisdictions. For example, reservoirs and water lines in Montgomery County serve Prince George's County, and sewer lines in Prince George's County connect Montgomery County to Blue Plains in Washington, D.C.



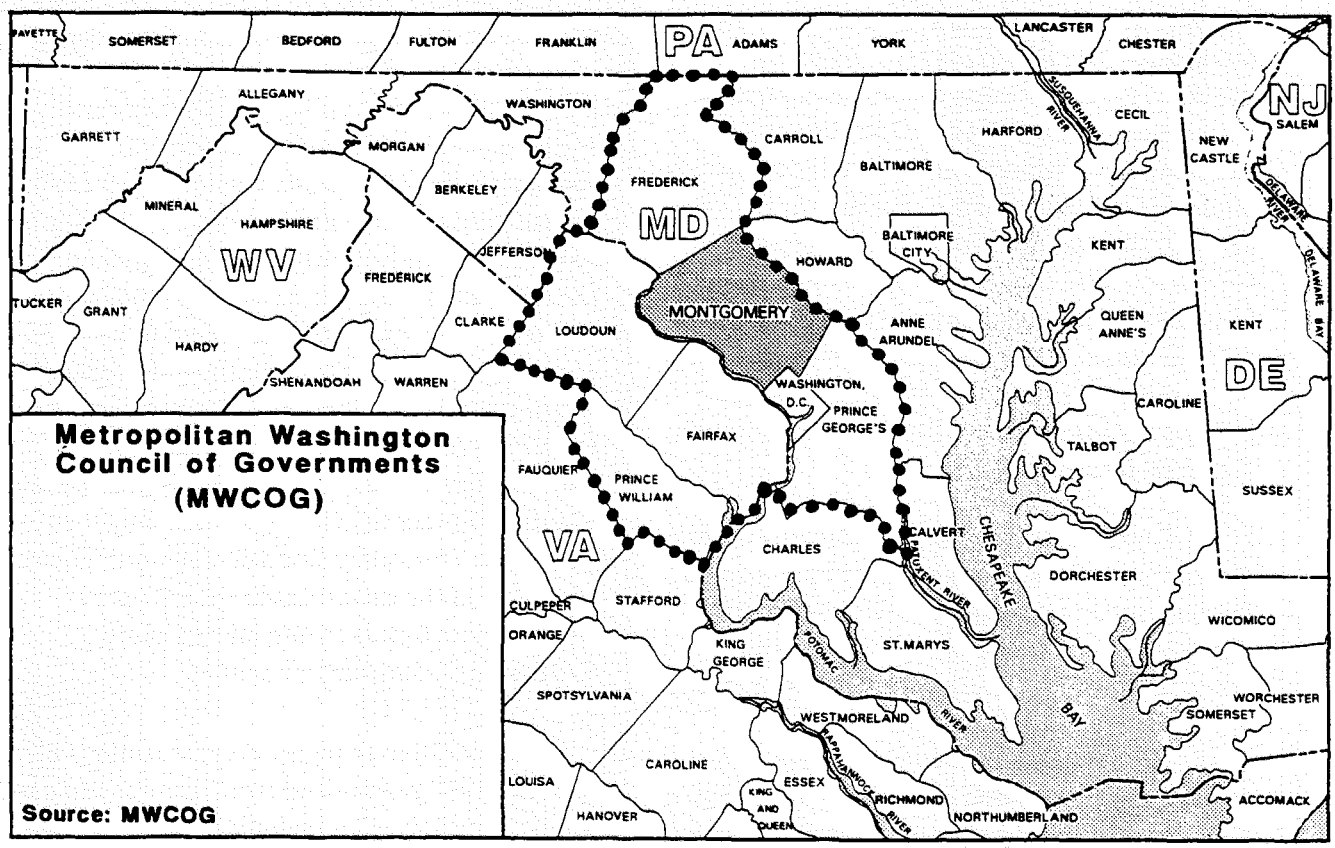


A number of regional agreements and agencies have been formed and are discussed in this fact sheet.

*** The Metropolitan Washington Council of Governments provides one regional forum for debate and resolution of diverse issues.** The Metropolitan Washington Council of Governments (MWCOG) was formed in 1957. MWCOG addresses topics such as the environment, housing, public safety and regional planning, serves as a clearinghouse for information, and provides an administrative structure for regional purchasing by member governments.

and the planning agencies of the environs." The result of that cooperative effort was *A Policies Plan for the Year 2000.*

The MWCOG region now covers 17 local governments and includes Washington, D.C.; Montgomery, Frederick, and Prince George's Counties in Maryland; and Arlington, Fairfax, Loudoun, and Prince William Counties in Virginia, along with individual municipalities in those counties. These jurisdictions, with the exception of Frederick, Loudoun, and Prince William Counties, made up the Washington MSA from the 1960 Census. The geographic coverage of



MWCOG was preceded by the National-Capital Region Planning Council, created by Congress in 1952 to "prepare a general plan for the development of the National Capital region and to promote collaboration and cooperation between the National Capital Planning Commission

COG is not the same as the Metropolitan Statistical Area (MSA) from the 1980 census. Three counties within the SMA, Stafford, Charles, and Calvert, have chosen not to join MWCOG. The MWCOG is funded by an annual fee assessed to each member jurisdiction based upon its popula-

tion, and by various federal grants available to regional agencies. Presently, Montgomery County is represented on the MWCOG Board by a member of the County Council and by the County Executive.

*** The MWCOG provides a variety of information that is generally the result of cooperative effort by the member jurisdictions or special studies by MWCOG staff.** One example is the cooperative forecasting process which develops forecasts for housing, population, and employment growth in each jurisdiction in the region. These forecasts form the standard data set for regional planning analyses. Member jurisdictions and various state agencies, such as the Maryland Department of Transportation, also utilize these cooperative forecasts to prepare analyses for issues such as future traffic conditions, air quality, or sewage demands. Other cooperative efforts include various programs for the purchasing of supplies used regionally such as gasoline or road salt. MWCOG has a number of policy committees such as the Environmental Policy Committee that formulate recommendations and policy on many regional issues. There are also a number of task forces established from time to time for specific projects such as the recent Task Force on Growth and Transportation.

*** There are also a number of boards or regional committees which influence planning in the region that are associated with MWCOG.** Among these are the Transportation Planning Board (TPB) and the recently formed Metropolitan Washington Air Quality Committee (MWAQC). The TPB was formed in 1965 and coordinates transportation planning in the region in accordance with federal procedures. The TPB provides for coordination with state departments of transportation as well as independent transportation authorities such as Washington Metropolitan Area Transit Authority (WMATA) and the Washington Metropolitan Airports Authority (WMAA).

As with other regional Boards and committees which coordinate with the States of Maryland and Virginia, the practice of regional cooperation gives the District of Columbia equal status with the two states.

*** Special purpose groups commonly address specific regional concerns rather than having one group deal with all concerns.** Examples include the Interstate Commission on the Potomac River Basin, Washington Metropolitan Area Transit Authority, and the Washington Metropolitan Airports Authority and the Year 2020 Panel.

*** A tendency in Maryland is to have agencies of the state government take responsibility for activities that might otherwise be done by a regional group.** Geographically, Maryland is a relatively small state with many of its metropolitan-oriented activities centered on the City of Baltimore. The region of interest to many state agencies has also tended to coincide with the metropolitan area of Baltimore. Examples include the transit, port, and airport functions each having a separate administration within the Maryland Department of Transportation. This tendency has also reinforced approaches that tend to keep regional efforts within the authority of Maryland. A recent example includes the Governor declining the Metropolitan Washington Transportation Planning Board's (TPB) invitation for Charles and Calvert Counties to join the TPB, keeping them as part of the Tri-County Council of Southern Maryland. One of the issues associated with state-based regionalism is Montgomery County's location in the Washington region.

*** In addition to regional organizations of governments, private and social groups often organize themselves by regions, by isisue or on a metropolitan-wide basis.** These include the Metropolitan Washington Board of Trade, the Boy/Girl Scouts, the Sierra Club and the Southern Maryland Builders Industry Association; and cultural institutions such as the Kennedy Center, sports teams, and charitable organizations, to name a few. These serve to provide regional identity for many individuals.

III. THE COUNTY'S REGIONAL ROLE

*** Montgomery County was historically an agricultural area dotted with small towns from colonial times until the late 19th century.** In the late 19th century, new rail and streetcar lines into Montgomery County enabled workers to commute to their jobs in the District of Columbia. These workers commuted from homes which were being developed in the Chevy Chase, Takoma Park, Kensington and Silver Spring communities.

*** In the years immediately following World War II, Montgomery County assumed the role of a bedroom community.** At that time, the County's population increased rapidly as government workers flocked to jobs in the District of Columbia and found housing in the suburbs. Between 1940 and 1950 the County's population nearly doubled from 84,000 to 164,000.

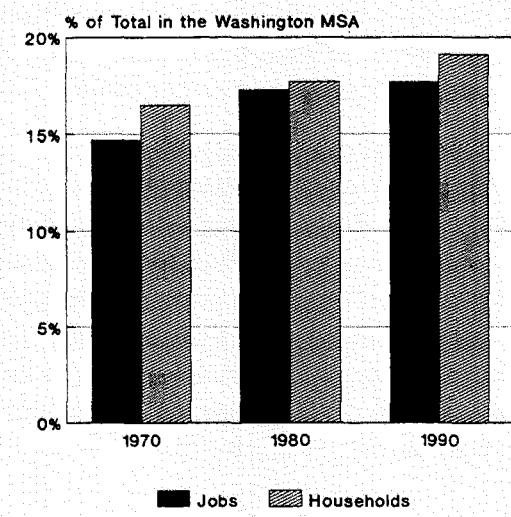
*** The suburbanization of retail trade enabled Montgomery County residents to be less dependent on downtown Washington, D.C. for shopping.** In the late 1940s, Silver Spring's business district became the shopping district for Montgomery County and northern Washington. It was soon supplanted by Wheaton Plaza and Congressional Plaza in the mid-1950s, among the first of the suburban shopping malls. This was the beginning of large-scale regional commerce in the suburbs.

*** Montgomery County has become a major regional employment center that is no longer dependent on downtown Washington for the majority of residents' jobs.** Fairfax and Prince George's Counties are also major sources of jobs as well as residences, resulting in county to county commuting.

*** The economic strength of Montgomery County has bolstered the County's role as a center of economic development in Maryland.** The County brings in 21 percent of the total state taxes and has a strong proportionate share of statewide and regional economic activity. In the past two decades, about one-third of the growth in new employment in Maryland occurred in Montgomery County.

*** The County's share of jobs and housing in the metropolitan MSA has grown since the adoption of the 1969 General Plan.** The regional share of at-place employment in Montgomery County has grown from 14.7 percent in 1970 to 17.7 percent in 1990. Similarly, the share of households has risen from 16.5 percent to 19.1 percent. Montgomery County trails the District and Fairfax in shares of at-place employment in the Washington MSA.

Montgomery County's Share of Jobs and Households in the Washington Region Has Grown



Note: Region is Based on the 1990 Definition for the Washington Metropolitan Statistical Area (MSA)
Source: U.S. Bureau of Economic Analysis and Montgomery County Planning Dept.

In 1970, both the District of Columbia and Prince George's County had more households than Montgomery County and Fairfax County. By 1990, Montgomery County had more households than any jurisdiction in the State and the District of Columbia, but less than Fairfax County. Over the next 20 years, it is expected that the County will grow at a slower rate than the Washington, D.C. MSA overall, and that the share

of total households will slip to about 18 percent of MSA households.

*** The role that the County has played in addressing regional issues has varied over time and by issue.** The County's involvement varies over time because of the wide variety of issues and the manner in which different elected and appointed officials, and staff have participated in addressing and resolving these issues. As a general trend, the County's role in addressing regional problems has grown, as the challenges have grown.

Within the Council of Governments, the County has always participated, and in many cases played a lead role in the development of regional solutions. Within the state government, the number and thus the power of the County's elected officials in Annapolis is growing. In addition, some election districts cross County lines, with the elected officials representing residents and interests from more than one county.

One of the challenges facing the County policy makers is how to participate in the various regional arenas. With growing federal mandates for regional cooperation in solving environmental and transportation related issues, for example, the County is likely to increase its activity in regional organizations. The County must choose how its energies will be directed and the particular regional role it wants for itself.

IV. ISSUES THAT NEED REGIONAL APPROACHES

There are a number of issues which will need regional approaches in order to be appropriately addressed. Some of these were identified in the previous fact sheets prepared for the General Plan Refinement. The following discussion presents these regional issues according to the goal and objective subject areas from the previous work: housing, environment, land use, transportation, community identity, and economic activity. They are discussed in the order in which the goal subject areas were previously reviewed with the Planning Board.

This section covers some of the more pertinent regional activities before and after the 1969 General Plan for a longer-term perspective and context for the various regional activities of the past two decades.

A. HOUSING

*** The Washington, D.C. MSA is one of the ten least affordable housing markets, as measured by affordability ratios by the National Association of Realtors.** Lack of affordable housing is a region-wide problem. The rise in the number of homeless families, difficulty in attracting workers, and increased development in outer areas of the region are all manifestations of the region's affordable housing problem.

*** In 1972 MWCOG developed a regional Fair Share Program, where local jurisdictions recommended the percentage of federal housing subsidies to go to each jurisdiction.** This program was quite effective until the early '80s, when federal formulas to determine funding allocations changed. The total amount of federal funding for housing also decreased substantially in the 1980s.

*** Public and private programs have also been established to deal with other regional housing issues, particularly that of producing affordable housing.** In 1989 MWCOG presented a list of housing initiatives, including: inclusionary zoning, employer-assisted housing, developing a common format for housing linkages, and local inventories of vacant land and buildings. Another initiative, a task force to investigate a public/private housing partnership, resulted in the Washington Area Housing Partnership, which serves as a broker in affordable housing development, as an advocate for low-cost housing, and as a provider of technical assistance.

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The Metropolitan Washington Planning and Housing Association (MWPHA), which advocates policies and programs that improve the

quality of housing for low- and moderate-income housing throughout the metropolitan area, created a reinvestment alliance that works to obtain bank loans for affordable housing.

In addition to government agencies, there are grass-roots organizations like the Northern Virginia Fair Housing Coalition, which seek to address regional housing shortages. According to the MWPHA, banks and other private businesses are regional in scope and lending practices, and have considerable influence on the provision of affordable housing. There are also private organizations dedicated to providing affordable housing, such as the Montgomery Housing Partnership.

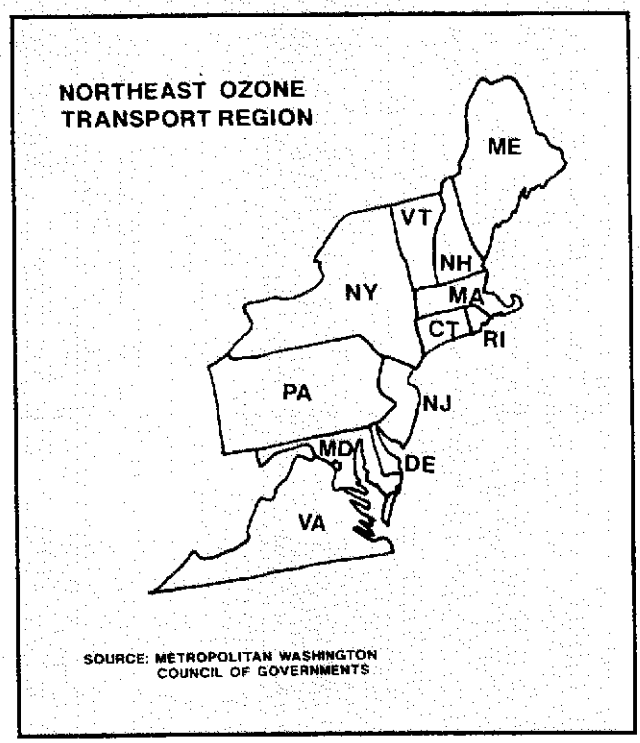
*** Montgomery County has several successful housing programs that also tend to serve the regional housing market needs.** One is the Moderately-Priced Dwelling Unit program, which requires a certain percentage of housing units in a new subdivision to be affordable for moderate-income families. Another success is the County's Housing Opportunities Commission. Among its activities are a mortgage subsidy program, building and operating housing for lower-income families and elderly people through a variety of programs, and issuing revenue bonds locally.

B. ENVIRONMENT

1. Air Quality

*** The Clean Air Act Amendments of 1990 require that areas of "serious non-attainment" such as the Washington, D.C. region achieve federal ozone standards by 1999 and carbon monoxide standards by 1996.** Air quality knows no political or regional boundaries yet is strongly affected by what happens or does not happen in various regions. In the 1970s and early 1980s, various programs, such as the Vehicle Emission Inspection Program, were established regionally as elements of State Implementation Plans for Air Quality that were adopted at that time in response to previous federal Clean Air legislation. The 1990 Clean Air Act Amendments require that by 1996, ozone production must be reduced by 15 percent, and then three percent each year until attainment is reached. In addition, the Baltimore and Philadelphia MSAs are "severe non-attainment" areas, due in part to emissions from the Washington region.

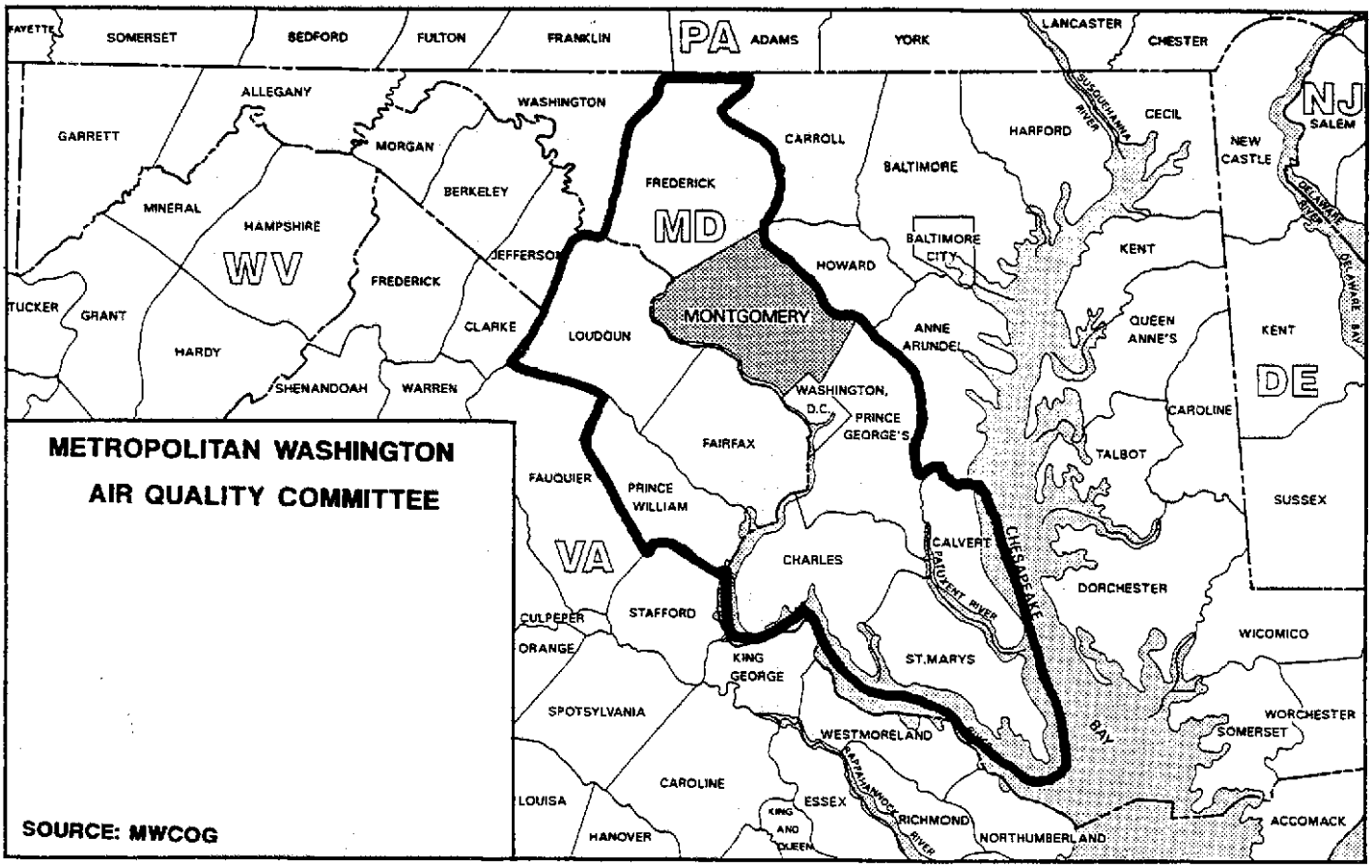
*** Another regional entity associated with the air pollution issue is the Northeast Ozone Transport Region, stretching from Virginia to Maine, of which Maryland and Montgomery County are part.** That multi-state regional agency was created in conjunction with the 1990 Act to address the interdependent actions affecting air quality in the northeast. Due to prevailing weather patterns, the air pollutants tend to be transported from one metropolitan area to the next area, increasing its ozone levels.



*** The Metropolitan Washington Air Quality Committee (MWAQC) was formed in March 1992 to coordinate efforts to improve air quality in conformance with the 1990 Clean Air Act Amendments in a region larger than that of MWCOG.** MWAQC membership is comprised of the members of the MWCOG plus Charles and Calvert Counties in Maryland and Stafford County in Virginia, as well as the State

air quality agencies, the transportation departments of Maryland and Virginia, and the District of Columbia.

*** The Interstate Commission on the Potomac River Basin was formed in 1940 to coordinate clean-up efforts and the use of the**



2. Water Quality

*** The water quality of the Potomac River and the Chesapeake Bay is affected by activities in a region that covers several states.** Activities in Montgomery County affect its streams and lakes; the Potomac, Patuxent, and Anacostia Rivers; and the Bay.

*** Maryland, Virginia, Pennsylvania, Washington, D.C., and the Chesapeake Bay Commission signed the 1987 Chesapeake Bay Agreement to provide comprehensive guidance for minimizing the negative impacts of land development activities in the Chesapeake Bay drainage region.** The agreement provides specific goals for improving the Bay such as a 40 percent reduction in nutrient pollution by the year 2000.

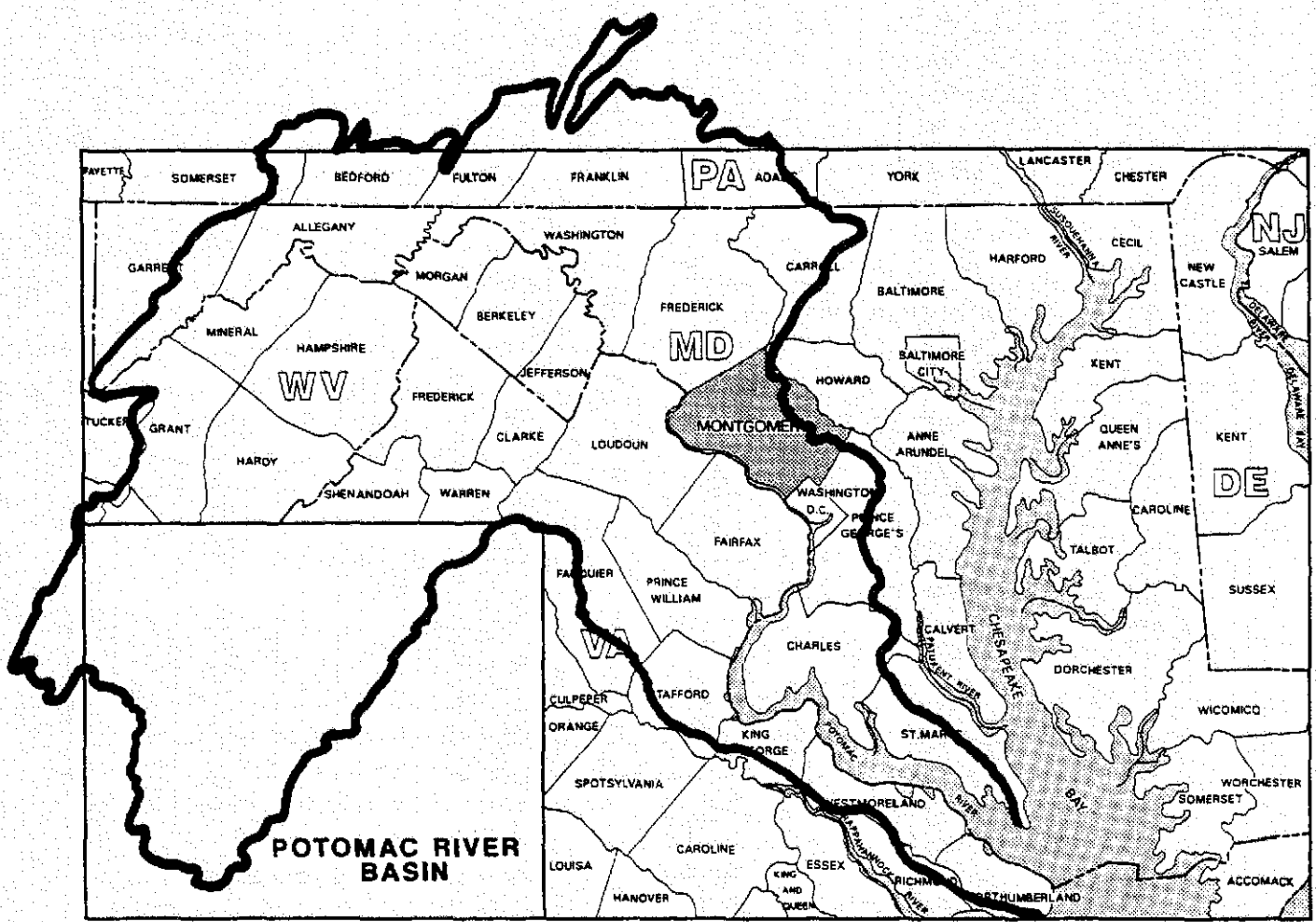
Potomac's water. The water quality in the Potomac River was quite poor but has improved dramatically since 1970. The Potomac River drains parts of Maryland, Virginia, Pennsylvania, West Virginia and all of Washington, D.C. The expanse of this drainage basin and the number of jurisdictions involved is a particular challenge in managing impacts. Stringent controls required by federal, state, County, and local regulations on point source and non-point source pollution in tributary streams have helped improve the Potomac's water quality. In addition, the Commission coordinates clean-up efforts for the Anacostia River, which is a tributary of the Potomac.

*** Regional agreements control the use of the water in the Potomac River during low flow conditions.** Many jurisdictions including Montgomery County use the Potomac River as their primary supply for drinking water. Since the total demand has the potential to be greater than the supply of water in the river during drought conditions the Potomac Low-Flow Allocation Agreement was signed in 1978. This agreement determines how much water each jurisdiction may draw from the river in order that a sufficient flow is maintained.

3. Water and Sewer Service

*** The Washington Suburban Sanitary Commission (WSSC) was formed in 1918 by the state of Maryland to provide water and sewer service to the Washington Suburban Sanitary District (WSSD).** The WSSD now covers Montgomery and Prince George's Counties. The six member commission is comprised of three representatives from each county who are appointed by the respective County Executive and confirmed by their County Council.

*** The WSSC estimates that additional water supply may be needed by 2015.** As demand for water approaches the level at which the Potomac and Patuxent Rivers can supply raw water, alternative sources, from somewhere in the larger region, will be required. The WSSC also estimates that additional water treatment capacity will be needed by 2005.



*** The lack of sewage treatment or transmission ability has been a factor in limiting growth at different times.** The rapid suburbanization of the 1960s resulted in inadequate sewage treatment and transmission capacity in the early 1970s in many parts of Montgomery and Prince George's Counties. The State Health Department imposed a moratorium on new development approvals until sewage treatment and transmission capacity were improved by WSSC.

*** Specific agreements have been signed by constituent governments allocating sewage treatment capacity of regional facilities to serve activities in those jurisdictions.** The Blue Plains Intermunicipal Agreement allocated regional waste-water treatment capacity to Washington D.C., Montgomery, Prince George's, and Fairfax Counties along with some of the municipalities in those counties. It was approved in 1973 and amended in 1985. Approximately 169 million gallons per day (MGD) of the 370 MGD ultimate regional capacity of Blue Plains are allocated to the WSSC.

The Bi-County Sewage Treatment Agreement, signed in 1983, indicates that the Rock Run waste-water treatment plant in Potomac is the next scheduled increase in treatment capacity for the Blue Plains service area. The WSSC operates the Damascus and Seneca Creek waste water treatment plants in Montgomery County. The Town of Poolesville is served by its own waste-water treatment plant. Other rural areas that are not served by WSSC are served by private septic systems.

*** The WSSC, along with agencies of Montgomery and Prince George's counties, has begun to prepare the WSSC's Strategic Sewerage Plan.** The objectives of this study are to determine the long-term (40 years) waste water treatment and transmission needs within the Washington Suburban Sanitary District, to develop alternatives to meet these needs and to identify staging strategies.

*** Multi-jurisdictional facilities continue to create conflict.** For example, Washington, D.C. is proposing to charge suburban users of the Blue Plains sewage treatment plant $3 million. Montgomery, Prince George's, and Fairfax Counties object. As with other regional conflicts, resolution is being sought at the next level of government above the participants; in this case, the U.S. Congress.

C. LAND USE

*** While land use planning decisions are made by local governments, and implementation is done by the private sector, many effects are felt at the regional level.** The regional impacts of individual land use decisions can be both obvious and subtle. Land use patterns can impact water quality, air quality, transportation and other public facilities. Often these impacts are not felt in the jurisdiction that experiences the growth but in those that are downstream, downwind or along highways that are miles away from the source. The recognition of these impacts has led to the creation of a number of regional efforts, discussed in this fact sheet.

Ultimately, the effectiveness of regional efforts is determined by the actions of individual jurisdictions and people. Throughout the region, the actual development of most land is a private sector decision. Governments can prevent the land uses they do not want but cannot mandate the land uses they do want.

The coordination and planning of land use has been viewed as a strong prerogative of local governments. There tends to be little willingness to share that authority at the regional level even if local land use decisions or private sector actions have effects in neighboring jurisdictions. Because of the region's tax structure, jurisdictions are more competitive than cooperative with each other. The latest evidence of this is Fairfax County's efforts to attract the Redskins away from the District.

*** New statewide land use planning laws have been designed to better coordinate the plans of jurisdictions throughout Maryland in the coming years.** The 2020 Report issued by the Governor's Commission on Growth in the Chesapeake Bay Region indicated that then current regional and local efforts would not be adequate to protect the health of Maryland's environment, particularly the Chesapeake Bay, and that changes would need to be made. This report led to the adoption of legislation in 1992 to create statewide accountability in the land use planning process. According to the Maryland Office of Planning, this new bill requires that all County and municipal plans and zoning ordinances be governed by a uniform set of growth policies. It also requires that State plans and public works and transportation projects be consistent with that same set of growth policies.

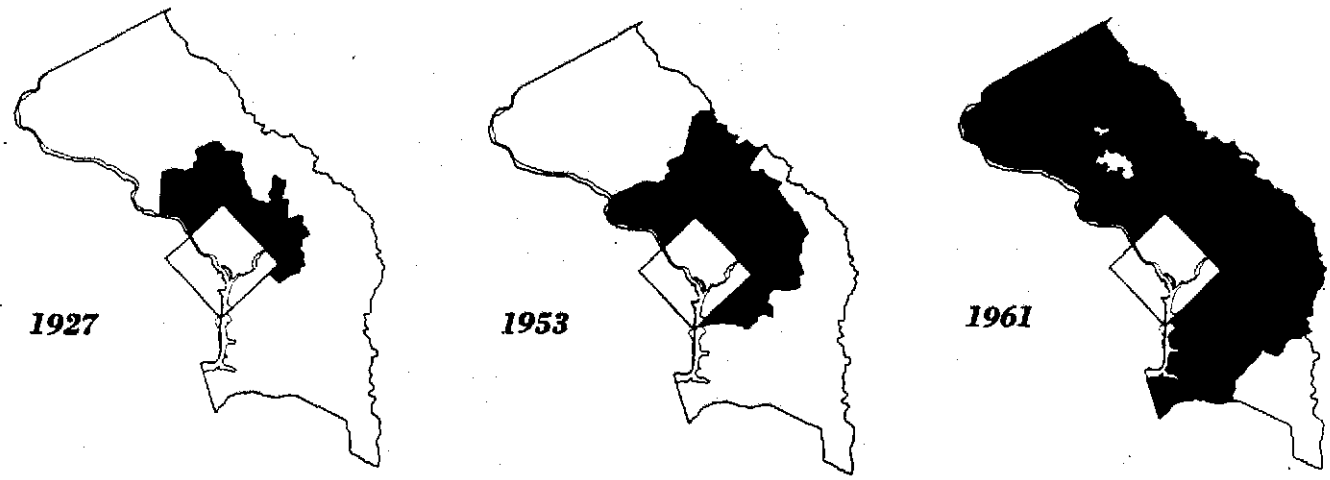
*** Municipalities in Montgomery County have their own planning and zoning powers and have independent roles in various regional groups.** This allows these municipalities to create and implement their own plans. One of the major issues of concern is potential inconsistencies between County plans and the plans of municipalities for land that has been annexed into a municipality. In addition, the implementation of road and transit projects in municipalities that have regional functions is also critical to the functioning of the County.

State law requires that the recommended land use of annexed land in a municipality must be consistent with the land use recommended in the county plan for a period of five years after the annexation unless the County Council approves a change. While this provides immediate protection, it does not ensure long term consistency. This is a concern where land in the agricultural reserve is annexed into a municipality and can be changed to any other zoning classification in five years.

*** There are other regional or subregional entities in the Washington area that have responsibilities related to land use planning.** The U.S. Congress recognized the need for planning in the metropolitan area and created the National Capital Planning Commission (NCPC) in 1928. The purpose of NCPC was originally to plan for and review development inside the District of Columbia. NCPC was 'recreated' by Congress in 1952 as "the central planning agency for the Federal and District governments to plan for the appropriate and orderly development and redevelopment of the Nation's Capital." When home rule for Washington was approved in 1974, the planning functions of NCPC were transferred to the District government. As part of that transfer, the primary functions of NCPC were oriented to that of reviewing proposed policies, plans, and programs for federal facilities and preparing a capital improvements program for the location of federal agencies and facilities located throughout the National Capital Region.

*** The Maryland State Legislature created the Maryland-National Capital Park and Planning Commission (M-NCPPC) in 1927 to plan for the development of the Maryland-Washington Regional District.** Created by the state, M-NCPPC's geographic area of responsibility was that portion of Maryland immediately surrounding and influenced by the District of Columbia, aptly named the Maryland- Washington Regional District. As the suburbs expanded, so did the Regional District. In 1953 it was nearly doubled to 294 square miles to cover newly urbanized areas. In 1957 it was enlarged to 691 square miles, including all of Montgomery County. In 1961 it expanded to the current 1,000 square miles, up from the original 145 square miles. Regional District boundaries now correspond to Prince George's and Montgomery counties, excluding certain municipalities. The growth in the size of the Regional District reflects the early stages of suburbanization spreading outward from Washington, D.C. The suburban growth of the Washington region now extends beyond the city's adjacent counties in Maryland and Virginia and into parts of West Virginia and Pennsylvania.

Washington-Metropolitan Regional District

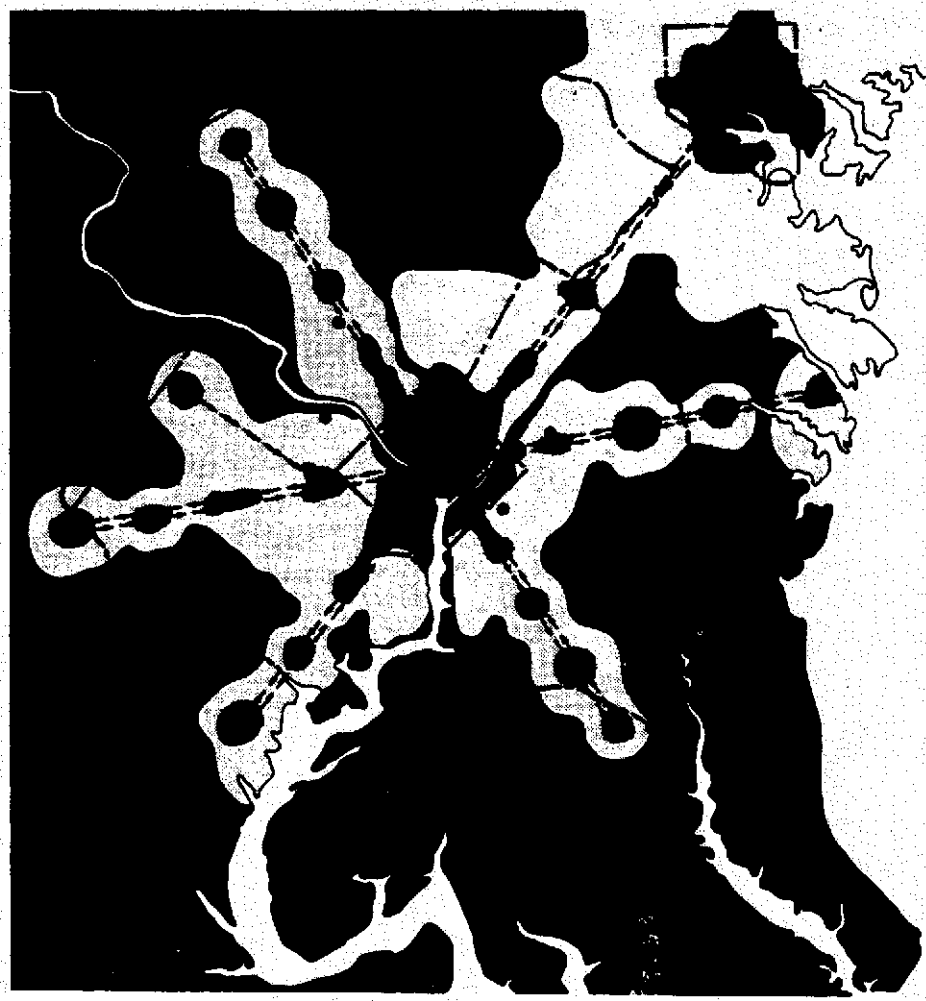


*** In 1957 M-NCPPC published its first regional plan, *Looking Ahead: A General Plan for the Maryland-Washington Regional District*, which guided the development of the inner suburban areas of both counties.** This plan recognized the importance of sound regional planning and that "the job of planning for any area is much more difficult when several planning agencies are involved." While the bulk of the plan is a compilation of then existing area plans, it is continually mindful of the Washington, D.C. region. For example, it recommends several large parks near the suburban fringe "to serve the suburban population as well as the central city, since this outlying territory offers the only available wooded sites for large new facilities to serve the population of congested Washington."

*** In 1959 the National Capital Planning Commission and the National Capital Regional Planning Council published the *Policies Plan for the Year 2000: The Nation's Capital*, commonly referred to as *The Year 2000 Plan*.** This plan established the framework of the wedges and corridor pattern throughout the larger region. The Plan called for growth to be located along six corridors of urban development. Corridors in Montgomery County are I-270 and the northwestern portion of the I-95 Corridor. The Plan advocated that these corridors should be served by rapid transit to connect the entire area with downtown D.C. The areas outside of the corridors were designed to be kept open to contain urban growth and conserve rural resources. Montgomery County has been implementing the Year 2000 Plan through the 1964 and 1969 General Plans, various local area master plans, functional plans, and the implementation of capital improvements consistent with the General Plan.

*** The 1964 *...On Wedges and Corridors*, and the 1969 *General Plan* were local expressions of the regional "wedges and corridors" radial land use pattern established by the *Year 2000 Plan*.** In 1969 the Montgomery County portion of *...On Wedges and Corridors* was updated. The research done for the general plan update was a bi-county project of M-NCPPC. The Prince George's and Montgomery County Planning Boards produced separate updated general plans, with differing land use patterns. The two planning branches of M-NCPPC have evolved from a regional orientation to an individual county government orientation.

*** The Washington Metropolitan Council of Governments formed a task force on Growth and Transportation in June of 1990.** The purpose of the task force is to:



the
radial corridor
plan

New Town Center

Urbanized Area

Sub-center

Controlled Open Space

Main Communication Line

Source: A Plan for the Year 2000 The Nation's Capital, NCPC & NCRPC

bring together the public and private sectors and community interests to discuss and examine the need, if any, for new policies and institutional arrangements or procedures to ensure the more rational and orderly growth of the region, including the provision of needed transportation facilities and services in a timely manner.

The task force wants to avoid a future for the Washington region that has growing traffic congestion, continued environmental degradation, and declining economic vitality. The task force believes that the region can change that picture if state, federal, and local officials work with the private sector toward a new vision. The task force stressed the need for increased cooperation to solve regional issues.

D. TRANSPORTATION

*** Transportation facilities physically connect Montgomery County residents and workers with the rest of the region and the nation.** Interconnections between jurisdictions are particularly important and require close coordination between jurisdictions. At the one level, the interstate highway system is coordinated by the Federal Highway Administration, with the state departments of transportation and the affected local jurisdictions working together to create an interconnected system. At another level, local streets constructed in a subdivision need to be connected with the rest of the road network to reach other parts of the County, region, and state.

The coordination and interconnection of transit facilities is somewhat similar to that of highways although the coordinating agencies are different, such as the Federal Transit Administration, until recently called the Urban Mass Transit Administration. The connectivity and coverage of transit services within the region, however, are more disjointed than highways and do not fully serve the entire region. Some inter-regional services, such as AMTRAK, also provide transit service within the Washington MSA.

*** Regional transportation planning responsibilities are provided by the Transportation Planning Board.** The National Capital Region Transportation Planning Board (TPB) was formed in 1965 to provide for continuous, cooperative and coordinated transportation planning throughout the Washington area. That action was in part in response to 1962 federal legislation which called for such regional entities as a condition of receiving federal transportation funds. Various requirements need to be maintained in order for the region to be certified to receive such funds. Subsequent legislation has termed agencies like these "metropolitan planning organizations."

The TPB is affiliated with the Metropolitan Washington Council of Governments (MWCOG). It uses MWCOG facilities for meetings and MWCOG staff to carry out the TPB's Unified Planning Work Program.

There has been conflict on this board, as states' self interests differ.

*** Developing a regional Long Range Transportation Plan is one of the main responsibilities of the TPB.** The TPB adopted its initial regional transportation plan in 1972. It has been periodically updated and amended since then. A major update is under way to be responsive to requirements of the 1990 Clean Air Act Amendments and the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). In order for the implementing agencies, such as the Maryland Department of Transportation (MDDOT), to receive federal funding for their projects, the projects must be elements of the TPB's Long Range Transportation Planning and be included in the TPB's Transportation Improvements Program.

*** Recent federal transportation legislation will encourage greater regional cooperation and provide more flexibility in the use of federal funds.** The *Intermodal Surface Transportation Efficiency Act of 1991* (ISTEA) gives more flexibility to

state and local governments to direct transportation funds to various roadway, transit, high occupancy vehicle, ride-sharing, bicycle, and pedestrian projects. Increased cooperation, coordination, and arrangements for intergovernmental sharing of transportation costs at a regional level will continue to be critical to the successful implementation of Montgomery County's General Plan.

*** Responsibilities for regional transportation planning, decision making, and implementation will continue to be a regional issue.** ISTEA has provisions that modify some of the institutional responsibilities for selecting how federal funds for implementing transportation projects should be allocated within metropolitan areas from funds apportioned to each of the states. This is causing various changes in procedures related to regional transportation planning activities. ISTEA also has a provision that calls for the establishment of an Interstate Study Commission... "to recommend new mechanisms, authority, and/or agreements to fund, develop, and manage the transportation system of the nation's capital region, primarily focusing on interstate highway and bridge systems..."

As part of recent Maryland legislation enacting the gas tax increase, a study will be conducted by the Maryland Department of Transportation in the summer of 1992 for review by the legislature in the fall "...on the feasibility of establishing a Metropolitan Planning Organization for Maryland's portion of the Washington urbanized area." The effect of this would be to create a Maryland-only focus to the transportation region.

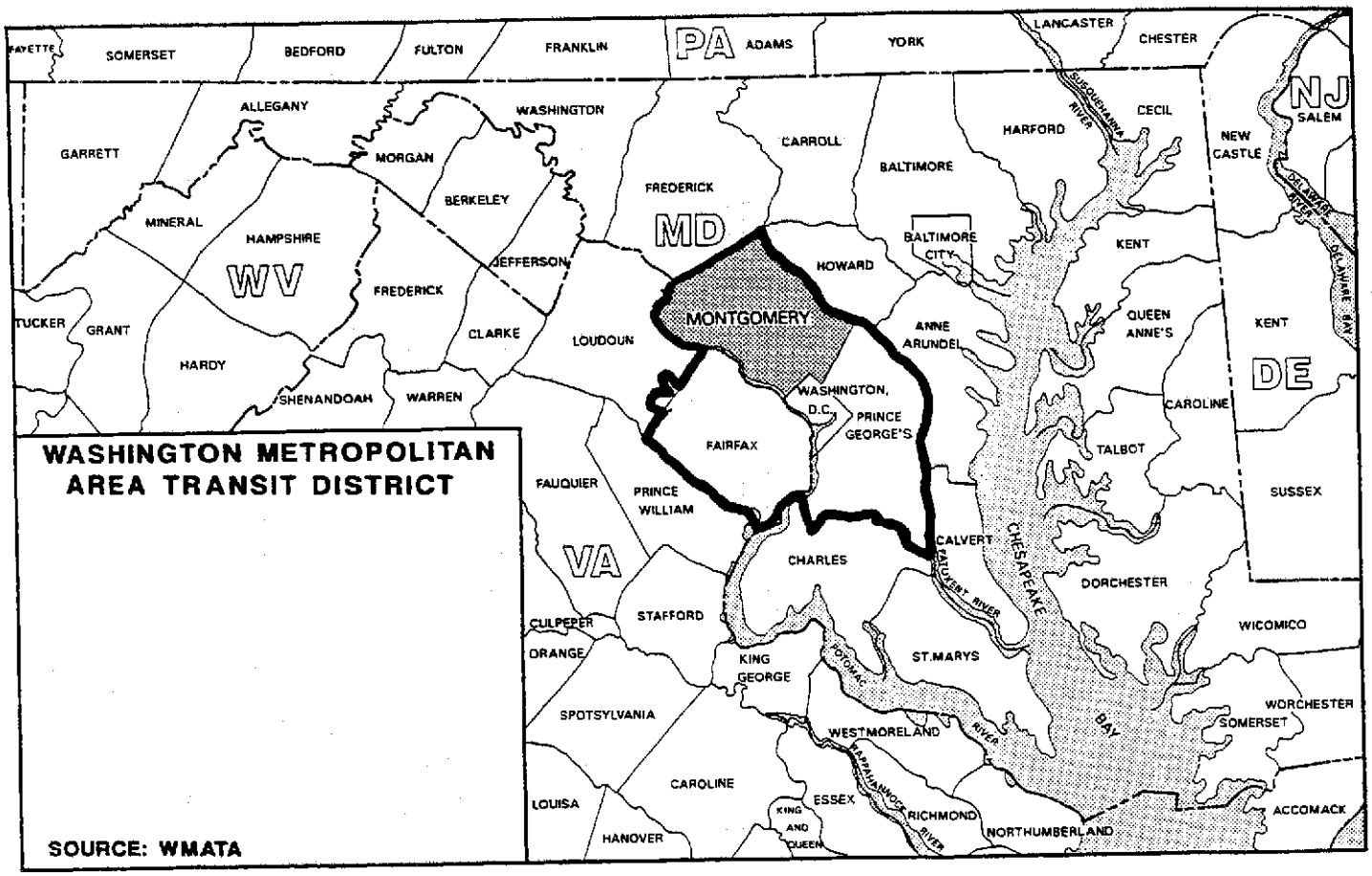
1. Highways

*** Highways throughout the region are provided and operated in a coordinated intergovernmental fashion with different levels of government having different roles throughout the Washington area.** Highways in Montgomery County are provided and operated by different levels of government primarily based upon the regional travel function of each section of highway. Such intergovernmental arrangements can vary by county, and definitely vary by state. For example, in Fairfax County the Virginia Department of Transportation funds and implements all roads, including local streets, while in Maryland the counties usually fund and implement local streets.

*** Providing for inter-regional truck and passenger car traffic heading north-south through the Washington area is a regional issue.** One of the upcoming challenges that Montgomery County and the rest of the region face is how to attain one or more bypasses of the Washington area. Bypasses have recently been under study by the Maryland and Virginia departments of transportation. The study has evaluated the feasibility of six bypass routes, three that are on the eastern side of Washington and three on the western side of Washington. Two of the potential western routes were shown to enter Montgomery County from Virginia to the west of Poolesville and head north, generally paralleling the border with Frederick County, to join I-70 near Mt. Airy. Montgomery County officials have vigorously opposed such western bypass routes, primarily due to the impact a major freeway would have on the agricultural reserve, an important element of the overall wedges and corridors concept.

2. Transit

*** The establishment of a regional rapid rail transit system required that appropriate regional authorities be established first.** The Washington Suburban Transit Commission (WSTC) was created by the state of Maryland in 1965, in anticipation of a regional transit authority being formed. WSTC provides a means of coordination between Montgomery County and Prince George's Counties and the State of Maryland in providing regional transit services. In 1992, the appointments to WSTC were changed so that the voting members to the Washington Metropolitan Area Transit Authority from WSTC will be appointed by the Governor in return for the State assuming the full share of the operating subsidies going to WMATA and County-operated bus services.



The Washington Metropolitan Area Transit Authority (WMATA) was created in 1967 as the result of an Interstate Compact between Maryland, Virginia, and Washington, D.C. as enacted by the U.S. Congress. WMATA was authorized to "plan, develop, finance and provide for the operation of a rapid rail transit system serving the Washington Metropolitan Area Transit Zone." The area served by WMATA includes the District of Columbia, Montgomery, Prince George's, Arlington, and Fairfax Counties, and the City of Alexandria. WMATA has a twelve-member Board of Directors composed of six voting members and six alternates. Maryland, Virginia, and the District of Columbia each have two voting members.

A plan for the regional system was adopted in 1968 and construction on the Metrorail system was started almost immediately. The 103-mile rapid rail transit system is centered in Washington, D.C. at Metro Center and radiates outward into the surrounding suburban areas. Specific funding and regional cost-sharing formulas were developed to enable the system to be developed over a long period of time in an equitable manner.

Bus service throughout the region was provided by privately operated companies until 1973. WMATA acquired several privately operated bus companies in 1973 and consolidated them into a regional transit system, called Metrobus. This was done in coordination with the development of the Metrorail system planning and development. That has facilitated the expansion and restructuring of bus services throughout the region as different segments of the Metrorail system have opened for service.

*** Planning efforts are underway to extend regional transit service beyond the 103 mile Metrorail system to meet future demand.** Studies of extending the regional transit service have been

underway in Prince George's County, Frederick, Montgomery, and in Fairfax County out to Dulles Airport in Loudoun County. Concerns to be addressed are how to consider these individual extension studies from a unified regional system perspective and how to better involve WMATA in those extension studies. Transit service between the Shady Grove Metrorail station and Frederick County was studied as part of the Corridor Cities Transit Easement Study. That study identified potential routes for a transit system that connects the Shady Grove Metro Station with the City of Frederick. The new transit line would serve the corridor cities of Gaithersburg and Germantown along with planned development in Clarksburg and Urbana. The MDDOT is working on project development and planning for the Shady Grove to Frederick line.

*** Commuter rail transit service is provided in and beyond the boundaries of the WMATA service area.** MDDOT, through its MARC operations, provides commuter rail service that connects West Virginia, Baltimore, and southern Maryland to downtown Washington. This system will be expanding its service and providing for increased use. A new commuter rail line connecting Manassas and Fredericksburg, Virginia, and Washington, called the Virginia Railway Express, is opened in June 1992.

*** The regulation of private transit-related activities, including private carriers such as taxis, buses and charter services, is done by the Washington Metropolitan Area Transit Commission (WMATC).** The areas covered by the WMATC include all those covered by the WMATA plus the portion of Dulles Airpor located in Loudoun County.

3. Ridesharing

*** Region-wide carpooling and vanpooling services have been provided throughout the region since the mid-1970s.** A region-wide ridesharing and carpooling program is operated by staff of the Transportation Planning Board. The carpooling program is also an element of the State Implementation Plans for Air Quality which were adopted in the mid-1970s and early 1980s. That program is coordinated with similar local efforts. The 1990 census estimated that 15 percent of commuters in the Washington MSA commute by carpool.

4. Aviation

*** Montgomery County is served by three regional, air carrier airports.** The Baltimore-Washington International (BWI), Dulles International, and Washington National Airports provide scheduled passenger service for the Washington-Baltimore region. All three of these airports are conveniently located for use by Montgomery County residents, business and visitors. In 1987, the percentages of airport users coming from Montgomery County were 11 percent for BWI, 36 percent for Dulles, and 53 percent for National. The 1969 General Plan sought to improve connections to airports in the region.

BWI is operated by the State Aviation Administration (SAA), a component of the MDDOT. Dulles and National Airports are now operated by the Washington Metropolitan Airport Authority (WMAA). The membership of the WMAA is composed of representatives from Maryland, Virginia, and Washington, D.C., with some oversight by a Congressional committee. Prior to the late 1980s, both National and Dulles were owned and operated by the federal government.

*** General Aviation and helicopter service also have regional aspects.** The Montgomery County Airpark in Gaithersburg and the Davis Airport outside Laytonsville serve the County's general aviation needs. In addition, the Frederick County and College Park airports provide nearby general aviation facilities for some County residents and businesses. General aviation facilities serve private planes and smaller commercial flights, as opposed to the regularly scheduled passenger service from the three regional airports.

*** Recent local area master plans have identified potential locations for heliports to improve connections between employment centers and regional airports.** The County's General Aviation Master Plan recommends that helistop/heliport locations be designated in employment center. The County contains a number of limited-use helistops for private helicopters as well as for medical evacuation helicopters at hospitals and the Maryland State Police Medical Unit in Norwood, which serves an area larger than Montgomery County.

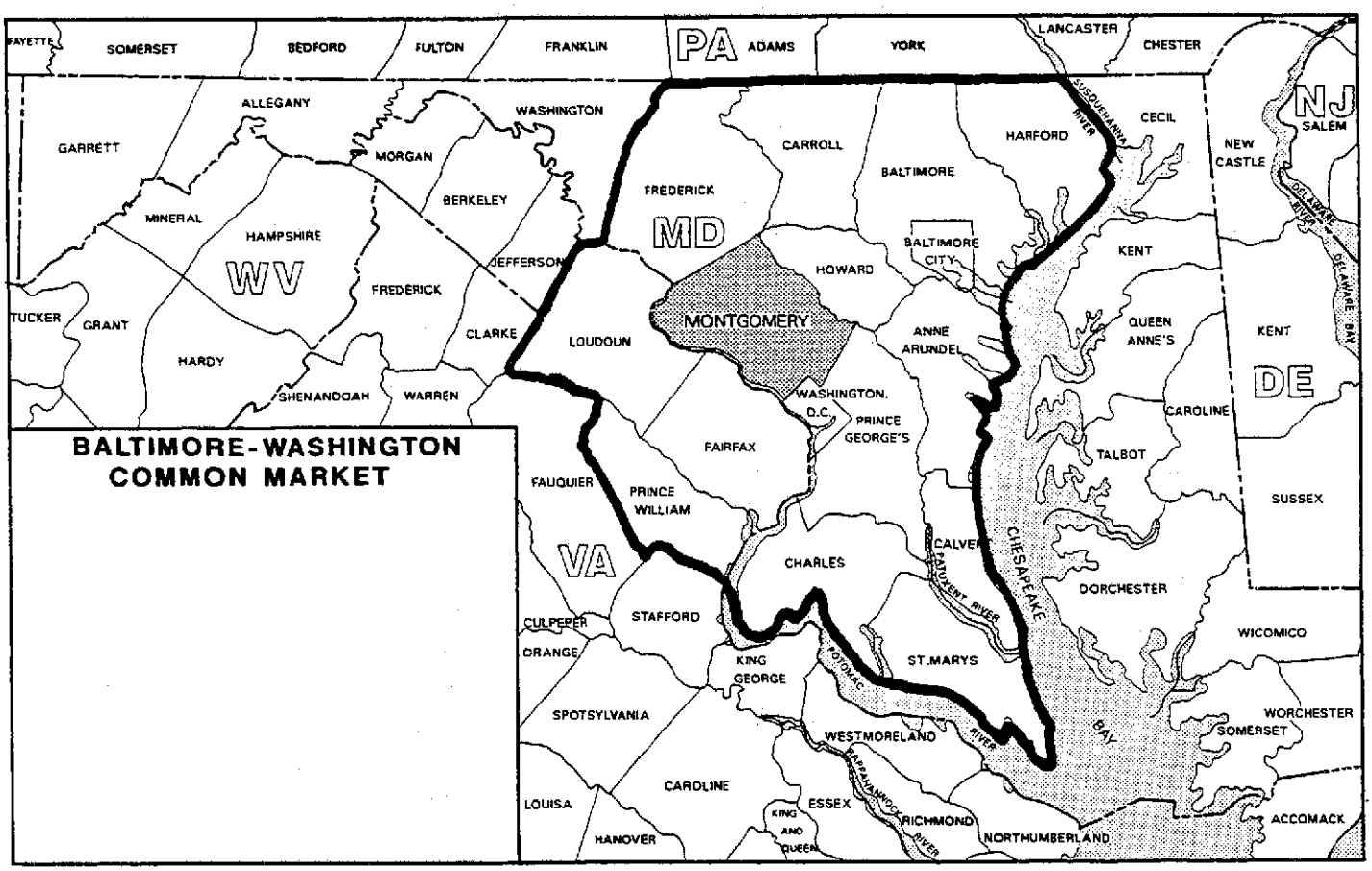
E. COMMUNITY IDENTITY AND DESIGN

Community identity is the collection of attributes that make a community unique, make it "home," and separate it from other places. Physical, social, ethnic, political, geographic, economic, and other characteristics contribute to our perceptions about our region. A person's perceived community can range from a neighborhood a few blocks square to the entire MSA, and beyond.

*** Regional identity could become a future issue and area of contention.** The expected consolidation of the Washington and Baltimore Metropolitan Statistical Areas will probably raise issues of regional identity. Will we be part of the "Washington-Baltimore" area or the "Baltimore-Washington" area? Which name comes first may affect regional identity. A consolidation has been underway for some time in terms of commuting patterns, housing markets, retail and commercial activities, and many social and cultural events. Politically and institutionally, each area is likely to retain a separate identity, in large part due to the different states involved.

F. ECONOMIC ACTIVITY

*** The economy transcends boundaries.** This morning, you may have read USA Today, a na-



tional newspaper, while eating a banana from Costa Rica, then commuted to work in your Japanese car or in a German bus. This global economy is comprised of regional, subregional, and local economies.

*** There is a Washington regional market for office space, employees, customers and goods, and business supplies and materials.** Empty office space in Montgomery County competes for tenants with other suburban counties and with downtown Washington. Workers commonly travel from West Virginia and Pennsylvania to jobs in and around the District. When local businesses expand, they often move into neighboring towns, counties, and states.

The Greater Washington Board of Trade is a regional "chamber of commerce," and the Washington/Baltimore Regional Association, which promotes this regional marketplace, covers the Washington and Baltimore MSAs plus St. Mary's County.

*** The I-270 corridor is a regional economic entity that spans several jurisdictions: Montgomery County, Rockville, Gaithersburg, Frederick County, and Frederick City.** The "I-270 High Technology Corridor" signs are one symbol of the corridor's identity.

*** The colleges and universities in the Washington area are known throughout, and draw students from, the region, the nation, and the world.** The ten universities within the Beltway and two of the colleges have formed the Consortium of Universities of the Washington Metropolitan Area as a vehicle for regional cooperation. The Consortium shares resources among the schools, reduces duplication in degree programs, and administers community-based programs.

*** There is a class of issues outside the normal scope of the General Plan which are regional in nature too.** These include social issues such as homelessness, welfare, job training, public education, public safety and law enforcement. There are various concerted efforts across jurisdictional boundaries to cooperate on some social issues. For example, the police departments from throughout the Washington area have regular coordination meetings at the Council of Governments and have developed agreements regarding police pursuit and fire/rescue responses in adjacent jurisdictions.

ACKNOWLEDGEMENTS

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